S. HRG. 108–650

Senate Hearings

Before the Committee on Appropriations

Energy and Water Development Appropriations

Fiscal Year 2005

108*th* CONGRESS, SECOND SESSION

H.R. 4614

DEPARTMENT OF DEFENSE—CIVIL
DEPARTMENT OF ENERGY
DEPARTMENT OF THE INTERIOR
NONDEPARTMENTAL WITNESSES

Energy and Water Development Appropriations, 2005 (H.R. 4614)

S. HRG. 108–650

ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 2005

HEARINGS

BEFORE A

SUBCOMMITTEE OF THE

COMMITTEE ON APPROPRIATIONS

UNITED STATES SENATE

ONE HUNDRED EIGHTH CONGRESS

SECOND SESSION

ON

H.R. 4614

AN ACT MAKING APPROPRIATIONS FOR ENERGY AND WATER DEVELOPMENT FOR THE FISCAL YEAR ENDING SEPTEMBER 30, 2005, AND FOR OTHER PURPOSES

Department of Defense—Civil
Department of Energy
Department of the Interior
Nondepartmental witnesses

Printed for the use of the Committee on Appropriations

Available via the World Wide Web: http://www.access.gpo.gov/congress/senate

U.S. GOVERNMENT PRINTING OFFICE

92–143 PDF WASHINGTON : 2005

For sale by the Superintendent of Documents, U.S. Government Printing Office
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ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 2005

WEDNESDAY, MARCH 3, 2004

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10:08 a.m., in room SD–138, Dirksen Senate Office Building, Hon. Pete V. Domenici (chairman) presiding.

Present: Senators Domenici, Craig, Reid, and Murray.

DEPARTMENT OF ENERGY

OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY

STATEMENT OF DAVID GARMAN, ASSISTANT SECRETARY

OPENING STATEMENT OF SENATOR PETE V. DOMENICI

Senator DOMENICI. The committee will come to order. Thank you everyone for coming. It's interesting to note that, of no consequence other than it's interesting, this is the first meeting of the Subcommittee on Energy and Water and we haven't yet seen impact that the budget's going to have on this subcommittee's ability to do its work, but it's pretty obvious that it won't be a bed of roses, so I regret to tell you that I don't think there's any chance that very many of the discretionary programs are going to be funded with any increases. Most will get some cuts.

But today we're going to review the Department of Energy's 2005 budget request, the Office of Energy Efficiency and Renewable Energy, the Office of Science, and the Office of Nuclear Energy, and we will receive testimony from David Garman, Assistant Secretary, Office of Energy Efficiency. I'd like to thank you for joining us. And Dr. Raymond Orbach, Director of the Office of Science, and William Magwood, Director of the Office of Nuclear Energy. I appreciate your attendance today and look forward to your testimony.

The budget request for Renewable Energy provides $374 million, an increase of $4.3 million. DOE—that's 1.2 percent—DOE's budget provides $95 million for hydrogen technology, that is the basic research. It's a $13 million increase and overall the President proposes spending $228 million on hydrogen R&D, multi-agency effort to diversify energy supply.

Office of Science, the administration requests $3.4 billion, a reduction of $78 million, 2 percent below last year's level. Science re-

ports specifically stated that flat funding for the office should be reversed. Unfortunately, that language was ignored.

Dr. Orbach, I understand the Secretary of Energy released a 20-year science plan late last year which will serve as a road map for science research. I appreciate your efforts to focus on these priorities and look forward to learning more about this proposal.

For the Office of Nuclear Energy, the budget provides $409 million, that's a $4.7 million increase, 1.2 percent. I'm disappointed to learn that nuclear R&D budget has been cut by $34 million, a 26 percent reduction. If I have anything to do about it, I'll put that money back, but I don't know how to do it yet.

The budget also cuts nuclear energy technology by 50 percent. I'm skeptical that the Department is serious about its commitment to deploy a new nuclear reactor, especially if you put a date alongside it of 2010.

I'm discouraged by the fact that the advanced fuel concepts initiative was cut. The objective of this program is to develop a proliferation-resistant nuclear fuel. In light of the recent news regarding the sale of nuclear materials, the last and biggest being Pakistan's top nuclear scientist, I believe more should be done to protect against nuclear proliferation, not less. I think we're beginning to make people understand that in the administration. The President spoke to it, Secretary Powell has alluded to it, but nonetheless you can't do this without money, and I'm hopeful that America will take the international lead in this regard.

PREPARED STATEMENT

I'm now going to turn to my good friend who's been working with me on this subcommittee either as chairman or ranking member for many years, Senator Reid. I'd like you to make your opening statement and then we will proceed in order to Mr. Garman, Dr. Orbach, and Mr. Magwood.

[The statement follows:]

PREPARED STATEMENT OF SENATOR PETE V. DOMENICI

Today, the subcommittee will review the Department of Energy's fiscal year 2005 budget request for the Office of Energy Efficiency and Renewable Energy, the Office of Science, and the Office of Nuclear Energy.

We will receive testimony from David Garman, Assistant Secretary, Office of Energy Efficiency and Renewable Energy, Dr. Raymond Orbach, Director, Office of Science, and William Magwood, Director, Office of Nuclear Energy.

I appreciate your attendance today and look forward to your testimony.

The budget request for Renewable Energy provides $374 million—an increase of just $4.3 million (+1.2 percent). The DOE budget provides $95 million for hydrogen technology research, a $13 million increase. Overall, the President proposes spending $228 million in fiscal year 2005 on hydrogen R&D in a multi-agency effort to diversify our Nation's energy supply.

For the Office of Science, the administration has requested $3.4 billion—a reduction of $78 million or 2 percent below last year's level. The Senate report specifically stated that flat funding for the Office of Science should be reversed—unfortunately, that language was ignored.

Dr. Orbach, I understand the Secretary of Energy released the 20-year Science Plan late last year, which will serve as a road map for DOE's science research. I appreciate your efforts to focus the Department's priorities and I look forward to learning more about this proposal.

For the Office of Nuclear Energy, the budget provides $409 million—an increase of $4.7 million above fiscal year 2004 (+1.2 percent).

I am disappointed to learn that the Nuclear R&D budget has been cut by $34 million (−26 percent). The budget entirely eliminates funding for the Nuclear Energy Plant Optimization and the Nuclear Energy Research Initiative.

This budget also cuts the Nuclear Energy Technologies by 50 percent. As a result of these cuts, I am skeptical that the Department is serious about its commitment to deploy a new nuclear reactor by 2010.

I am also discouraged by the fact that the Advanced Fuel Concepts Initiative was cut by 30 percent. The objective of this program is to develop a proliferation-resistant nuclear fuel. In light of the recent news regarding the sale of nuclear material by Pakistan's top nuclear scientist; I believe more should be done to protect against nuclear proliferation.

It is clear from these lean budgets that we will face numerous challenges this year. Nevertheless, I look forward to working with Senator Reid to develop the best bill we can.

I will now turn to Senator Reid or any other Senator who would like to make a brief opening statement. Thereafter, we will hear from Mr. Garman, Dr. Orbach, and Mr. Magwood.

STATEMENT OF SENATOR HARRY REID

Senator REID. Thank you very much, Mr. Chairman. You and I have worked together, a long, long time together on this committee, subcommittee, I'm sorry, and I enjoy working on this bill with you. I think the enjoyment will have been better in the past than this year because of the tremendous constraints on the budget. It's been frankly a lot of fun in years past, but I don't see that happening this year, but with our friendship we'll work our way through this.

Today is a first, as you have indicated, in a series of five budget oversight hearings for our subcommittee. Next week, a week from today, the subcommittee will hear testimony from the Bureau of Reclamation and the Corps of Engineers, which is so vitally important to the entire western half of the United States.

Today we're going to hear from the witnesses as you've outlined. I've reviewed all your statements and they cover some of my most—some of my favorite subjects, alternative energy and all these things that are so important to the future of our country.

I'm going to—we have a big tax bill coming up in 20 minutes so I have to leave soon, go back and work on that on the floor, but I appreciate everyone being here. I have a series of questions for each of the witnesses, Mr. Chairman, and I would ask consent of the subcommittee that I be allowed to submit those in writing and that they respond to them within the next 10 days in writing.

Senator DOMENICI. Yes, sir.

Senator REID. And the answers go to every member of the subcommittee.

Senator DOMENICI. I'll submit them on your behalf and let me say to you, if you have any trouble with the time, I don't expect you to just let it pass. I expect you to tell us why, if you had to go find something or whatever then let us know. Go ahead, Senator.

OFFICE OF SCIENCE FISCAL YEAR 2005 BUDGET REQUEST

Senator REID. I've reviewed the budget for the Office of Science, and by and large I suspect that you share some of the same frustrations as I have and you won't articulate them today and I understand why you can't. I'm concerned that such a budget, if enacted, will not allow you to move forward aggressively on enough major initiatives, including the ITER Project.

The request also strikes me as inadequate in terms of allowing you to maintain and improve your laboratory facilities nationwide. My overall impression is that the request is weak and I really believe it's short-sighted. I hope we'll be able to improve on that this year before we complete our work.

As I've said many times before, funding for research in the hard sciences is one of the very best and most appropriate investments taxpayer dollars can be made for this country. Few things that we do here can make our country safer or more secure than maintaining a scientific and technological edge.

For many years now, Chairman Domenici and I have watched as the last two administrations have sent ever-escalating budget requests up here for National Institutes of Health that have far outstripped the increase requests of the Office of Science. The imbalance between funding for the physical sciences and the biological sciences was getting to be staggering, particularly because both disciplines rely on each other so much. I think this is short-sighted in the long term.

I'm pleased with the work that you're doing on genomics and with the very impressive pace of the nanotechnology. Drew Willison of my staff and Tammy Perrin of Senator Domenici's staff visited the Lawrence Berkeley National Lab last month and were surprised at the rapid progress the lab is making on the molecular foundry.

ENERGY EFFICIENCY AND RENEWABLE ENERGY

You've been on the job now for nearly 2 years and I hope you're enjoying your time in one of the greatest jobs our Federal Government has to offer. Mr. Garman, as you know, I am a big supporter of your programs and believe that the National Renewable Energy Laboratory in Golden is one of the premiere labs in all the DOE if not the world. While I certainly hope we can add some resources to your budget, I realize that the most important thing Congress can do in the short term for the renewable energy industry is to get a series of productive tax credits into place and extend some of the others. Hopefully our body will be able to get that done this year and we may be able to get it done on this bill this week.

For the last few years, you've funded a competitive project in Nevada that has worked very well. As you know, my State has tremendous solar and geothermal potential and the seed money for the Department—that the Department has provided—allows Nevada and its universities and research organization industries to work together to prove out technology and techniques.

NUCLEAR ENERGY

Mr. Magwood, as you know, I've been very supportive of your programs during my years as chairman and ranking member of this subcommittee. I'm supportive even though it sometimes puts me in an awkward spot due to that very visible word, nuclear in your office's title. I support strong budgets for you because, as I mentioned earlier, long-term stable investments in scientific research and development is what makes our Nation strong.

My biggest problem with nuclear power comes, of course, at the end of the fuel cycle, and we've heard that so many times that I

even get tired of myself saying it. To the extent that there will be an ongoing waste stream, it will be investments in science that solves all or most of those disposal problems, and you're involved in that and I appreciate that.

That's why I've supported your advanced fuel cycle initiative over the years. I'm a little concerned this year that your support for this program seems to have eroded, but I suspect that Chairman Domenici and I can help you un-erode it as we move through this budget.

PREPARED STATEMENT

I feel confident that Senator Craig and Domenici have thoughts on the ongoing transition of the laboratory in Idaho to the Nation—this is to the Nation's nuclear energy laboratory, so I'll not address that issue at this time, other than to say that I'm far more interested in an aggressive R&D budget that benefits the Nation as a whole than I am in a long, slow, drawn-out transition.

I thank everyone for appearing today and appreciate the patience of everyone listening to my long statement.

[The statement follows:]

PREPARED STATEMENT OF SENATOR HARRY REID

Thank you, Mr. Chairman. By my count you and I are beginning our eighth Energy and Water appropriations cycle together. As you know I enjoy working on this bill with you and greatly appreciate your friendship and support throughout our many years together here in the Senate.

Today is the first in a series of five budget oversight hearings for our subcommittee. Next Wednesday, the subcommittee will hear testimony from the Bureau of Reclamation and the U.S. Army Corps of Engineers.

Today we will hear from three witnesses: Dr. Raymond Orbach, the Director of DOE's Office of Science; Mr. Bill Magwood, the Director of the Office of Nuclear Energy; and Mr. Dave Garman, the Assistant Secretary for the Office of Energy Efficiency and Renewable Energy.

Good afternoon, gentlemen, thank you for coming. Senator Domenici and I both appreciate you taking the time to join us. My duties on the Floor may require me to depart early today, but my staff will remain here and will report back on what transpires. I do have a series of questions for each of you and would ask, at this time, that they be made a part of the record. I hope each of you can respond quickly because the Chairman and I rely on your answers to help us make informed funding decisions. We are likely to be on an accelerated schedule this year so timely responses are critical.

I plan to keep my comments very brief today, but do want to highlight several issues concerning the budget requests for each of the three DOE offices represented today.

Dr. Orbach, I have reviewed the budget for the Office of Science and, by and large, I suspect that you and I share some of the same frustrations with it. The administration's budget request provides your office with a 2 percent cut this year. I am concerned that such a budget, if enacted, will not allow you to move forward aggressively enough on a number of major initiatives, including the ITER project. The request also strikes me as inadequate in terms of allowing you to maintain and improve your laboratory facilities nationwide.

My overall impression is that the request is weak and shortsighted.

I hope that we are able to improve on that a little bit before Congress completes work this year. As I have said many times before, funding for research in the hard sciences is one of the very best and most appropriate investments of taxpayer dollars that Congress can make. Very few things that we do here can make our country safer or more secure than maintaining a scientific and technological edge.

For many years now Chairman Domenici and I have watched as the last two administrations have sent ever-escalating budget requests up here for the National Institutes of Health that have far outstripped the increases requested for the Office of Science. The imbalance between funding for the physical science and the biologi-

cal sciences was getting to be staggering, particularly because both disciplines rely on each other so much.

Again, over the long-term, this is very short-sighted.

That said, I am very pleased with the work you are doing on genomics and with the very impressive pace of the nanotechnology program. Drew Willison of my staff and Tammy Perrin of Senator Domenici's staff visited Lawrence-Berkeley National Laboratory last month and were surprised at the rapid progress the lab is making on the Molecular Foundry.

You have been on the job now for nearly 2 years and I hope you are enjoying your time in one of the greatest jobs our Federal Government has to offer.

Mr. Garman, as you know, I am a big supporter of your programs and believe that the National Renewable Energy Laboratory in Golden is one of the premiere labs in all of DOE. While I certainly hope we can add some resources to your budget this year, I also realize that the most important thing Congress can do in the short term for the nascent renewable energy industry is to get a series of production tax credits into place and to extend some of the others. Hopefully, we, as a body, will be able to get that done this year.

For the last few years you have funded a competitive pilot project in Nevada that has worked tremendously well. As you know, my home State has tremendous solar and geothermal potential and the seed money the Department has provided has allowed Nevada universities, research organizations, and industries to work together to prove out technologies and techniques. I appreciate your hard work and that of your staff in getting this program started and keeping it moving forward.

Mr. Magwood, as you know I have been very supportive of your programs during my years as Chairman and Ranking Member of this subcommittee. I am supportive even though it sometimes puts me in an awkward spot due to that very visible word "nuclear" in your office's title.

I support strong budgets for you because, as I mentioned earlier, long-term, stable, investments in scientific research and development is what makes our Nation strong.

My biggest problem with nuclear power comes at the end of the fuel cycle. However, I firmly believe that investments in the future of nuclear power can produce reactors that are safer and will not produce the deadly waste streams that plague the current generation of reactors.

To the extent that there will be an on-going waste stream, it will be investments in the science that solves all or most of the disposal problem.

This is why I have supported your Advanced Fuel Cycle Initiative over the years. I am a little concerned this year that your support for this program seems to have eroded, but I suspect that Chairman Domenici and I can help you in this area.

I feel confident that both Senator Craig and Senator Domenici have many thoughts on the on-going transition of INEEL to the Nation's nuclear energy laboratory, so I will not address that issue at this time other than to say that I am far more interested in an aggressive R&D budget that benefits the Nation as a whole than I am in a long, slow, drawn-out transition.

Again, thanks to our witnesses for appearing today.

Senator DOMENICI. Senator, thank you very much, and now we will excuse you and look forward to the next hearing.

Senator, would you like to make some comments, please?

Senator MURRAY. Mr. Chairman, I do not have an opening statement. I'll just welcome the witnesses. I do have questions and we'll wait until after they've had their testimony.

PREPARED STATEMENT OF SENATOR THAD COCHRAN

Senator DOMENICI. Senator Cochran has submitted a statement for the record which will be included.

[The statement follows:]

PREPARED STATEMENT OF SENATOR THAD COCHRAN

Mr. Chairman, I'd like to thank the Assistant Secretary and Directors for testifying before this committee today. The work you do is very important to my State and to me. I commend David Garman, the Assistant Secretary of the Office of Energy Efficiency and Renewable Energy, for the work his department does with biomass research.

Biomass energy is estimated to contribute over 7 percent of Mississippi's total energy consumption—that amount is double the national average. The majority of our lumber facilities burn wood waste to generate steam for industrial processes. Biomass offers special benefits for Mississippi's economy by keeping energy dollars in our State and by providing jobs in rural areas where biomass is produced. By using these wastes for energy, disposal costs are avoided, and industries are better able to compete. I would also like to commend Mississippi State University and Jackson State University for their continuing research into this important scientific area.

Mr. Chairman, with your permission I have some questions I'd like to submit for the record.

Senator DOMENICI. Let me say how good it has been to have you working with us on this subcommittee. You have some very significant interests, but I'm very pleased to find that when we have problems on this committee, you're there to help us. It's not just strictly what's going on in your State, and we all need each other. Some very tough, tough problems when you cut the budget as much as ours here.

I want to make one last observation before I proceed to the witnesses. I don't know how to solve it, but I want to say about 10 years ago or a little less, a couple of Senators circulated around and got most of us to sign up on a resolution. Perhaps you signed it like I did and you probably, having been here awhile, chuckled as you signed it. We were going to make the NIH, National Institute of Health, double in 10 years. Of course, we signed it as we walked out the door wondering, who's kidding who?

Well, it happened, and every year after that it would be among the last bills, and sure enough, somebody would stand up and say, well, in order to meet our resolution we need $680 million more and the next year they needed a billion and here we have the largest National Institute of Health growth in a decade of any institution of that type in the world has ever seen. And here we sit with everybody telling us the counterpart is science, right, that without basic science, pretty soon the NIH, with all of its work, is going to be without the talent that's needed to back up the medical people.

And here we come, not critical of the President, after all we're in this terrific deficit, but here we are. While that occurred, we're cutting basic science, not increasing it. And I'm just wondering what we have to do around here to get us on a path where we recognize that these scientists and scientific prowess is not going to keep America if we don't fund it.

ENERGY EFFICIENCY AND RENEWABLE ENERGY

And so with that, I'm very sorry to start with such a negative comment, but let me open with you, Mr. Garman. You're the Assistant Secretary of Energy Efficiency and Renewable Energy and we want you to give your testimony and be ready for questions. I do want to say to you, sir, from the first time I inquired of you about this work, you have come a long way and I am very complimentary of you.

First of all, you are not run by the renewable associations out here in America. They have their interests but they don't run your Department. You're not supposed to be running their editorials, you're not supposed to be paying for their journals. Remember, we had all that going when you took over. Of course, all they did was get mad. Then when you looked at it you found that Domenici was

right, that if you want to do research, you ought to do research, but you sure shouldn't be paying for various organizations to get done what they want. They aren't synonymous with research. And now I think it's pretty clean in that regard.

I also want to tell you that we can do as much research as you want, but ultimately Americans want to see some of this work, and I am very, very pleased that I heard today that Democratic leader said we have the votes to pass the Energy bill. Now why would I be speaking of that at the same time? Well, you know, if you want to build wind energy, you want to build solar energy and biomass energy, everybody knows how to do that. You can perfect it, but that's already passed, your research issues.

And we're ready to go and build those but we need the incentive that caused them to move ahead so rapidly, and what everybody's finding out now, there is no incentive today. And people say, well what do you mean? Well, the incentives expired in January, so those who are very anxious and terribly enamored as most of us are with energy that comes from wind, you ought to know that unless you have a project that is already going, there are no new ones, and there's nobody going to do a new one. Why? Because they can't afford it.

But if we pass this bill they got this wonderful incentive for this next decade, and you will see biomass and geothermal and these other ones, you'll see them flourish across the land. The biggest one will be wind. Whether the public's going to want that much wind, I don't know. It's going to look funny because there's going to be a lot of it, but I think we're going to win, I think it's going to happen.

All right, would you proceed with your testimony? Make it brief, please.

STATEMENT OF DAVID GARMAN

Mr. GARMAN. Yes, sir. And thank you for your comments. As you noted in your statement, we are seeking an increase of $17.3 million in the renewable energy funding, and a budget increase in this environment does constitute an awesome responsibility and we understand that. We're not only mindful of how much we spend, but the way we spend it, as you noted, and we're proud of the fact that OMB has recognized the Department of Energy as leading the pack of Cabinet agencies in terms of management improvement, and we're also proud that the Office of Management and Budget has singled out the Office of Energy Efficiency and Renewable Energy as an example in implementing the President's management agenda.

So I will very briefly mention a few highlights of our budget. Our hydrogen technology subprogram is a key component of the President's Hydrogen Fuel Initiative. For 2005, we request $95.3 million, a $13.3 million increase. With these funds we propose to continue and accelerate our work with regard to hydrogen production, safety, storage, codes and standards, and other work that's critical to the long-term success of this initiative.

Last year, roughly $40 million out of our total hydrogen appropriation of $82 million was earmarked for some specific projects that in many cases were inconsistent with our research plan, so we

will have to delay some very important work in areas such as hydrogen storage and production that the National Academy of Sciences and others have told us is very important to the success of our program.

For our solar energy technology program, we're seeking $80.3 million, roughly equivalent to the unencumbered amount of our fiscal year 2004 appropriations. With this funding, we'll continue our work to lower the cost of photovoltaic solar energy systems, and for the first time in several years we're seeking funding for concentrating solar power technologies.

Our wind energy technology program has been successful in bringing down the cost of electricity generated from wind. Wind energy systems have been the fastest growing source of electricity worldwide for over a decade, but, of course, as the chairman mentioned, that is dependent on the production tax credit, which we do hope Congress will extend very quickly.

We are starting to devote more attention to the promise of offshore wind and our focus on wind energy has shifted to larger blades and turbines using advanced materials that will allow economically viable wind development in lower wind speed areas that are distributed across the country.

For our hydropower technology work, we request $6 million, a $1.1 million increase over the fiscal year 2004 appropriation. Geothermal, as the chairman mentioned, offers a promise as a baseload renewable energy resource, particularly in the U.S. West. Our program focuses on exploration and reservoir technologies and drilling research to enable industry to locate and produce new geothermal fields at greatly reduced cost.

Our biomass and biorefinery system R&D program is focused on technologies to transform our domestic biomass resources into high value chemicals, fuels, and power. In fiscal year 2005, we're seeking $72.6 million for activities conducted under this appropriation. That's $13.9 million less than the fiscal year 2004 amount. However, last year we did receive nearly $41 million in earmarks, so we're actually seeking far more funding directed toward our biomass and biorefinery R&D goals than we received last year.

PREPARED STATEMENT

There are a variety of other programs and activities that time doesn't allow me to mention, but for now I ask that my full statement appear in the record and I'm happy to answer any questions this committee has either today or in the future. Thank you, Mr. Chairman.

[The statement follows:]

PREPARED STATEMENT OF DAVID GARMAN

Mr. Chairman, Members of the subcommittee, I appreciate the opportunity to testify on the Fiscal Year 2005 President's Budget request for the Office of Energy Efficiency and Renewable Energy (EERE). My focus will be the renewable energy activities under the purview of this subcommittee.

The research and development activities surrounding and the deployment of advanced clean energy technologies are already making a difference in the lives of Americans, and they will have an even greater impact in the future. The overall EERE budget request for fiscal year 2005 is a robust $1.25 billion, an increase of $15.3 million over the comparable fiscal year 2004 appropriation. For the renewable energy programs funded through the Energy and Water Development appropriation,

the fiscal year 2005 request totals $374.8 million, a $17.3 million increase over the fiscal year 2004 appropriation and 30 percent of the total EERE Budget.[1]

We are not only mindful of how much we spend on these programs, but also the manner in which we operate and the results we are achieving. Our budget is prioritized in accordance with the National Energy Policy Report and the Department of Energy Strategic Plan. EERE has also used the research and development investment criteria called for in the President's Management Agenda to focus our research and development dollars on a balanced portfolio of well-planned activities that could generate significant public benefits and that require Federal involvement to be successful.

The Office of Management and Budget (OMB) recently announced that DOE has made the most progress among cabinet-level agencies in the implementation of the President's Management Agenda. OMB recognized the Department as the cabinet-level agency "leading the pack with regard to management improvement." In support of that, EERE in 2002 underwent a dramatic restructuring to streamline program management and centralize administration functions with a focus on developing consistent, uniform and efficient business practices. We are also increasingly successful in linking our expenditures with performance and results. We are striving to achieve more work in the laboratory with every research and development dollar entrusted to our stewardship. While we are very proud of the accomplishments we have made, a great deal of progress remains to be made in all of these areas.

RENEWABLE ENERGY PROGRAMS FISCAL YEAR 2005 BUDGET REQUEST

The renewable energy programs included in the Energy Supply account and funded within the Energy and Water Development appropriations include Hydrogen Technology, Solar Energy Technology, Wind and Hydropower Technologies, and Geothermal Technology. Activities in the Biomass Program and Intergovernmental programs are funded through both the Energy and Water Development and Interior and Related Agencies appropriations.

HYDROGEN TECHNOLOGY

The Fiscal Year 2005 Budget Request for Hydrogen Technology is $95.3 million, a $13.3 million increase over the fiscal year 2004 appropriation. Much of the proposed increase is for hydrogen safety research. This includes safety testing and analysis on bulk storage systems, fuel dispensing equipment, and piping to support new codes and standards specific to hydrogen. The Department has worked with the Department of Transportation and other agencies on an interagency codes and standards plan. Under this activity, we will also develop system safety requirements for producing hydrogen and sensors to detect hydrogen leaks.

Research undertaken in the Hydrogen Technology Program is also targeted to reduce the cost of distributed hydrogen production from electrolysis and natural gas reformation. An enhanced focus on electrolysis, as recommended by the National Research Council, may lead to cost competitive production of hydrogen from renewable energy at $2.25 per gallon of gasoline equivalent by 2015.

One of the major technical obstacles we face is developing the means to store sufficient amounts of hydrogen aboard the vehicle to provide a driving range of greater than 300 miles. The fiscal year 2005 budget provides funding for innovative storage technologies to be pursued under our "Grand Challenge" to leading universities and national laboratories. "Grand Challenge" is our name for a competitive solicitation that was directed towards the scientific community to get the best minds at our universities and national labs to propose research ideas to tackle this challenging problem.

The Hydrogen program is also stepping up its efforts on education at all levels, so Americans know what the hydrogen economy will mean for them, their businesses, and the environment, and understand how to handle hydrogen safely in their communities.

Our hydrogen work is well integrated with the fuel cell and vehicle work funded through the Interior Appropriations bill. Taken together, these programs represent the majority of the Federal efforts comprising the Hydrogen Fuel Initiative announced by President Bush during his 2003 State of the Union Address, and we have published very specific, measurable technical goals against which to measure our progress. If we achieve our technical objectives, the automotive and energy industries will be in a position to consider commercialization by 2015, with mass market availability of both vehicles and refueling infrastructure by 2020.

[1] Activities focused on energy conservation are funded through the Interior and Related Agencies appropriations bill.

The President's initiative was received by Congress with enthusiasm, and we appreciate this subcommittee's support. However, while the fiscal year 2004 EERE appropriation for hydrogen technology was approximately $82 million, roughly half of those funds were earmarked for specific projects that are not wholly consistent with our research plan or the recommendations of the National Research Council. As a consequence, we must delay some very important work in areas such as hydrogen storage and production, and thus our ability to meet our established research targets in the specified timeframes may be in jeopardy. The Department looks forward to working with the subcommittee to help ensure that projects supported by the Committee are consistent with our established goals in an effort to keep our progress on track.

SOLAR ENERGY TECHNOLOGY

The Solar Energy Technology program focuses research on advanced solar devices that can provide the Nation with a widely available domestic energy resource to help meet electricity needs and reduce the stress on our critical electricity infrastructure. Efforts are directed in the interrelated areas of Photovoltaics, Solar Heating and Lighting, and Concentrating Solar Power. The fiscal year 2005 budget request for Solar Technology is $80.3 million. This is roughly equivalent to the unencumbered amount of the fiscal year 2004 appropriation of $83.4 million, which included $3.6 million earmarked to specific recipients.

Photovoltaic research and development seeks to reduce the manufacturing cost of highly reliable photovoltaic modules from $2.10/watt in 2003 to $1.85/watt by fiscal year 2005. The program is focused on next-generation technologies such as thin-film photovoltaic cells and leap-frog technologies such as polymers and nanostructures. Systems engineering efforts seek to increase system durability and develop technologies to improve interconnections with the electric grid. The fiscal year 2005 request of $75.4 million for photovoltaic includes: $30 million for critical fundamental research, including $2.1 million to equip the new Science and Technology Facility at the National Renewable Energy Laboratory; $29 million for advanced materials, including thin films and next generation materials with potential for dramatic cost reductions; and $16.4 million for technology development efforts to improve reliability of the entire system, including testing, verification, and deployment activities for grid-connected applications and analysis of private sector commercialization options.

The fiscal year 2005 $2.9 million request for Solar Heating and Lighting will support efforts on hot water and space heating for residential and commercial buildings in collaboration with industry partners. The program uses new formulations of lightweight polymer materials to modernize solar water heaters, making them easier to install, while lowering the cost of solar water heating in non-freezing climates.

Last year, we did not request any funding for the Concentrating Solar Power (CSP). In light of recent studies we sought from an independent engineering firm, a draft of which was reviewed by the National Research Council, the Department proposes $2 million for Concentrating Solar Power in fiscal year 2005 to support a more thorough investigation of the appropriate R&D course needed to realize the potential for CSP. The fiscal year 2005 budget request will maintain essential facilities and support work with several States on the establishment of 1,000 MW of Concentrating Solar Power in the Southwest, while developing a comprehensive program plan to help inform the fiscal year 2006 budget development process and a longer term R&D plan.

ZERO ENERGY BUILDINGS

Zero Energy Buildings activities develop strategies to integrate renewable energy technologies into highly energy-efficient buildings that produce as much or nearly as much energy as they consume on an annual basis. The fiscal year 2005 budget request for the Building Technologies Program funded through the Interior Appropriations bill combines this energy research and development with ongoing activities in the Buildings program and therefore, no fiscal year 2005 funds are requested in this area.

WIND AND HYDROPOWER TECHNOLOGIES

Wind and Hydropower research and development supports the Nation's fastest growing and most widely used renewable energy resources. These technologies emit no air pollution or greenhouse gases, and they produce significant amounts of bulk power to help meet America's growing need for clean, domestic sources of electricity.

Since 2000, installed wind turbine capacity in the United States has more than doubled, driven in large part by the tremendous reductions in cost that have re-

sulted from wind energy research. Our research contributed to reducing the cost of electricity generation by a factor of 20 since 1982, to 4 cents or less per kilowatt-hour in areas with excellent wind resources.

The fiscal year 2005 budget request for Wind Energy is $41.6 million, $290,000 more than the fiscal year 2004 appropriation, which included $1.4 million in funds that were earmarked to specific recipients. The $12 million request for Low Wind Speed Technology research and development will support multiple large wind system technology pathways to achieve the goal of 3 cents per kilowatt-hour for onshore systems. It also supports new work in off-shore systems to help achieve a cost goal of 5 cents or less per kilowatt-hour. Fiscal year 2005 activities will include field testing of the first full-scale low wind speed technology prototype turbine and fabrication and testing of advanced drivetrains, power converter and blades for future low wind speed turbines. The $17 million request for supporting research and testing will engage the capabilities of the National Labs, universities and private sector for technical support including both facility and field tests of newly developed components and systems to ensure design and performance compliance.

Hydropower is the most widely used form of renewable energy in the world today and accounts for about 7 percent of total electricity generation in the United States and over 75 percent of domestic renewable electricity generation. The fiscal year 2005 budget request for Hydropower Technologies is $6.0 million, a $1.1 million or 22 percent increase over the fiscal year 2004 appropriation. The Department's research approach involves a unique combination of computer modeling, instrumentation, lab testing, and field-testing that is improving the design and operation of the next generation of hydropower technology. The request will support development of technologies that will enable hydropower operators at existing plants to generate more electricity with less environmental impact. This will be done through environmentally enhanced, improved efficiency turbines, as well as with new methods for optimizing unit, plant, and reservoir systems to increase energy production per unit water. Supporting research and testing will improve understanding of fish response to the physical stresses experienced in passage through turbine systems. The program will also explore ways to harness undeveloped hydropower capacity without constructing new dams.

GEOTHERMAL TECHNOLOGY

The fiscal year 2005 budget request for Geothermal Technologies is $25.8 million, a $300,000 increase from the fiscal year 2004 appropriation of $25.5 million, which included almost $2 million in funds that were earmarked to specific recipients. Geothermal energy generates electricity and provides heat for applications such as aquaculture, crop drying, and district heating, and for use in heat pumps to heat and cool buildings. The program focuses on developing technology that optimizes the use of geothermal energy through improved exploration, drilling, reservoir engineering, and energy conversion. These technology improvements lead to cost-effective energy production at new geothermal fields and expanded production at existing fields.

Fiscal year 2005 resource development activities will characterize and assess the geothermal resource by understanding the formation and evolution of geothermal systems, including a collaborative effort with the U.S. Geological Survey on a national geothermal resource assessment. Activities in the Enhanced Geothermal Systems program seek to increase the productivity and lifetime of reservoirs, potentially more than doubling the amount of viable geothermal resources in the West. Fiscal year 2005 activities will include Enhanced Geothermal System field tests in California and Nevada, and tests of the Diagnostics-While-Drilling advanced drilling system in a high temperature geothermal well. New geothermal State working groups in Alaska and California will be added, bringing the number of groups to nine.

BIOMASS AND BIOREFINERY SYSTEMS R&D

Biomass and Biorefinery Systems R&D focuses on advanced technologies to transform the Nation's domestic biomass resources into high value chemicals, fuels, and power. With the U.S. Department of Agriculture, the DOE biomass program leads the multi-agency Biomass Research and Development Initiative that coordinates and accelerates all Federal bioenergy research and development in accordance with the Biomass Research and Development Act of 2000.

The 2002 EERE reorganization integrated several bioenergy activities into one office to allow a clear and consistent set of goals and objectives and increased collaboration with industry. The program worked closely with industry to produce a vision and R&D roadmap that focuses on the most promising long-term opportunities that, with leveraged funding from industry, can realize a goal of establishing the first

large-scale biorefinery based on agricultural residues by 2010. A multiyear technical plan in support of this goal provides a comprehensive work breakdown structure with milestones, costs and schedule, so that every project is linked to program goals, objectives and technical barriers.

In fiscal year 2005, the Department is requesting $72.6 million for biomass program activities in the purview of the Energy and Water appropriation, $13.9 million less than the fiscal year 2004 appropriation. However, it is important to note that the fiscal year 2004 appropriation included nearly $41 million, or nearly half of the biomass budget, targeted to specific projects not identified in program plans. Congressional earmarking has delayed progress toward the program goals and diminished core research capabilities at the National Laboratories.

Biomass activities funded through the Energy and Water appropriation focus on advanced biorefinery technologies to produce low cost sugars, syngas and pyrolysis oils. In fiscal year 2005, the thermochemical program will test the continuous production, cleanup and conditioning of biomass syngas and pyrolysis oils suitable for conversion to fuels, chemicals or hydrogen, and examine the production of hydrogen from biomass via synthesis gas. Work will continue with industry on improved process integration capabilities for industrial biorefineries, and the program will evaluate existing partnerships for more productive and lower-cost cellulase enzyme systems. Additional partnerships may further improve the procession operations leading to cheaper biomass-based sugars. Projects to test and evaluate the performance and costs of converting corn fiber to fuels and co-products will also continue.

INTERGOVERNMENTAL ACTIVITIES

Intergovernmental Activities funded through the Energy and Water appropriation include a variety of programs to promote renewable energy technologies. The fiscal year 2005 request for these programs is $16 million, an increase of $1.3 million over the fiscal year 2004 appropriation.

The International Renewable Energy Program provides technical assistance to support sustainable development and emerging market economies. These efforts expand the market of U.S. industries and reduce the cost of energy to trading partners while improving their environment and creating new jobs. In fiscal year 2005, we request $6.5 million for international activities, a $612,000 increase from the fiscal year 2004 appropriation, which included nearly $2.7 million in funds that were earmarked to specific recipients. We propose to use these funds for a wide variety of partnership activities under the U.S. Clean Energy Initiative arising from the World Summit on Sustainable Development.

In fiscal year 2005, we request $5.5 million for the Tribal Resources Program, an increase of $594,000 over the fiscal year 2004 appropriation. The program provides assistance to Native American Tribes and Tribal entities in assessing energy resources, comprehensive energy plan development, energy technology training, and project development. This primarily involves the development of energy efficiency and renewable energy resources on Tribal lands. Projects include resource assessments and development plans for energy efficient and renewable energy technologies. Technical assistance helps Native American Tribes, and Tribal Colleges develop culturally compatible energy and economic development plans and strategies reflecting Tribal priorities. In addition, the program invests in technical program and market analysis and performance assessment in order to direct effective strategic planning. Again, this is an area where congressionally directed spending totaling $3.2 million, or more than half of our funding, inhibits our ability to issue and entertain competitive funding opportunities for tribes.

We are also requesting $4.0 million dollars for the Renewable Energy Production Incentive, which will create an incentive similar to the renewable production tax credits available to investor-owned utilities for public power providers.

DEPARTMENTAL ENERGY MANAGEMENT PROGRAM

The Departmental Energy Management Program seeks to improve energy and water efficiency, promote renewable energy use, and manage utility costs in DOE facilities and operations. The Department owns or leases about 11,000 buildings at more than 50 sites across the United States. The fiscal year 2005 request for Department Energy Management Program activities of $1.97 million, about the same as the fiscal year 2004 appropriation, will allow continued facility audits to identify energy conservation opportunities; provide funding for best practices identification and dissemination; and accomplish energy conservation retrofits through direct funding and alternative financing.

NATIONAL CLIMATE CHANGE TECHNOLOGY INITIATIVE COMPETITIVE SOLICITATION PROGRAM

This is the third year we seek funding for the Competitive Solicitation Program as part of the President's National Climate Change Technology Initiative. The competitive solicitation process will seek innovative, novel, high-impact climate change technology options that can complement and enrich the existing portfolio of climate change-related research and applied technology. By stimulating and strengthening Federal research in this area, the program hopes to inspire private sector interest and international cooperation in a sustained collaborative program of research investment aimed at accelerating technology development and advancing the administration's climate change goals. The Department is requesting $3 million in fiscal year 2005 for this initiative.

FACILITIES AND INFRASTRUCTURE

This Facilities and Infrastructure budget addresses capital requirements for capital projects, equipment and plant maintenance at the National Renewable Energy Laboratory (NREL). NREL provides state-of-the-art research facilities, user facilities, analysis, and management of R&D contracts for the Solar, Wind, Geothermal, Biomass, and Hydrogen programs within the Energy Supply budget, and does the same for the programs in the Energy Conservation budget and superconductivity research in the Office of Electricity Transmission and Distribution. NREL is home to 1,100 researchers, engineers, analysts, and administrative staff, plus visiting professionals, graduate students, and interns on a 300-acre campus in Golden, CO, occupying five large research buildings and over 200,000 square feet of research and administrative space in a neighboring office park.

The fiscal year 2005 request of $11.5 million will provide $4.8 million for operation and maintenance funded activities and $6.7 million for continued construction of the Science and Technology Facility.

PROGRAM DIRECTION

Program Direction provides the technical direction and oversight resources needed to successfully implement EERE renewable energy programs. The budget requests covers Federal staff, as well as associated properties, equipment, supplies, and materials required to support the management and oversight of programs. Areas funded by these requests include information systems and technology equipment; travel; public information activities; support service contractors; and crosscutting performance evaluation, analysis and planning.

The fiscal year 2005 budget request for Program Direction in the Energy Supply account is $20.7 million, which is $8.3 million more than the fiscal year 2004 appropriation. The increase in fiscal year 2005 will fund activities to develop and strengthen EERE's program management and project management practices at both Headquarters and field offices. A new Project Management Center that includes the Golden Field Office and other EERE field organizations is responsible for project management of research and development partnerships, laboratory contract administration including the management and operating contract for the National Renewable Energy Laboratory, and providing procurement, legal, business management, and information resource management. This Project Management Center initiative allows our Laboratories to devote more time to real research as opposed to management oversight functions, and will help our program dollars remain focused on research, development, and deployment.

The proposed increase will also provide full funding for the renewable energy programs' share of landlord services at the Golden Field Office and its fair share of Information Technology services and local-area network operations.

The budget request also includes $3 million to provide analytical and technical support services to the cross-cutting Climate Change Technology Program, a multi-agency research planning and coordination activity led by DOE.

CONCLUSION

Mr. Chairman, we believe the administration's fiscal year 2005 budget request for renewable energy technologies reflects a robust, balanced and consistent approach toward meeting the Nation's energy goals of increased energy security through utilization of diverse domestic supplies, greater freedom of choice of technology, and reduced financial costs and environmental impacts of energy utilization.

This completes my prepared statement, and I am happy to answer any questions the subcommittee may have.

OFFSHORE WIND

Senator DOMENICI. I have a series of questions, but your testimony kind of interrupted my thoughts and suggested that I ask you a question. When you mentioned offshore activities, we've run into a lot of arguing about people wanting more say-so about where these great big fields of windmills are located. In fact, we almost got an amendment on the floor. They were all waiting for me to do it and I guess I let them down to give local authority to decide yes or no.

I'm not asking you that question, but I'm saying, is there a significant growth in the complaints about where you should locate these fields and tell me a little bit about what's happening?

Mr. GARMAN. Sure. Today the regulatory structure is very, very difficult to navigate. There are a variety of State and local agencies that one has to deal with if one wants to put offshore wind in place. Offshore wind has such great promise because it is a tremendous resource that's located very close to the population and load centers, particularly on the northeast coast of the United States, and we believe wind energy could be very competitive there.

But today, unlike if you're trying to develop offshore leasing for oil and gas and you deal with only one agency, the Minerals Management Service as the lead agency to develop offshore wind you have to deal with several agencies. The Army Corps of Engineers is the lead agency, but it is very, very difficult to deal with the regulatory structure.

There is a provision in the energy bill, however, that would vest authority with the Department of the Interior to begin to manage offshore leasing for wind similar to the way they manage it for offshore outer continental shelf leasing.

Senator DOMENICI. Well, sir, you mentioned the northeast. What's the issue off the shore of Massachusetts?

Mr. GARMAN. The Cape Wind Project is a project that is probably economically viable today, but there is, of course, concern, NIMBYism, some call it, about the impact of the wind turbines on the horizon. I think wind turbines are aesthetically beautiful, but that's me. Not everybody agrees.

So we are actually developing the larger technology that could be offshore at such a distance that it couldn't be seen from shore, and I think that could help ameliorate many of the concerns that people have about the aesthetics.

Senator DOMENICI. There isn't any need that it be right close, but does it get more expensive as you go out?

Mr. GARMAN. It does because the water is deeper. But particularly in the Northeast, less so on the West Coast, you have shallow water that extends 20 or more kilometers offshore. The limit today is about 30 meters. If you go deeper than that, we don't quite have the technology today to install wind turbines.

Senator DOMENICI. Okay. Thank you very much. Dr. Orbach.

OFFICE OF SCIENCE

STATEMENT OF RAYMOND L. ORBACH, DIRECTOR

Dr. ORBACH. Mr. Chairman, members of the committee, I want to thank you for your support over the years. I look forward to

working with you to ensure that our Nation stays at the leading edge of science and technology for energy security.

The Office of Science 2005 budget request is $3.4 billion, an increase of $72 million, or 2.2 percent over the fiscal year 2004 appropriation when congressionally-directed projects are taken into account. This request allows the Office of Science to carry forward with the Department's and the administration's priorities in critical areas of science.

It enables us to begin our planning for the future of science in America through important progress on the priorities set out in the Facilities for the Future of Science report and in the Office of Science strategic plan. It increases the operation of our user facilities from 92 percent to 95 percent of optimum, enhancing our leverage for our construction investment. The full details of our budget request are provided in the written statement I have submitted.

By title, let me talk about the highlights of our budget. It will keep our Nation on the path to fusion power, with important investments in ITER and other fusion programs. It will enable investments in leadership-class machines for high-end computation, essential for America's open scientific technological research and economic development.

The President's request for the Office of Science will fund vital research enabling the hydrogen economy. The President's request provides funding for long-lead procurement of the LINAC coherent light source, an X-ray free-electron laser, which will truly provide a new window on nature.

PREPARED STATEMENT

Finally, this request provides the funding needed to initiate project engineering design activities for the GTL facility for the production and characterization of proteins and molecular tags, which promises to accelerate genomics research.

I would be delighted to answer any of your questions and I hope that my testimony can be submitted for the record. Thank you.

[The statement follows:]

PREPARED STATEMENT OF RAYMOND L. ORBACH

Mr. Chairman and Members of the subcommittee, thank you for the opportunity to testify today about the Department of Energy's Office of Science fiscal year 2005 budget request. The Department appreciates the support of the Chairman and the Members of the committee over the past years and I look forward to working with you to ensure that our Nation stays at the leading edge of science and technology.

The Office of Science fiscal year 2005 budget request is $3.4 billion, a $68.5 million decrease from the fiscal year 2004 appropriation levels. When $140.8 million for fiscal year 2004 congressionally-directed projects is set aside, there is an increase of $72.3 million in fiscal year 2005. This request makes investments in: Advanced Scientific Computing Research (ASCR), Basic Energy Sciences (BES), Biological and Environmental Research (BER), Fusion Energy Sciences (FES), High Energy Physics (HEP), Nuclear Physics (NP), Science Laboratories Infrastructure, Safeguards and Security, Workforce Development for Teachers and Scientists and Science Program Direction.

It allows us to increase support for high priority scientific research, increase operations at our key scientific user facilities, keep major science construction projects on schedule, and support new initiatives. This request, coming at a time of tight overall Federal budgets, is also a demonstration of the administration's support for basic research and the role that fundamental science plays in keeping our Nation strong and secure.

OFFICE OF SCIENCE FISCAL YEAR 2005 PRESIDENT'S REQUEST

[B/A in thousands]

	Fiscal Year 2003 Comparable Approp.	Fiscal Year 2004 Comparable Approp.	Fiscal Year 2005 President's Request
Science:			
Advanced Scientific Computing Research	$163,185	$202,292	$204,340
Basic Energy Sciences	1,001,941	1,010,591	1,063,530
Biological & Environmental Research	494,360	641,454	501,590
Congressionally-directed projects	(51,927)	(140,762)	.....
Core Biological and Environmental Research	(442,433)	(500,692)	(501,590)
Fusion Energy Sciences	240,695	262,555	264,110
High Energy Physics	702,038	733,631	737,380
Nuclear Physics	370,655	389,623	401,040
Science Laboratories Infrastructure	45,109	54,280	29,090
Science Program Direction	137,425	152,581	155,268
Workforce Development for Teachers & Scientists	5,392	6,432	7,660
Small Business Innovation Research/Technology Transfer	100,172	.....	.....
Safeguards and Security	61,272	56,730	67,710
Subtotal, Science	3,322,244	3,510,169	3,431,718
Use of prior year balances	.....	−10,000	.....
Total, Science	3,322,244	3,500,169	3,431,718
Total, excluding Congressionally-directed projects	(3,270,317)	(3,359,407)	(3,431,718)

I am proud to tell you that the Department of Energy was ranked the most improved cabinet-level agency in the most recent scorecard to assess implementation of the President's Management Agenda (PMA). The scorecard, which evaluates agency performance in the areas of human capital, competitive sourcing, financial management, e-government, and budget/performance integration, was issued by the Office of Management and Budget (OMB) in January and recognized the Department as one of the agencies "leading the pack with regard to management improvement."

The Department has made a strong commitment to a results-driven, performance-based approach to management of itself and its government-owned, contractor-operated laboratories. Laboratory contracts are being renegotiated so that mutually agreed upon performance measures will result in increased contractor authority and accountability, while lessening the burden of DOE day-to-day oversight of activities. In January of this year, the Department announced that it will compete the management and operating contracts for seven of the DOE laboratories.

In September 2003, the Department issued its updated Strategic Plan and incorporated this Plan and the Performance Plan into the fiscal year 2005 budget request. The performance measures included in this budget were developed with input from our scientific advisory committees and OMB. A website (www.sc.doe.gov/measures) has been developed to more fully explain the new measures within the context of each program.

SCIENCE PLANS AND PRIORITIES

When I joined the Office of Science after a career as a university scientist and administrator, I came with an appreciation for the four key roles that the Office plays in the U.S. research effort. We provide solutions to our Nation's energy challenges, contributing essential scientific foundations to the energy, national, and economic security missions of the DOE. We are the Nation's leading supporter of the physical sciences, investing in research at over 280 universities, 15 national laboratories, and many international research institutions. We deliver the premier tools of science to our Nation's science enterprise, building and operating major research facilities for open access by the science community. We help keep the United States at the forefront of intellectual leadership, supporting the core capabilities, theories, experiments, and simulations to advance science.

This fiscal year 2005 budget request will set us on the path toward addressing the challenges that face our Nation in the 21st Century. SC has recently released "Facilities for the Future of Science: A Twenty-Year Outlook" which sets an ambitious agenda for scientific discovery over the next two decades. The priorities established in this plan—which is clearly not a budget document—reflect national priorities set by the President and the Congress, our commitment to the DOE missions,

and the views of the U.S. scientific community. Pursuing these priorities will be challenging, but they hold enormous promise for the overall well-being of all of our citizens. We have recently released an updated Office of Science Strategic Plan that is fully integrated with the Facilities Plan, the Department's Strategic Plan, and the President's Management Agenda—including the R&D Investment Criteria and OMB's Program Assessment Rating Tool. The fiscal year 2005 budget request begins to implement these plans.

I am increasingly mindful that the health and vitality of U.S. science and technology depends upon the availability of the most advanced research facilities. DOE leads the world in the conception, design, construction, and operation of these large-scale devices. These machines have enabled U.S. researchers to make some of the most important scientific discoveries of the past 70 years, with spin-off technological advances leading to entirely new industries. More than 19,000 researchers and their students from universities, other government agencies (including the National Science Foundation and the National Institutes of Health), private industry, and those from abroad use DOE facilities each year. These users are growing in both number and diversity.

Because of the extraordinarily wide range of scientific disciplines required to support facility users at national laboratories, and the diversity of mission-driven research supported by the SC, we have developed an interdisciplinary capability that is extremely valuable to some of the most important scientific initiatives of the 21st Century. There is also a symbiotic relationship between research and research tools. Research efforts advance the capabilities of the facilities and tools that in turn enable new avenues of research.

Excluding funds used to construct or operate our facilities, approximately half of our research funding goes to support research at universities and institutes. Academic scientists and their students are funded through peer-reviewed grants, and SC's funding of university research has made it an important source of support for graduate students and postdoctoral researchers in the physical sciences during their early careers.

Mindful of the role that the Office of Science plays in supporting the physical sciences and other key fields, I would now like to briefly outline some specific investments that we are proposing in the Fiscal Year 2005 Request.

SCIENCE PROGRAMS

ADVANCED SCIENTIFIC COMPUTING RESEARCH

Fiscal Year 2004 Comparable Appropriation—$202.3M; Fiscal Year 2005 Request—$204.3M

The Advanced Scientific Computing Research (ASCR) program significantly advances scientific simulation and computation, applying new approaches, algorithms, and software and hardware combinations to address the critical science challenges of the future, and provides access to world-class, scientific computation and networking facilities to the Nation's scientific community to support advancements in practically every field of science and industry. The ASCR budget also supports the Scientific Discovery through Advanced Computing (SciDAC) program—a set of coordinated investments across all Office of Science mission areas with the goal of achieving breakthrough scientific advances via computer simulation that were previously impossible using theoretical or laboratory studies alone.

The fiscal year 2005 budget request includes $204.3 million for ASCR to advance U.S. leadership in high performance supercomputing and networks for science and to continue to advance the transformation of scientific simulation and computation into the third pillar of scientific discovery. The request includes $38.2 million for the Next Generation Computer Architecture (NGA) research activity, which is part of a coordinated interagency effort that supports research, development and evaluation of new architectures for scientific computers that could help enable continued U.S. leadership in science. Enhancements are supported for ASCR facilities—the Energy Sciences Network (ESnet) and the National Energy Research Scientific Computing Center (NERSC). The request also includes $8.5 million for the new Atomic to Macroscopic Mathematics research effort to provide the research support in applied mathematics needed to break through the current barriers in our understanding of complex physical processes.

BASIC ENERGY SCIENCES

Fiscal Year 2004 Comparable Appropriation—$1,010.6M; Fiscal Year 2005 Request—$1,063.5M

The Basic Energy Sciences (BES) program is a principal sponsor of fundamental research for the Nation in the areas of materials sciences and engineering, chemistry, geosciences, and bioscience as it relates to energy. This research underpins the DOE missions in energy, environment, and national security; advances energy-related basic science on a broad front; and provides unique user facilities for the scientific community and industry.

For fiscal year 2005, the Department requests $1.1 billion for BES including $208.6 million to continue to advance nanoscale science through atomic- and molecular-level studies in materials sciences and engineering, chemistry, geosciences, and energy biosciences. This supports Project Engineering Design (PED) and construction of four Nanoscale Science Research Centers (NSRC's) and a Major Item of Equipment for the fifth and final NSRC. NSRC's are user facilities for the synthesis, processing, fabrication, and analysis of materials at the nanoscale. The request also includes $80.5 million for construction and $33.1 million for other project costs for the Spallation Neutron Source, and $54.1 million for research, development, PED, and long lead procurement of the Linac Coherent Light Source, a revolutionary x-ray laser light source. With these tools, we will be able to understand how the compositions of materials affect their properties, watch proteins fold, see chemical reactions, and design matter for desired outcomes.

The fiscal year 2005 budget request also includes $29.2 million for activities that support the President's Hydrogen Fuel Initiative. This research program is based on the BES workshop report "Basic Research Needs for the Hydrogen Economy," which highlights the enormous gap between our present capabilities and those required for a competitive hydrogen economy.

BIOLOGICAL AND ENVIRONMENTAL RESEARCH

Fiscal Year 2004 Comparable Appropriation—$641.5M; Fiscal Year 2005 Request—$501.6M

The Biological and Environmental Research (BER) program advances energy-related biological and environmental research in genomics and our understanding of complete biological systems, such as microbes that produce hydrogen; in climate change, including the development of models to predict climate over decades to centuries; developing science-based methods for cleaning up environmental contaminants; in radiation biology, providing regulators with a stronger scientific basis for developing future radiation protection standards; and in the medical sciences, by developing new diagnostic and therapeutic tools, technology for disease diagnosis and treatment, non-invasive medical imaging, and biomedical engineering such as an artificial retina that will restore sight to the blind. For fiscal year 2005, the Department requests $501.6 million for BER. The fiscal year 2004 appropriation includes $140.8 million of one-time Congressionally-directed projects, for which no additional funds are being requested in fiscal year 2005.

Research on microbes through the Genomics: GTL program, addressing DOE energy and environmental needs, continues to expand from $63.5 million in fiscal year 2004 to $67.5 million in fiscal year 2005. The request also provides $5 million for initiation of Project Engineering Design (PED) activities for the GTL Facility for the Production and Characterization of Proteins and Molecular Tags, a facility that will help move the Genomics: GTL systems biology research program to a new level by greatly increasing the rate and cost-effectiveness with which experiments can be done. DOE, through the Genomics: GTL program, will attempt to use genetic techniques to harness microbes to consume pollution, create hydrogen, and absorb carbon dioxide.

FUSION ENERGY SCIENCES

Fiscal Year 2004 Comparable Appropriation—$262.6M; Fiscal Year 2005 Request—$264.1M

The Fusion Energy Sciences (FES) program advances the theoretical and experimental understanding of plasma and fusion science, including a close collaboration with international partners in identifying and exploring plasma and fusion physics issues through specialized facilities. This includes: (1) exploring basic issues in plasma science; (2) developing the scientific basis and computational tools to predict the behavior of magnetically confined plasmas; (3) using the advances in tokomak research to enable the initiation of the burning plasma physics phase of the Fusion Energy Sciences program; (4) exploring innovative confinement options that offer

the potential of more attractive fusion energy sources in the long term; (5) focusing on the scientific issues of nonneutral plasma physics and High Energy Density Physics; (6) developing the cutting edge technologies that enable fusion facilities to achieve their scientific goals; and (7) advancing the science base for innovative materials to establish the economic feasibility and environmental quality of fusion energy.

When the President announced that the United States would join in the International Thermonuclear Experimental Reactor (ITER) project he noted that "the results of ITER will advance the effort to produce clean, safe, renewable, and commercially available fusion energy by the middle of this century." To this end, the Department continues its commitment to the future of Fusion Energy Science research with a request of $264.1 million, slightly above the fiscal year 2004 enacted level. Within that amount, $38 million is requested for preparations for ITER in fiscal year 2005, $30 million more than in fiscal year 2004. Of this $38 million, $7 million is for scientists and engineers who will support the International Team and for the qualification of vendors that will supply superconducting cable for ITER magnets. The remaining $31 million will be used to support refocused experiments in our tokamak facilities and for component R&D in our laboratories and universities that is closely related to our ongoing program but which is focused on ITER's specific needs. The researchers and facilities that we support will not be doing less work because of ITER, but some of their time and effort will be directed to different, ITER-related, work than they were doing before.

Fabrication continues on the National Compact Stellarator Experiment (NCSX), an innovative confinement system that is the product of advances in physics understanding and computer modeling. In addition, work will be initiated on the Fusion Simulation Project that, upon completion, will provide an integrated simulation and modeling capability for magnetic fusion energy confinement systems over a 15-year development period. The Inertial Fusion Energy research program will be redirected toward high energy density physics research based on recommendations that will come from the recently established Interagency Task Force on High Energy Density Physics.

HIGH ENERGY PHYSICS

Fiscal Year 2004 Comparable Appropriation—$733.6M; Fiscal Year 2005 Request—$737.4M

The High Energy Physics (HEP) program advances our understanding of the basic constituents of matter, including the mysterious dark energy and dark matter that make up most of the universe; the striking imbalance of matter and antimatter in the universe, and the possible existence of other dimensions. Collectively, these investigations will reveal the key secrets of the birth, evolution, and final destiny of the universe. HEP expands the energy frontier with particle accelerators to study fundamental interactions at the highest possible energies, which may reveal previously unknown particles, forces or undiscovered dimensions of space and time; explain how everything came to have mass; and illuminate the pathway to the underlying simplicity of the universe.

For fiscal year 2005, the Department requests $737.4 million for the HEP program, an increase from fiscal year 2004. The highest priority in HEP is the operation, upgrade and infrastructure for the two major HEP user facilities at the Fermi National Accelerator Laboratory (Fermilab) and the Stanford Linear Accelerator Center (SLAC), to maximize the scientific data generated.

In 2005, the Neutrinos at the Main Injector (NuMI) facility will be complete and the beam line will be commissioned. The fiscal year 2005 budget request also supports research and design activities for a new Major Item of Equipment, the BTeV ("B Physics at the TeVatron") experiment at Fermilab that will extend current investigations, using modern detector technology to harvest a data sample more than 100 times larger than current experiments. Research and development work continues in fiscal year 2005 on the proposed Supernova Acceleration Probe (SNAP) experiment for the DOE/NASA Joint Dark Energy Mission (JDEM).

NUCLEAR PHYSICS

Fiscal Year 2004 Comparable Appropriation—$389.6M; Fiscal Year 2005 Request—$401M

The Nuclear Physics (NP) program supports innovative, peer reviewed scientific research to advance knowledge and provide insights into the nature of energy and matter, and in particular, to investigate the fundamental forces which hold the nucleus together, and determine the detailed structure and behavior of the atomic nuclei. Nuclear science plays a vital role in studies of astrophysical phenomena and

conditions of the early universe. At stake is a fundamental grasp of how the universe has evolved, an understanding of the origin of the elements, and the mechanisms of supernovae core collapse. The program builds and supports world-leading scientific facilities and state-of-the-art instruments necessary to carry out its basic research agenda. Scientific discoveries at the frontiers of Nuclear Physics further the Nation's energy-related research capacity, which in turn provides for the Nation's security, economic growth and opportunities, and improved quality of life.

The fiscal year 2005 budget request of $401 million gives highest priority to exploiting the unique discovery potentials of the facilities at the Relativistic Heavy Ion Collider (RHIC) and Continuous Electron Beam Accelerator Facility (CEBAF) by increasing operating time by 26 percent compared with fiscal year 2004. R&D funding is provided for the proposed Rare Isotope Accelerator (RIA) and 12 GeV upgrade of CEBAF, which is located at Thomas Jefferson National Accelerator Facility.

Operations of the MIT/Bates facility will be terminated as planned, following 3 months of operations in fiscal year 2005 to complete its research program. This facility closure follows the transitioning of operations of the Lawrence Berkeley National Laboratory 88-Inch Cyclotron in fiscal year 2004 from a user facility to a dedicated facility for the testing of electronic circuit components for use in space (using funds from other agencies) and a small in-house research program. These resources have been redirected to better utilize and increase science productivity of the remaining user facilities and provide for new opportunities in the low-energy subprogram.

SCIENCE LABORATORIES INFRASTRUCTURE

Fiscal Year 2004 Comparable Appropriation—$54.3M; Fiscal Year 2005 Request—$29.1M

The Science Laboratories Infrastructure (SLI) program supports SC mission activities at SC laboratories by addressing needs related to general purpose infrastructure, excess facilities disposition, Oak Ridge landlord, health and safety improvements and payment in lieu of taxes (PILT).

The fiscal year 2005 budget request supports three ongoing line item construction projects at Lawrence Berkeley National Laboratory, Brookhaven National Laboratory and the Stanford Linear Accelerator Center and nine projects to clean-up/remove 84,000 square feet of excess space to reduce operating costs, and environment, safety and health liabilities, and to free up land for future use. The request also supports activities to maintain continuity of operations at the Oak Ridge Reservation (ORR), including Federal facilities in the town of Oak Ridge and PILT for local communities surrounding Oak Ridge. PILT is also provided to communities surrounding Brookhaven and Argonne East.

We have continued to work cooperatively with the Occupational Safety and Health Administration (OSHA) and the Nuclear Regulatory Commission (NRC) teams as they have conducted audits of our laboratories. NRC has completed its audits; OSHA is expected to complete its audits in mid-March 2004. The laboratories are preparing cost estimates to meet the requirements as identified by those agencies, and we plan to provide this information to Congress by May 31, 2004. Health and safety improvements to address OSHA- and NRC-identified deficiencies and recommendations at Office of Science laboratories are expected to be completed in fiscal year 2004.

SAFEGUARDS AND SECURITY

Fiscal Year 2004 Comparable Appropriation—$56.7M; Fiscal Year 2005 Request—$67.7M

Safeguards and Security activities reflects the Office of Science's commitment to maintain adequate protection of cutting edge scientific resources and assets. The fiscal year 2005 budget request includes $9.8 million for Pacific Northwest Site Office safeguards and security activities, which were transferred from the Office of Environmental Management. In fiscal year 2005, Safeguards and Security will enable the Office of Science laboratories to meet the requirements of Security Condition 3 level mandates for the protection of assets. The request also provides the laboratories with the ability to maintain requirements of increased Security Condition 2 level for 60 days. The funding includes the increase needed to meet expectations of the revised Design Basis Threat approved by the Secretary in May 2003. In addition, critical cyber security investments will be made to respond to the ever changing cyber threat.

WORKFORCE DEVELOPMENT FOR TEACHERS AND SCIENTISTS

Fiscal Year 2004 Comparable Appropriation—$6.4M; Fiscal Year 2005 Request—$7.7M

The mission of the Workforce Development for Teachers and Scientists program is to continue the Office of Science's long-standing role of training young scientists, engineers, and technicians in the scientifically and technically advanced environments of our National Laboratories.

The fiscal year 2005 budget request of $7.7 million provides $1.5 million for a Laboratory Science Teacher Professional Development activity. About 90 participating teachers will gain experience and enhance their skills at five or more DOE laboratories in response to the national need for science teachers who have strong content knowledge in the classes they teach. A new $500,000 Faculty Sabbatical Fellowship activity will provide sabbatical opportunities for 12 faculty from minority serving institutions (MSI's). This proposed activity is an extension of the successful Faculty and Student Teams (FaST) program where teams of faculty members and two or three undergraduate students, from colleges and universities with limited prior research capabilities, work with mentor scientists at a National Laboratory to complete a research project that is formally documented in a paper or presentation.

SCIENCE PROGRAM DIRECTION

Fiscal Year 2004 Comparable Appropriation—$152.6M; Fiscal Year 2005 Request—$155.3M

The mission of Science Program Direction is to provide a Federal workforce, skilled and highly motivated, to manage and support basic energy and science-related research disciplines, diversely supported through research programs, projects, and facilities under the Office of Science's leadership.

Science Program Direction consists of two subprograms: Program Direction and Field Operations. The Program Direction subprogram is the single funding source for the SC Federal staff in Headquarters responsible for directing, administering, and supporting the broad spectrum of scientific disciplines. This subprogram also includes program planning and analysis activities which provide the capabilities needed to evaluate and communicate the scientific excellence, relevance, and performance of SC basic research programs.

The Field Operations subprogram is the centralized funding source for the SC Federal workforce in the field who are responsible for providing business, administrative, and specialized technical support to SC and other DOE programs. Our service centers in Chicago and Oak Ridge provide primary support to SC laboratories and facilities, including Ames, Argonne National Laboratory, Brookhaven National Laboratory, Lawrence Berkeley National Laboratories, Oak Ridge National Laboratory, Pacific Northwest National Laboratory, Fermilab, Princeton Plasma Physics Laboratory, Thomas Jefferson National Accelerator Facility, and Stanford Linear Accelerator Center.

Secretary Abraham approved the Office of Science Restructuring (OneSC) on January 5, 2004. OneSC was initiated in July 2002 to embrace the changes envisioned by the President's Management Agenda (PMA) to accomplish government programs more economically and effectively by creating a new, more efficient, and productive SC organization. It will also provide a management environment for SC employees in which their success and high performance can continue in the face of changing resources, requirements, and societal needs.

The fiscal year 2005 budget request of $155.3 million represents a 1.8 percent increase over the fiscal year 2004 enacted level. This increase is reflected in salaries and benefits to support a total SC workforce of 1,014 full-time equivalents (FTE's). Compared to fiscal year 2004, the fiscal year 2005 request is flat or lower in our other major budget categories, such as travel, training, support services, and other related expenses. We will continue to leverage resources and rely on building good business practices by streamlining operations, improving financial controls, and reengineering business processes in support of the PMA and the OneSC structure.

CONCLUSION

The Office of Science occupies a unique and critical role within the U.S. scientific enterprise. We fund research projects in key areas of science that our Nation depends upon. We construct and operate major scientific user facilities that scientists from virtually every discipline are using on a daily basis, and we manage civilian national laboratories that are home to some of the best scientific minds in the world.

Our researchers are working on many of the most daunting scientific challenges of the 21st Century. These include pushing the frontiers of the physical sciences

through nanotechnology and exploring the key questions at the intersection of physics and astronomy. We are also pursuing opportunities at the intersection of the physical sciences, the life sciences, and scientific computation to understand how the instructions embedded in genomes control the development of organisms, with the goal of harnessing the capabilities of microbes and microbial communities to help us to produce energy, clean up waste, and sequester carbon from the atmosphere. The Office of Science is also pushing the state-of-the-art in scientific computation, accelerator R&D, plasma confinement options and a wide array of other technologies that advance research capabilities and strengthen our ability to respond to the rapidly changing challenges ahead.

I want to thank you, Mr. Chairman, for providing this opportunity to discuss the SC's research programs and our contributions to the Nation's scientific enterprise. This concludes my testimony. I would be pleased to answer any questions you might have.

Senator DOMENICI. Is this your product?

Dr. ORBACH. Yes, it is, sir.

Senator DOMENICI. Facilities for Future of Science 20-Year Outlook. I think it's terrific.

[CLERK'S NOTE.—The document entitled, "Facilities for the Future of Science: A Twenty-Year Outlook" can be found at http://www.sc.doe.gov/sub/Facilities_For_Future/20-Year-Outlook_screen.pdf.]

Dr. ORBACH. Thank you.

Senator DOMENICI. I'm very sorry that it doesn't get more use and more exposure and maybe you might just tell me, how does it get around?

Dr. ORBACH. Well, we've been distributing it at each of the meetings that I attend around the country. We have made major press announcements and we have submitted it to scientific organizations not only in the United States but also abroad.

Also our current budget request enables us to begin the top six of our priorities at different stages depending on R&D, so we're beginning to put it into play.

Senator DOMENICI. Great.

Dr. ORBACH. Thank you for your comment.

Senator DOMENICI. Mr. Magwood, would you proceed with kind of dispatch on your statement, because we've got a lot of questions.

OFFICE OF NUCLEAR ENERGY, SCIENCE AND TECHNOLOGY

STATEMENT OF WILLIAM D. MAGWOOD, IV, DIRECTOR

Mr. MAGWOOD. Be happy to, Mr. Chairman. I do have a written statement for the record. Let me very briefly summarize my remarks because I know you're very familiar with our program activities.

NUCLEAR ENGINEERING PROGRAMS

I want to take a look back. When you think about where we started from back in 1998, when you and I spoke about the pretty dire situation facing the nuclear energy program run by the Federal Government, at that time our research budget plummeted to zero; students entering nuclear engineering programs had gone down to 500 from 1,500 just a few years earlier; and many countries that had seen the United States as a principal partner for nuclear energy research and development had turned away from us and had begun to think of the United States as being basically a past partner.

Over the last several years, this has turned around significantly. I think there's been a lot of success to look back on. Looking at it today, the number of nuclear engineering students now are 1,400 in universities across the country. This is a huge accomplishment considering where we were a few years ago.

Senator DOMENICI. How many?

Mr. MAGWOOD. One thousand, four hundred. Almost as——

Senator DOMENICI. Studying what?

Mr. MAGWOOD. Nuclear engineering. So that's almost completely reversed from the climate of the 1990's.

Senator DOMENICI. But now we went like that and we're going to stop growing.

Mr. MAGWOOD. No, we want to keep growing. We think we're in good shape. As a matter of fact, we are actually starting new programs in nuclear engineering across the country at schools like the University of South Carolina, South Carolina State and even—I'm sorry that Mr. Reid's not here—University of Nevada Las Vegas is looking at starting a new nuclear engineering program.

On our side, the research that we're pursuing in Generation IV nuclear power systems has really taken off. We're working with our international partners very closely and we're very optimistic about the direction that that work has taken.

PREPARED STATEMENT

You may know, Mr. Chairman, that I was recently elected chairman of the Generation IV International Forum and also the OECD steering committee on nuclear energy, and in those positions I've been able to really leverage our activities with those of our international partners; and we think that the ability to work with our international partners to pursue advanced technologies, including the possible pursuit of a project at our Idaho site to look at an advanced hydrogen electricity production reactor, is something that's well within our grasp.

So I'll just leave it at that. We've appreciated your leadership over the years and look forward to any questions you have.

[The statement follows:]

PREPARED STATEMENT OF WILLIAM D. MAGWOOD, IV

Mr. Chairman, Senator Reid, and Members of the subcommittee, it is a pleasure to be here to discuss the fiscal year 2005 budget submission for DOE's Office of Nuclear Energy, Science and Technology.

The program has made a great deal of progress over the past several years. From the time, not so many years ago, when it appeared that the United States might abandon advanced nuclear research and development, we have been successful in reasserting U.S. leadership in the world. Representing the United States, I have been elected by my international colleagues to serve as the chair of two important international bodies—the OECD Steering Committee on Nuclear Energy and the Generation IV International Forum. When it appeared that nuclear power's era had ended in the United States, nuclear utilities have turned their programs around, making more energy last year than at any time in history and launching into very serious discussions to explore the construction of new plants for the first time in decades.

Recent developments have been encouraging. The Department has launched the process of establishing a central laboratory for nuclear research and development—the Idaho National Laboratory. We are also exploring the possible construction of a pilot Generation IV nuclear plant at our new lab that will demonstrate highly efficient electricity production and pave the way to realize the President's vision of a future hydrogen economy.

The Department's fiscal year 2005 request for the nuclear energy program proposes a $410 million investment in nuclear research, development and infrastructure for the Nation's future that is designed to continue this progress. This budget request moves forward the Department's commitment to support the President's priorities to enhance the Nation's energy independence and security while enabling significant improvements in environmental quality. Our request supports development of new nuclear generation technologies and advanced energy products that provide significant improvements in sustainability, economics, safety and reliability, and proliferation and terrorism resistance.

We are committed to efficiently managing the funds we are given. We have abandoned outdated paradigms to integrate the Idaho Operations Office with our headquarters organization, enabling us to manage our responsibilities in the field to achieve greater quality and efficiency than would otherwise be possible. We are enhancing our expertise in critical areas such as project management through training and certification of existing staff and the acquisition of experienced, proven managers. We continue to implement the President's Management Agenda (PMA) by further integrating budget and performance, improving Program Assessment Rating Tool (PART) scores for our research and development programs, and linking major program goals in the performance plans for our Senior Executives and technical staff. These improvements are challenging and time-consuming, but we feel they must be done to assure our program's ability to make the best use of the taxpayer dollars.

While we have made great progress in all these areas, much remains to be done. Our fiscal year 2005 request moves us in the right direction and I will now provide you a full report of our activities and explain the President's request for nuclear energy in detail.

GENERATION IV NUCLEAR ENERGY SYSTEMS

Our Generation IV effort continues to make significant progress. Since the Generation IV International Forum and the Nuclear Energy Research Advisory Committee (NERAC) issued their joint report, "A Technology Roadmap for Generation IV Nuclear Energy Systems", the members of the Forum have expanded to include Switzerland and the European Union. The now 11 members (Argentina, Brazil, Canada, the European Union, France, Japan, the Republic of Korea, the Republic of South Africa, Switzerland, the United Kingdom and the United States) have organized into interest groups associated with each of the six selected Generation IV systems and are negotiating international legal agreements to enable advanced nuclear research to be conducted on a multilateral basis.

We hope to complete these negotiations later this year and move forward with these countries to develop advanced reactor technologies for commercial deployment in the 2015 to 2030 timeframe. Generation IV concepts offer significant improvements in sustainability, proliferation resistance, physical protection, safety and economics. These advanced systems will not only be safe, economic and secure, but will also include energy conversion systems that produce valuable commodities such as hydrogen, desalinated water and process heat. These features make Generation IV reactors ideal for meeting the President's energy and environmental objectives.

As indicated in our recent report to Congress on our implementation strategy for the Generation IV program, while the Department is involved in research on several reactor concepts, our efforts and this budget proposal place priority on development of the Next Generation Nuclear Plant (NGNP). The NGNP is based on the union of the Very-High-Temperature Reactor concept in the Generation IV Roadmap with advanced electricity and hydrogen production technologies. We are exploring the potential of an international, public-private project to build and operate a pilot NGNP at the Department's Idaho site. While the Department has not made a decision to proceed with this effort, such a project could validate the potential of this technology to contribute to meeting to goals of the President's Hydrogen Fuel Initiative. If successful, this technology could produce hydrogen at a cost that is competitive with gasoline and electricity and with advanced natural gas-fired systems.

The Idaho National Laboratory and several other labs will also explore a range of other Generation IV concepts principally the Supercritical Water-Cooled Reactor, the Gas-Cooled Fast Reactor and the Lead-Cooled Fast Reactor. Our efforts will focus on establishing technical and economic viability, and developing core and fuel designs, and advanced materials for these concepts. We are also working with our colleagues in the Office of Science to assemble a joint Future Energy Advanced Materials Initiative aimed at the development of new materials for advanced fission and fusion energy systems. The fiscal year 2005 request enables progress on this broad front. With your support, and the leveraging of our resources with those of

our international partners, we expect to make continued progress toward developing world-changing technologies.

NUCLEAR HYDROGEN INITIATIVE

Hydrogen offers significant promise as a future energy technology, particularly for the transportation sector. The use of hydrogen in transportation will reduce U.S. dependence on foreign sources of petroleum, enhancing national security. Significant progress in hydrogen combustion engines and fuel cells is making transportation using hydrogen a reality. Today, through electrolysis, we can convert water to hydrogen using electricity. We believe that for the future, Very-High-Temperature Reactors coupled with thermo-chemical or high-temperature electrolytic water splitting processes offer a more efficient technology for production of large quantities of hydrogen without release of greenhouse gases. The goal of the Nuclear Hydrogen Initiative is to develop economic, commercial-scale production of hydrogen using nuclear energy.

With funding of $9 million in fiscal year 2005, the Nuclear Hydrogen Initiative will progress toward the development and demonstration of closed, sulfur-based cycles, such as the sulfur-iodine process. These processes have been demonstrated on a bench scale at somewhat lower temperatures and pressures than would be required for economic hydrogen production, but they show considerable promise, especially when they are considered for mating to Very-High-Temperature Reactor systems. We will also explore high-temperature electrolysis, which uses electricity to split high-temperature steam into hydrogen and oxygen, similar to a fuel cell operating in reverse (specifically a solid-oxide fuel cell, SOFC). High-temperature electrolysis requires much less fundamental R&D, but the ability of the process to scale economically must be demonstrated.

Finally, a major effort will be pursued in fiscal year 2005 to explore materials for hydrogen production processes which must endure high temperatures and very corrosive environments while maintaining structural integrity at low costs. Included in this effort will be our work to explore new membranes that can increase the efficiencies of the hydrogen production processes.

ADVANCED FUEL CYCLE INITIATIVE

Of the issues affecting future expansion of nuclear energy in the United States and worldwide, none is more important or more difficult than that of dealing effectively with spent nuclear fuel. After a long and difficult process, the United States is moving forward with a geologic repository, and the Department is on schedule to submit a license application to the Nuclear Regulatory Commission by the end of 2004.

Research on improving ways to treat and utilize materials from spent nuclear fuel will allow the Department to optimize the first repository, and delay—and perhaps even eliminate—the need for future repositories. The Advanced Fuel Cycle Initiative, with an investment of $46 million for fiscal year 2005, will continue the progress made in the development of proliferation-resistant treatment and transmutation technologies that can reduce both the volume and toxicity of spent nuclear fuel. These technologies would support both national security and energy independence by reducing inventories of commercially-generated plutonium while recovering residual energy value from spent nuclear fuel. If successful, these same technologies offer benefits of enhancing national security by reducing inventories of commercially-generated plutonium and enhancing energy independence by recovering the energy value contained in spent nuclear fuel.

The program has already enjoyed considerable success. We have proven the ability of our UREX technology to separate uranium from spent fuel at a very high level of purity and also shown that a derivative, UREX+, can separate a combined mixture of plutonium and neptunium that can serve as the basis for a proliferation-resistant fuel for light water reactors.

The Department's research efforts are leading to the demonstration of proliferation-resistant fuel treatment technologies to reduce the volume and radioactivity of high level waste, and the development of advanced fuels that would enable consumption of plutonium using existing light water reactors or advanced reactors. We have tested proliferation-resistant nitride and metal transmutation fuels in the Advanced Test Reactor and are currently testing mixed-oxide fuels such as would be derived from the UREX+ process.

For the Advanced Fuel Cycle Initiative to be successful, advanced fuel treatment and transmutation research and development must be integrated with the development of Generation IV nuclear energy systems, particularly with those reactor technologies that can produce very high energy neutrons that would be needed to trans-

mute a wide variety of toxic radioactive species. We have organized our national labs, universities, and international collaborations in a manner that will enable this work to proceed in a coordinated manner.

NUCLEAR POWER 2010

The President's Budget supports continuation of Nuclear Power 2010 in fiscal year 2005 to demonstrate, in cost-shared cooperation with industry, key regulatory processes associated with licensing and building new nuclear plants in the United States by the end of the decade. The requested funds of $10 million would support the activities associated with achieving NRC approval of early site permits and the development of Combined Construction and Operating License applications. (It is also critical that the Department identify the business conditions under which power generation companies would add new nuclear capacity and determine appropriate strategies to enhance such investment. In fiscal year 2005, the Department will continue to evaluate and develop strategies to mitigate specific financial risks associated with the deployment of new nuclear power plants.)

In December, the Department issued a solicitation inviting proposals from teams led by power generation companies to initiate New Nuclear Plant Licensing Demonstration Projects. Under these cost-shared projects, power companies will conduct studies, analyses, and other activities necessary to select an advanced reactor technology and prepare a site-specific, technology-specific Combined Operating License application. These projects will provide for NRC design certification and other activities to license a standardized nuclear power plant design. The Department expects to award at least one project in this fiscal year. The focus of activities in fiscal year 2005 for these projects will be on development of the Combined Operating License application.

UNIVERSITY REACTOR FUEL ASSISTANCE AND SUPPORT

The Department is very pleased with the progress we have made in reversing the decline in nuclear engineering in the United States. With significant support and encouragement from this body and your colleagues in the House of Representatives, we have played a large role in completely reversing the decline in undergraduate enrollments in this area of study that began in 1993 and continued through 1998. In 1998, the United States saw only around 500 students enroll as nuclear engineers—down from almost 1,500 in 1992. After several years of focused effort, the United States now has over 1,300 students studying nuclear engineering. That number is set to increase further, as strong programs—such as at Purdue and Texas A&M—continue to grow and we see new programs start at schools such as South Carolina State University, the University of South Carolina, and the University of Nevada-Las Vegas.

The growth of nuclear energy in the United States is dependent on the preservation of the education and training infrastructure at universities. The research conducted using these reactors is critical to many national priorities. Currently, there are 27 operating university research reactors at 26 campuses in 20 States. These reactors are providing support for research in such diverse areas as medical isotopes, human health, life sciences, environmental protection, advanced materials, lasers, energy conversion and food irradiation.

The most exciting development in University Reactor Infrastructure and Education Assistance is the Innovations in Nuclear Infrastructure and Education (INIE) Program established in fiscal year 2002. In fiscal year 2003, two additional university consortia were awarded, bringing the total to six INIE grants, providing support to 24 universities in 19 States across the Nation. The consortia have demonstrated remarkable collaborative efforts and strong formation of strategic partnerships between universities, national laboratories, and industry. These partnerships have resulted in increased use of the university nuclear reactor research and training facilities, upgrading of facilities, increased support for students, and additional research opportunities for students, faculty and other interested researchers. We are very pleased that the President's Budget includes $21 million for the University Reactor Infrastructure and Education Assistance program for fellowships, scholarships, nuclear engineering research, and for critical support to university research reactors, all of which will help address this shortage of well-trained nuclear scientists. (We have modified the structure of this program for fiscal year 2005. I am pleased to report that the President's request includes a small but important element to provide scholarships and graduate fellowships to students studying the vital and too-often overlooked discipline of health physics. The Department is concerned that the Nation may soon not have the trained health physicists who are needed to assure the safety of all nuclear and radiological activities. With this budget, we begin build-

ing a program to reverse the negative trends in this field as we have already done in nuclear engineering.)

In another change, we will transfer responsibility for the shipment of spent research reactor fuel to the Office of Civilian Radioactive Waste Management, which is to become the Department's central expertise in the management of spent fuel.

One final note in this regard, Mr. Chairman. I am sure that you have noticed that no funding is requested for the Nuclear Energy Research Initiative (NERI) in fiscal year 2005. While this program has successfully spurred U.S. nuclear energy R&D, we believe that the time has now come to integrate the program into our mainstream R&D programs. We will continue to make peer-reviewed NERI awards to university-based researchers who work in areas relevant to our Generation IV, Nuclear Hydrogen, and Advanced Fuel Cycle Initiative programs. With this step, we will engage NERI researchers at universities in the exciting, first-class research we are pursuing in cooperation with countries all over the world.

RADIOLOGICAL FACILITIES MANAGEMENT

This budget request also includes $69.1 million to maintain critical research, isotope and space and national security power systems facilities at Oak Ridge National Laboratory, Los Alamos National Laboratory, Sandia National Laboratory, and Brookhaven National Laboratory in a safe, secure, and cost effective manner to support national priorities.

The fiscal year 2005 budget request also includes $20.6 million to continue baseline operations and begin construction of the Uranium-233 project at Oak Ridge National Laboratory. This project is aimed at stabilizing materials left over from the Cold War to address a Defense Nuclear Facilities Safety Board recommendation, while extracting isotopes from the uranium that are needed for very promising medical research.

INL—DOE'S COMMAND CENTER FOR NUCLEAR R&D

This budget supports the Secretary's realignment of the mission of the Idaho National Engineering and Environmental Laboratory to focus the future of the site on nuclear research and development. The Department is in the process of establishing the Idaho National Laboratory, which will combine the resources of the INEEL and the Argonne-West site. As the Department's leading center of nuclear research and development, a core mission of this laboratory is advanced nuclear reactor and fuel cycle technologies, including the development of space nuclear power and propulsion technologies. The new Idaho National Laboratory will play a vital role in the research and development of enabling technologies for the Next Generation Nuclear Plant, which will support the Department's long-term vision of a zero-emissions future free of reliance on imported energy.

The Department issued a request for proposals in February to find a management team to reduce costs and build expertise at the INL. The Department's nuclear energy program involves the collective talents of universities, the private sector, international partners and many of our other national laboratories—Argonne, Los Alamos, Sandia and Oak Ridge among them. However, the rebuilding of the Department's nuclear power research and development program will be centered at INL. While environmental cleanup remains an important focus at the Idaho site, real progress is being made that will aid in the expansion of nuclear research and development.

Developing a central research laboratory is a major step forward for the nuclear energy program. We will join the other key energy programs at the Department by having a central, dedicated research site at which we can centralize our infrastructure investments and build the expertise needed to accomplish our program goals. A central lab also helps us minimize the shipment of nuclear materials across the country and allows us to bring our nuclear materials together in a single, secure location. We also expect that our new lab will become a major player in the education of the next generation of nuclear energy technologists that this Nation will need to assure our energy security in the future.

CONCLUSION

This concludes my prepared statement. Your leadership and guidance has been essential to the progress the program has achieved thus far and your support is needed as we engage the tasks ahead.

I would be pleased to answer any questions you may have.

Senator DOMENICI. Thank you very much. Well, the fact that we've started at nothing and put these things in is a good thing

to repeat, but it's pretty pathetic when you note that most of them were things everybody knew we needed. It wasn't like this was a vision from on high, and every year because they didn't come out of the administration made it harder and harder to fund them. And now when we get a tighter and tighter budget, it's, you know, they're the easiest ones to choke.

So, you know, you're getting 20 and 30 percent cuts in yours, while over here on the side they're saying we're for nuclear energy, right? You don't have to comment. You work for the administration.

STATEMENT OF SENATOR PATTY MURRAY

Senator Murray, I note you're on a tough time schedule and I'm most appreciative you would come today so I yield to you.

PACIFIC NORTHWEST NATIONAL LABORATORY FACILITIES

Senator MURRAY. Well, thank you very much, Mr. Chairman. Thank you for your tremendous work on this committee over the years and your leadership in many directions. I just have a couple of questions for Dr. Orbach today. Dr. Orbach, you note the Pacific Northwest National Laboratory, PNNL. In my State it's one of the Department of Energy's multi-program laboratories and is under your stewardship at the—as Director of Science.

PNNL is a very valuable asset to the State of Washington and it's going to be an enduring asset to the Tri-Cities community after Hanford clean-up is completed. I think you know there's been considerable concern over the schedule for the cleaning up of the 300 area and the replacement of the many facilities that currently house approximately 1,000 staff at PNNL. That space, I think it's 700,000 square feet, represents a third of PNNL's total laboratory space.

The Tri-Party Agreement required clean-up of the Columbia River corridor including that 300 area by 2018. As I understand it, current proposed clean-up contracts assume a 2012 or 6-year earlier completion date. That would require those 1,000 PNNL employees to exit the 300 area facility by 2007. This budget, the fiscal year 2005 budget, has no funding for replacement facilities in the 300 area and I see no scenario where new facilities can be in place by fiscal year 2007.

I noticed in your written testimony you talk a great deal about facilities and infrastructure and planning, but I don't see any plan from you or DOE on how those facilities at PNNL are going to be replaced. As owner of PNNL, Mr. Orbach, what are you doing to lead the effort in the Department to seek an aggressive program to replace those facilities at PNNL, which is your laboratory?

Dr. ORBACH. Thank you, Senator, for the question. We are as concerned as you are over the 1,000 staff members who have been so productive for our country. I have visited PNNL often and it is a magnificent laboratory and your assessment of its future is mine as well, and also the community's.

We have put together some funding from our own budget from 2003 and from fiscal year 2004, and there are funds in the fiscal year 2005 budget which we believe can help in this process, but it will require a reprogramming to use the fiscal year 2003 and fiscal

year 2004 funds and so I hope you will help us in the reprogramming request.

Senator MURRAY. So would you support a reprogramming in the fiscal year 2004 budget for that?

Dr. ORBACH. Yes.

Senator MURRAY. You do, okay.

Dr. ORBACH. We may require it for 2003, 2004, and for 2005 we will reassess our options.

Senator DOMENICI. Did you ask him if they had?

Senator MURRAY. I was about to. I will.

Senator DOMENICI. Good.

Senator MURRAY. Had you——

Dr. ORBACH. And I want to say also we're working very closely with the contractor, Battelle, to work together to provide the facilities for the staff who will be displaced from the 300 area. Our target date is October 2007, which as we understand it, would be the latest that the Office of Environmental Management could begin the clean-up in order to satisfy the river corridor agreement that it has by 2012. And we believe that by working with Battelle, we can achieve the facilities that are required to house the staff. They will be new facilities, they will be more efficient facilities, and in the long run we hope that this will be a very positive outcome for the laboratory.

Senator MURRAY. Well, we need to get a reprogramming request from you as soon as possible then to get this going because in order to replace your facility there we're going to have to have some planning in place fairly quickly. And, Mr. Chairman, I really am concerned about DOE's initial inability to coordinate its clean-up and its science programs, and I think we have to be very concerned about DOE's planning process for both the labs and the clean-up sites.

I know that the Secretary's office has become engaged in this matter and I've personally spoken with Mr. McSlarrow and I appreciate the Secretary and Mr. McSlarrow's involvement. I wish it hadn't risen to that level, but I do think we need direction from you, reprogramming requests, and to get this going because 2007 is not that far off when we're talking about an entire facility or large facility there that needs to be—we need to know where we're going with that, so I want to hear more from you on this.

Dr. ORBACH. You're absolutely right, Senator, and I have just met with Dr. Len Peters, the director at PNNL, and we've talked about the need to get moving quickly in order to begin the planning and construction phase. It's my view that if we start now that we can in fact meet that October 2007 date.

Senator MURRAY. When do we expect to see the reprogramming request from you?

Dr. ORBACH. We need to process it through the Department and I'm hopeful that we can get it to you within a month.

Senator MURRAY. All right. Well, Mr. Chairman, thank you very much. I have some other questions. I will submit them for the record and look forward to working with you on this.

Senator DOMENICI. You understand if we get that, unless there's something I'm not aware of, I will hurry up. It comes to me and my friend in the House and we'll try to——

Senator MURRAY. I appreciate that very much.

Senator DOMENICI [continuing]. Try to hurry it up.

Dr. ORBACH. Thank you.

Senator MURRAY. Thank you.

Senator DOMENICI. Senator, would you like to inquire, Senator Craig?

STATEMENT OF SENATOR LARRY CRAIG

Senator CRAIG. Thank you, Mr. Chairman. I apologize for running late.

Senator DOMENICI. I haven't asked any questions yet, but I would like to yield to you for a few remarks.

Senator CRAIG. Well, why don't we move right ahead into the questioning? You proceed with questions and then I'll come to questions. That would be appropriate.

Senator DOMENICI. I was going to make an observation since this was the first time off the Senate floor this year that we have your presence at a committee hearing and I want the record to reflect that we have a very distinguished Senator here. He has a big record. Yesterday he completed work on a bill where he spent more time, took more amendments, defeated more amendments, all in pursuit of the bill that he wanted, that many wanted, only to find that in the end he had to vote against the bill.

Senator, I had been leaving for a little while and taking naps, so when I came in, my staff said, it's very important you be here for the last vote because it's an important thing for your constituency, as you might recall, you were there. And I walked in and made the wrong vote. I voted aye because I had been wanting to help pass that bill. It turned out everything had kind of blown up and you were advising everyone to vote no. How many no votes? Everybody?

Senator CRAIG. Ninety-something, yes. I don't think it was a demonstration of my power whatsoever. I wish it were, Mr. Chairman.

Senator DOMENICI. It was.

Senator CRAIG. But I will tell you, in the words that I've been here working with you and a good many other of our friends, I've learned a few lessons, and I've also learned that something that goes bad does not necessarily get better and that you have an opportunity to stop something and that's what I did yesterday.

Senator DOMENICI. Yes.

Senator CRAIG. Because it had grown worse than we had hoped it would be and because of the rules of the Senate, something those who want to obstruct can obstruct absolutely. We found that on a couple of issues that you and I had been working on in recent times and some of our friends on the other side I think have determined that this is a year of total obstructionism, and so we're going to have to work our way through those problems. Thank you.

Senator DOMENICI. I do want to tell you, Senator, I'm most appreciative of all your work that you've put into the energy bill, and there's a nice story out today that the Minority Leader expects a victory on the floor and so it's just a matter of when. No, there are going to be some Senators like the ones you mentioned that wanted to obstruct that bill, but how many days are they going to get on

it to make our leader frustrated? I don't know. I don't think it's going to frustrate him if they take a few days because he's made up his mind that he wants to send this bill to the House so that the Senate can at least go on record that they've produced one.

SCIENCE PRIORITIES

Having said that, let me move quickly. Dr. Orbach, can you explain to me the department's priorities contained in this 20-year plan and how they were selected? Can you do that very quickly?

Dr. ORBACH. Yes, thank you, Mr. Chairman. We began an initial process in my office through our Associate Directors who headed each of our six programs. That set of recommendations is important because it began first with the research money. We took into account the energy bill authorization level and subtracted from the out-years the cost of doing research. The reason I stress that is that these facilities are not meant to displace our ability to do research. Research comes first. They then provide us the ability to do that.

With the recommendations from the Associate Directors, we went out to our advisory committees, and what you see today reflects the advice, priorities that the advisory committee set with regard to the importance of the science. This is a science-driven prioritization.

I then had over 50 recommendations from the advisory committees and I had to make them fit under the energy bill's authorization levels and I had to make them fit also with regard to time, and when we got done we had 28 facilities that survived.

I was in the unenviable position of having to prioritize across fields, but the response of the community has been very positive and I believe that the scientific community is very supportive of this prioritization.

Z MACHINE APPLICATION TO THE SCIENCE PROGRAM

Senator DOMENICI. Thank you very much. Now let me ask you a question about something technical and see if you can agree to do something for us. Sandia National Laboratory has developed a power plant concept known as the Z machine. You must have heard of it. It has made all kinds of news, including the front page of Time magazine. Shortly after we had agreed to pay for NIF over in California because the Z hadn't quite made it, we got a big announcement that Z was ready to go. What we've got now is about $3 billion invested in NIF and we've got Z going, a little cheap machine.

This machine is the world's most powerful x-ray source, and extensive experiments have led the technology to make breakthroughs that lead to record fusion neutron yields. Although this program has been funded by NNSA, and that's part of the nuclear preparedness program of the country, the low cost and high efficiency seem attractive to the development of commercial fusion power. In fact, this facility has been identified by the Fusion Energy Science Advisory Committee as one of the three promising approaches to internal fusion energy.

I would greatly appreciate it if you would visit Sandia and spend some time with the scientists associated with Z and would be will-

ing to visit the facility. After you've done that and had the opportunity to evaluate it, I would be interested in your thoughts on its application to the science program. Can you do that?

Dr. ORBACH. Yes, Mr. Chairman, I'd be delighted. I've been briefed on the Z-Pinch machine. It is a magnificent accomplishment and I am scheduled to visit Sandia on the 24th of May.

Senator DOMENICI. That's great.

Dr. ORBACH. And I will be spending a good portion of my time there to talk to the people on the Z-Pinch. They have some very clever ideas for renewing it with a liquid wall, which might help in the fusion energy area.

GENOMES TO LIFE PROGRAM

Senator DOMENICI. I have a question with reference to ITER, but I'll just submit that and I'll move on to Genomes to Life. This project focuses on the utilization of genome maps and understanding of genome, or genomic functions in seeking solutions to DOE missions. Funding increases by $4 million to $67 million from its inception. It's accurate to say that the entire program was created by virtue of a discussion which very few people know about which took place in my office with a very distinguished scientist named Charles DeLisi. You may or may not know him but he was with the NIH.

He decided he didn't like the NIH because they didn't like genome research, believe it or not. Think of that. They covet it today as their great baby, but they literally didn't want to do it, so he left and went to the Energy Department. He came to my office and talked me into funding it. Believe it or not, when I got it funded, NIH decided that they should too, so it turned out—you wonder why DOE and NIH are in it, that's why, because I introduced a bill, put it all in DOE, and that brought the people who are for NIH to my office and we changed the bill so they both got funding. Great things happened much quicker than expected in producing the genome mapping of the human system. You're aware of that.

PROTEIN AND MOLECULAR TAGS FACILITY

I note that you plan to start project engineering and design for dedicating a facility, a facility for the production and characterization of protein and molecular tags. I understand that you will conduct a competition for the site of that facility. What's the status of that competition? How will this benefit the Genomes to Life program?

Dr. ORBACH. First of all, Mr. Chairman, I want to thank you for your support——

Senator DOMENICI. You're welcome.

Dr. ORBACH [continuing]. Of genomics and the Genomes to Life program. It has been a tremendous success. What this project does is to take us from the structural elements that we have been able to study through our sequencing to the dynamics of how cells actually function, and this particular factory will produce, as you noted, proteins for our scientists in the United States which are tagged.

We are currently in the final stages of preparing the competition amongst all of the DOE laboratories for the facility, and we are working towards the formal RFP as we speak.

GENOME SCIENCE

Senator DOMENICI. How do you generally, for 2 minutes, think genome is going? The evolution of the genome science, is it going well?

Dr. ORBACH. It's going wonderfully. The relationship with NIH is as you described it. The DOE has the ability to create these large-scale machines using, as you said in your opening remarks, the physical sciences that we have available. This is truly a factory. This will produce proteins that are tagged so there will be a common way of identifying them and visualizing them in cellular function. Your assistance and really initiation of this project has had phenomenal impact.

Senator DOMENICI. You know, it's interesting when people look around and read from time to time some experts tell us, Greenspan testifies and my friend, Senator Craig, gets a hold of it and goes to the floor and gives a speech because Greenspan says productivity went up 8.2 percent and it doesn't bother him because he doesn't have too much hair, but people that have got a lot of hair, they go bald-headed when they hear such a thing. That's incredible.

But I'll give you an example. We produced the entire mapping of the protoplasm of the human genome in half the time predicted when we started the program, half. It was supposed to take 20-plus years, it took 10. Why? Well, because the machines that we used to do it, computers, were never imagined to have the capacity in such a short time that they had. That's a perfect example of productivity. The productivity was incredible in producing the mapping of the human genome, wasn't it? It was so big that it caused us to produce the most complex set of information in half the time, which is the genome mapping of the human body.

I think we haven't even come close to its utility, is that correct?

Dr. ORBACH. Absolutely, and what you've said is true in spades. The sequencing facility we have in Walnut Creek used to cost $2 a base pair to sequence. It now costs two-tenths of a cent, so it's a factor of 1,000 increase in productivity that this factory has achieved. It can now sequence two human genomes a year.

Senator DOMENICI. Entirely?

Dr. ORBACH. Entirely, so that 10 years is now compressed into 6 months.

ADVANCED REACTOR HYDROGEN CODE GENERATION PROJECT

Senator DOMENICI. Just a couple more. This one has to do with Senator Craig and I. Mr. Magwood, general funding under the title of nuclear energy, last year as part of the 2004, $15 million was included in the Generation IV initiative so the Department could begin the research, development, design work on an advanced reactor hydrogen code generation project at Idaho National Laboratory.

Senator Craig and I sent a letter to Secretary Abraham urging him to make a competitive solicitation for this project. The response we received, signed by the Secretary, reassuring Senator Craig and me that the Department intended to undertake this design competition this year. Do you recall that, Senator?

Senator CRAIG. I do.

Senator DOMENICI. Now, can you please tell us what you have prepared for the budget and the schedule for this solicitation, and what you believe your funding requirements will be for 2005? Are the funds requested sufficient to support the engineering design of at least two competing concepts as spelled out in H.R. 6 prior to selecting the final choice?

Mr. MAGWOOD. Mr. Chairman, we have been working very hard over the last several months since the 2004 appropriation was passed to put in place the kind of program that you're describing. We do expect to have some sort of solicitation available for the industry and others to look at this fiscal year, fiscal year 2004, and we believe that the funding that we have available in fiscal 2004, and what we have requested in fiscal 2005, which by the way is an increase for this activity of about $4½ million over the 2004 request, 2004 appropriation rather, is sufficient to move forward.

Obviously, if we move forward with a major project, significantly more funds will be needed, but at this stage of the game, we believe that what we've asked for is enough.

WORLD NUCLEAR POWER PLANTS UNDER CONSTRUCTION ON ORDER

Senator DOMENICI. I have two other questions for you, Mr. Magwood, and then I'll proceed to yield to Senator Craig. One, could you get for us at your earliest convenience a current status of the construction of nuclear power plants in the world? Get us a report that says as of this date, whatever date that is, three plants are being built in Taiwan, two in China, one somewhere else, so we would know just how many plants the world is building, and if you can, tell us what their status is and what kind they are, we'd appreciate it.

Mr. MAGWOOD. Be happy to do that.

[The information follows:]

WORLD NUCLEAR POWER PLANTS UNDER CONSTRUCTION AS OF JANUARY 1, 2004

Country	Name	Location	Type [1]	Capacity (MWe)	Year of Expected Commercial Operation [2]	Comments
USA	Browns Ferry 1	Decatur, AL	BWR	1,065	2007	Approximately $1.7 billion is being invested over five years to return this unit, which has not operated since 1985, to service.
Argentina	Atucha 2	Buenos Aires	PHWR	962	NA	Suspended indefinitely.
China	Tianwan 1	Jiangsu	VVER	1,000	2004	
China	Tianwan 2	Jiangsu	VVER	1,000	2005	
China—Taiwan	Lungmen 1	Taipei	BWR	1,300	2006	
China—Taiwan	Lungmen 2	Taipei	BWR	1,300	2007	
India	Kaiga 3	Karnataka	PHWR	202	2007	
India	Kaiga 4	Karnataka	PHWR	202	2007	
India	Kudankulam 1	Tamil Nadu	VVER	917	2007	
India	Kudankulam 2	Tamil Nadu	VVER	917	2008	
India	Rajasthan 5	Rajasthan	PHWR	202	2007	
India	Rajasthan 6	Rajasthan	PHWR	202	2008	
India	Tarapur 3	Maharastra	PHWR	490	2007	
India	Tarapur 4	Maharastra	PHWR	490	2006	
Iran	Bushehr 1	Bushehr	PWR	915	2005	
Japan	Hamaoka 5	Shizuoka	BWR	1,325	2005	
Japan	Higashidori 1	Aomori	BWR	1,067	2005	
Japan	Shika 2	Ishikawa	BWR	1,304	2006	
North Korea	LWR–Project 1	Kumho	PWR	1,040	NA	Construction suspended pending a decision, to be made before 12/1/04, on whether support for this project by the Korean Peninsula Energy Development Organization (KEDO) should continue.
Romania	Cernavoda 2	Cernavoda	PHWR	655	2007	
Russia	Balakovo 5	Saratov	VVER	950	2008	
Russia	Kalinin 3	Tver	VVER	950	2004	
Russia	Kursk 5	Kursk	RBMK	925	2006	
Russia	Rostov 2	Rostov	VVER	950	2007	
South Korea	Ulchin 5	Ulchin	PWR	950	2004	
South Korea	Ulchin 6	Ulchin	PWR	950	2005	

Ukraine	Khmelnitski 2	Neteshin	VVER	950	2004	
Ukraine	Rovno 4	Kuznetsovsk	VVER	950	2004	
Total				24,130		

[1] BWR–Boiling Water Reactor; PWR–Pressurized Water Reactor; PHWR–Pressurized Heavy Water Reactor; LMFBR–Liquid Metal Fast Breeder Reactor; VVER–Soviet-designed PWR; RBMK–Soviet-designed boiling water, graphite-moderated, pressure-tube reactor.

[2] NA–Not Announced.

Sources: IAEA Power Reactor Information System; Uranium Information Centre/World Nuclear Association; Nuclear News 2004; organization press releases/web pages.

WORLD NUCLEAR POWER PLANTS ON ORDER AS OF JANUARY 1, 2004

Country	Name	Type [1]	Capacity (MWe)	Year of Expected Commercial Operation [2]
China	Lingdong 1	PWR	1,000	2012
China	Lingdong 2	PWR	1,000	2012
China	Sanmen 1	PWR	1,000	2012
China	Sanmen 2	PWR	1,000	2012
Finland	Olkiluoto	PWR	1,600	2009
India	Kaiga 5	PHWR	489	NA
India	Kaiga 6	PHWR	490	NA
India	Rawatbhata 7	PHWR	490	NA
India	Rawatbhata 8	PHWR	491	NA
Japan	Fuikishima 7	PWR	1,325	2009
Japan	Tomari 3	PWR	912	2009
Japan	Fuikishima 8	PWR	1,325	2010
Japan	Higashidori 1–2	BWR	1,320	2011
Japan	Shimane 3	BWR	1,375	2011
Japan	Tsuruga 3	PWR	1,500	2011
Japan	Higashidori 2	BWR	1,320	2012
Japan	Ohma	BWR	1,350	2012
Japan	Tsuruga 4	PWR	1,500	2012
Pakistan	Chashma 2	PWR	300	2011
South Korea	Shin Kori 1	PWR	950	2008
South Korea	Shin Kori 2	PWR	950	2009
South Korea	Shin Wolsong 5	PWR	950	2009
South Korea	Shin Kori 3	PWR	1,350	2010
South Korea	Shin Wolsong 6	PWR	950	2010
South Korea	Shin Kori 4	PWR	1,350	2011
South Korea	Ulchin	PWR	1,350	2015
South Korea	Ulchin	PWR	1,350	2015
Total			28,987	

[1] BWR–Boiling Water Reactor; PWR–Pressurized Water Reactor; PHWR–Pressurized Heavy Water Reactor.
[2] Not Announced.

Source: Uranium Information Centre/World Nuclear Association.

ADVANCED FUEL CYCLE INITIATIVE

Senator DOMENICI. You know, Mr. Magwood, some of us in this Congress are very happy that the President and the Secretary have finally come around. They're talking about trying to stop proliferation of Weapons of Mass Destruction in the broadest sense, stop the proliferation of the great scientists, you know about that. We're trying to stop the flow of plutonium, got a big program going, highly enriched uranium, we've bought a bunch of it from them, a lot of things, cost a lot of money, but we've started.

Now, I am very concerned. With that going and the threat of nuclear proliferation, what's the basis for reducing funding for this account, Advanced Fuel Cycle Initiative, from $66 million to $46 million? Would you update the committee as to what you hope to achieve this year, when you expect to have a project ready for deployment?

Mr. MAGWOOD. Yes, Mr. Chairman. First, I should say that the Advanced Fuel Cycle Initiative really has shown tremendous progress over the last several years and continues to show progress. For example, we have successfully demonstrated on a laboratory scale the separation of pure uranium from spent fuel, to the point of 99.999 percent purity.

We've also demonstrated on a laboratory scale the separation of a mixed neptunium/plutonium fuel that we believe could form the basis of a new proliferation-resistant recyclable fuel for the future, and this work is going to continue in increasing scale in fiscal 2005.

So our primary missions for this program will continue. We will continue to make progress. The reduction that you spoke of is primarily because we are deferring the project of a large commercial-scale facility for UREX+ until we've gained greater confidence that this technology is really viable commercially.

That said, there are—we are going to continue to fund our primary missions for the program. That will continue.

Senator DOMENICI. Senator Craig.

Senator CRAIG. Mr. Chairman, thank you very much. Let me use my time both to ask questions and make in positioning those questions somewhat of an opening statement, and I'll address my questions at you, Bill, and I do thank all the rest of you for being here.

ADVANCEMENT OF NUCLEAR ENERGY TECHNOLOGY

Bill, your prepared statement starts off by talking about the times not so many years ago when this country was very close to abandoning advanced nuclear reactor research and development. I remember those years very well. As a matter of fact, the chairman and I wrote a letter to the then-Secretary of Energy, Federico Peña, and we told him this in our letter, and I'm going to quote from that letter, that was 1997.

The Chairman and I said, the coming fiscal year will mark a notable event in the history of your agency and its predecessors. For the first time since the establishment of the Atomic Energy Commission more than 40 years ago, the United States Government has no program to further the development of nuclear energy for the production of energy. This change, in the view of many, of the technology's critics is long overdue. However, in the view of many members of the Senate and in the view of the Nation's energy experts, the lack of a strong and reliant nuclear energy research and development program represents a major gap in the Department of Energy's research and development agenda.

The year is now 2004. We've traveled a long way on nuclear energy since I signed that letter along with the chairman. I appreciate your efforts in the progress we've made and I mean that most sincerely, but I must suggest to you that the state of our nuclear energy program is nearly as fragile and vulnerable today as it was when we sent that letter in 1997, and I will further suggest that the nuclear energy budget proposal for fiscal year 1995 is as—is a—2005—is a discredit to the progress that we've made. I believe the chairman has made similar strong statements.

INEEL SOLICITATION AND INFRASTRUCTURE

That's the basis of my following questions, the question that the chairman just asked was my first question, and I appreciate him asking it. So, having heard that answer, Bill, let me ask you this question. Since you will be issuing a solicitation, why have you not engaged the experts at the Idaho labs, the INEEL and Argonne, that are supposedly DOE's command center of nuclear R&D? To

my knowledge, you have not engaged anyone in the lab in this initiative yet. Is that true?

Mr. MAGWOOD. In the actual solicitation?

Senator CRAIG. In the process.

Mr. MAGWOOD. In the process, not yet, and that's because we are still working within my office to put a plan on the table where we can sit down with those lab scientists and discuss the ins and outs and the particulars of it. It's been my experience that before sitting down with the scientists who are trying to deal with very technical issues, it's been my job to set the framework as to how to accomplish a particular mission, and that's proven successful in the past and that's what we're implementing this time.

Senator CRAIG. Well, I thank you for that, because the Office of Nuclear Energy is currently responsible, I think is the lead program office for the INEEL. Because you have this lead, most of the costs for supporting the INEEL's infrastructure being transferred over to the nuclear energy budget, my conclusion is that the nuclear energy budget is not growing sufficiently to support the infrastructure that your program is becoming responsible for at Idaho.

I think this leads to a very dangerous situation. You can either not support the infrastructure adequately, a program that some would say already exists, or you can raid your small research budget to support the infrastructure. Over time, the nuclear energy program might reach a point where it is doing very little research but is merely supporting an aging infrastructure. Either way, it is a bad situation for nuclear energy, for Idaho, and for the country from my perspective.

We even had a recent example, I think, with the Advanced Test Reactor, the only operating test reactor in Idaho and one of the few in the DOE complex. What happened? It was shut down because the safety documentation was not up to date. Lack of resources, lack of initiative, down goes the reactor. Question: Do you believe the budget you are requesting is sufficient to fully support the Idaho infrastructure as well as research you are charged with doing?

Mr. MAGWOOD. Senator, I would say that clearly—you use the word fragile—and I clearly agree with that. I think that the program is at a fragile state at this point in history, but nevertheless, still poised for some considerable growth. In the case of the infrastructure and research program that we've laid out for fiscal 2005, I do believe that it's sufficient to meet the primary missions that we've set out for ourselves.

We have a long way to go to build this laboratory. It's going to be a long, hard process that we think will take 10 years to really accomplish. So while this fiscal year 2005 budget request is a first step, a fragile first step, it is only the first step, and I think that what we do in fiscal years 2006 and beyond will probably be more important to the future of the laboratory than what we've done in 2005.

Senator CRAIG. Well, I guess my greatest concern, one last comment——

Senator DOMENICI. Sure.

Senator CRAIG [continuing]. Mr. Chairman, it is that tearing down and then building back can be a very expensive process, one

that I doubt this country could afford to do or would be willing to do. Sustaining and building on a sustained base is something that we can afford to do and should.

Now finally, I have many concerns, I think, with DOE's request for the proposals for the Idaho lab. This is not, I think, the forum to explore all of those concerns, but let me say this. The Idaho congressional delegation will be sitting down with the Secretary. We are very concerned about DOE's draft RFP. It does not reflect, we believe, the principles necessary to build a sustainable new mission. We—and I say this, Mr. Chairman—I know that Los Alamos is facing a recompetition in its operating contract in the near term.

Senator DOMENICI. Yes.

Senator CRAIG. I think that we have at stake some very important issues to address with DOE as we craft RFP's for the sustainability and growth of these laboratories. So I say that as now not just an observer, but one who's fully engaged in an RFP that—the devil is in the details, and we're very much focused on the details.

I thank you very much, Bill, to all of you thank you much. Mr. Chairman, thank you.

ENERGY EFFICIENCY PROGRAM DIRECTION

Senator DOMENICI. Mr. Garman, did we fail to ask you something that is important in your opinion that you want put on the record?

Mr. GARMAN. I would like to mention one thing, Mr. Chairman.

Senator DOMENICI. Please do.

Mr. GARMAN. And I appreciate the opportunity. You said something a little earlier about gaining control of the program and understanding and being able to be accountable for the things we spend——

Senator DOMENICI. Yes.

Mr. GARMAN [continuing]. And to assure the taxpayers are receiving value for their dollars. I think the committee will note that we have sought an increase in funding for program direction, which is not a very popular thing to do and a very difficult thing to talk OMB, much less the Congress, into doing.

But we've done that and we were successful in making our case to OMB and we think it's important, because quite frankly, we heard what you said in your direction to us in prior conference reports that we must have an increased vigilance in project management and that we take project management very, very seriously. And candidly, in the past we ceded some of our responsibilities to contractors and others that we need to re-federalize to ensure that we're doing a good job. More money will actually get to the lab at the bench doing R&D, which is the important thing, and so I do leave you with that plea and thank you for that opportunity.

Senator DOMENICI. Well, thank you. Thank you to all three of you and for the record, I'd like to close with two things. First, it's my understanding that Senator Stevens from Alaska has questions he's going to ask of you. They're going to be submitted. Please answer them as quickly as you can. I ask that any other questions submitted to you by me or any other members of the committee receive your response within 2 weeks, and again, I said if you can't do it, tell us so we don't sit over here getting mad at you for not

doing your work. The record will be left open for 2 weeks for members to submit questions, so watch for them also.

YUCCA MOUNTAIN

Senator Craig, I would just like to talk with you a moment about the status of nuclear power in the world and what a terrible mistake the United States has made, is making. You know, there is nobody, no country trying to build a Yucca facility, just America. France has 87 percent of its facility from nuclear. Countries have lots of nuclear power. So I ask for the record for conversation, that we be able to talk about what's even happening today, how many new reactors are being built.

Senator CRAIG. Good point.

Senator DOMENICI. Lots of them. I don't mean 50, but I can check off six or eight that I know about. What are we doing? Nothing. Every year we have a fight over how much is enough for Yucca and we all with bated breath wonder, is the Nuclear Regulatory Commission (NRC) going to really license them, aren't they?

And if you go to Europe or France and you'd say, I'd like to see your spent fuel rods. Oh, fine, we'll take you. They put you in a bus and blindfold you—no they don't, but they could—and say, we're here and let you out. You walk into this beautiful building, looks like a great schoolhouse, modern schoolhouse, and once you're in the doors, they say, now you can look all around. And you look around and you say, this is where all the nuclear waste is, and you say, well, what are you talking about. Well, now you can just look down and you look down and it's all in the floor in casks, glass casks. Spent fuel rods are in there and the whole thing is filled with glass of some kind and you walk all over the place and there's no radioactivity escaping, it never will, and they may take it out of there in 100 years. They plan to get it out in 50 but they're wondering how crazy, why do we want to do that and just disturb everybody. It's very safe.

Here we sit with the tail end of this tiger haunting us, the greatest engineers in the world. This morning we read we're following old Rover around up there on the red planet, right? Trying to find out how much water was up there, how many thousands of years ago, and America can't find a way to dispose of in a safe manner high-level waste so you can build some nuclear reactors.

To me, one of the most astounding failures on the part of talent and leadership that the world has ever seen, and we're all worried about energy. Now we're going to run out of the next one, which is natural gas. We've already run out of crude oil, now pretty soon natural gas, and then pretty soon after that, who knows? But we've got 15 big power plants in a row waiting there, where's my natural gas, right, 15, I think, or 13, up almost 1,000 kilowatts each. Not a single one plans to use coal, geothermal, nothing, all natural gas.

Well, to me, we have a little bit of a role up here when we're in the Senate for a while, we're only here a few years. But I tell you, I'm going to continue to make the point and try to make the proposition wherever I can that the United States must get on with this, and frankly I wouldn't be at all adverse right now, as late as it is, to pick a site for interim storage and do it. You know, Senator, we've come that close.

Senator CRAIG. Oh, yes.

Senator DOMENICI. If we didn't have the President we had at that point, we would already be building interim storage some place and it wouldn't have been the least bit dangerous to anybody except those who want to run around and claim that the world's dying because there's radioactivity coming out of spent fuel. So obviously you can't help but get my lecture.

Senator CRAIG. Well, Mr. Chairman, for those of us who worry about a variety of issues when it comes to energy, I so totally agree with you that we've not only made some missteps and some poor judgement over time because of the political pressures involved, but we've been unwilling to lead.

The reason I was late coming here, as I was sitting down with the new Minister for Energy from Canada. Canada loves us at the moment and they'll continue to love us more because we're not developing energy and they are and they're anxious to send it south. And I'm glad they're our northern neighbors, because if we cannot rely on ourselves, thank goodness we've got them to rely on.

But the consequence of doing that is that the $35 billion that flows north today will be $40, then $50, then $60, then $80, then $100 billion a year and more, and that's not good business that some of that can't stay here. That'll be our companies north of the border working with Canadians and Canadian companies.

CLIMATE CHANGE

But lastly, I found it fascinating, I was in Milan this winter for the climate change conference. The world has significantly changed since I was in Belgium a few years ago where I was almost—put it this way—a riot almost occurred, we almost were succumbed by eggs and pies in the face and all of that. Today the world recognizes a folly so defined. The Minister of Energy for Italy, now that Italy has ratified the Kyoto Protocol, suggests that they can't meet it. In fact, their gases today, emissions, are a factor of 5, 4 or 5 percent higher than they were at the time. You cannot grow today in the world using hydrocarbons without greater emissions and nobody wants to die, economically speaking.

I met with the Minister of Environment for Japan. Japan was at 6 percent above 1999 gas emissions at the time they signed it. They are now 13 percent and she opined as to how they could not meet, and they've even become an aggressive nuclear reactor developer.

So it is significant out there that politics sometimes mislead us dramatically, but the reality is that those emissions levels cannot be met, because we're driving the world toward greater use of hydrocarbon, and unless we advance the technologies of their utilization, we don't meet anywhere near those standards unless we just turn our economy off.

Lastly, we met the 1999 standards about 6 months ago, 8 months ago in this country, and the reason we did was because we were in a recession and we reduced our employment by 2.5, almost 3 million jobs, and we met the standard or were right at it. That's the bad news, so you see they can be met, and for those of us who went to the floor and spoke of those realities, guess what? We were right. I don't like to be right on those kinds of issues, but we were.

Now, the good news is that we come back—as we come back online, and we are, our unit of utilization of hydrocarbons is less per unit of production. Our emissions are less per unit of production coming back online because the technologies we are applying are newer. We're not using less hydrocarbon, we're using it differently, and those of us who have advocated technology and the application of technology over the years again are right as it relates to economic growth development and jobs.

And the combination of the two, and that's what the chairman has always driven toward, the development of hydrocarbons and the combination of nuclear energy, is the right combination. So we're not going to give up on this fight. I hope the chairman is right that the Minority Leader will support us in the policy you've developed. Our new hurdle will be the House again and we'll work closely over there to see if we can't get something accomplished this year, but thank you for your leadership, Mr. Chairman. It's greatly appreciated.

ADDITIONAL COMMITTEE QUESTIONS

Senator DOMENICI. Thank you very much, Senator. I just want to say, what one should do as you listened to all statements just made by the good Senator from Idaho, we probably ought to conclude our remarks by saying we speak of nuclear because it has not contributed any of the pollutants we're worried about, zero. So it's not like we were for it because we did it once and it's our baby. It's because the pollutants that we're worried about and the pollutants that are going to ruin China come from coal, come from those kinds of products which they're going to all have to produce because everybody's scared of nuclear. Nuclear produces none excepting fear and trauma from those who are scared and question what we do with the waste.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR PETE V. DOMENICI

TWENTY YEAR FACILITY PLAN

Question. Given the strong support demonstrated by the Secretary for your 20 year facility plan can you help me understand how this budget supports these new priorities?

Answer. The 20-year facility plan is not a budget document and reflects a most aggressive and optimistic view of future funding for the Office of Science. Affordability of these facilities will depend upon many factors in the future, and the list of facilities may change as science priorities evolve and mature. In the fiscal year 2005 request, funding is provided for the top 5 facility priorities in the plan as follows: ITER $7,000,000; Ultrascale Scientific Computing capability $38,212,000; Joint Dark Energy mission $7,580,000; Linac Coherent Light Source $54,075,000; and Protein Production and Tags $5,000,000. We consider the above facilities to be near-term priorities for the next decade.

INTERNATIONAL THERMONUCLEAR EXPERIMENTAL REACTOR (ITER)

Question. Can you explain why the Department purposefully ignored congressional direction in this regard?

Answer. We believe the Department has not ignored Congressional direction because the fiscal year 2005 budget request does not reduce the overall level of domestic fusion research to any significant extent as a result of ITER preparations. Where appropriate, domestic fusion experimental, theoretical and enabling technology re-

search is reoriented more toward the needs of ITER. This research is performed by existing fusion scientists and engineers. Only a very small amount, on the order of $1 million of the ITER preparations request of $38 million, is for industrial preparations at this time. This reorientation of fusion research has resulted in some shifts in priorities, such as reducing facility operating time and focusing technology more on the near-term, but overall the domestic fusion research is not reduced to any significant extent.

Question. Can you please update the subcommittee on the ongoing negotiations to pick a location for the project?

Answer. The ongoing negotiations are centered on the two host candidates, Japan and EU. These two governments are communicating with each other and trying to find a solution. On the periphery, all of the negotiating parties are still discussing various technical aspects of the two candidate sites; however, this is not likely to be decisive as both sites are considered to be fully acceptable.

Question. What does the funding curve look like for this large international project?

Answer. Assuming the site negotiations are successful and the ITER International Agreement is completed, fiscal year 2006 would be the earliest time to start the ITER construction project. According to a preliminary cost and schedule estimate—which has yet to be validated according to the project management guidelines for capital assets set out in DOE Order 413.3 and OMB Circular A–11—the profile of the U.S. funding share would begin in fiscal year 2006, peak around fiscal year 2010 at about $190 million, and end in fiscal year 2013.

Question. How much funding is the United States expected to provide on an annual basis going forward and how does that compare with our international partners on this project?

Answer. The U.S. contributions to the project, mainly in the form of hardware, but also including some personnel to work on the project and some cash for common expenses, would be about 10 percent of that required for the total project. That is essentially the same as all of the non-host partners.

WHO CONTROLS THE HYDROGEN INITIATIVE?

Question. Who is ultimately responsible for the overall hydrogen initiative, and what controls will be implemented to ensure the taxpayers are getting best deal for the research dollars?

Answer. Within the Department of Energy, the Offices of Energy Efficiency and Renewable Energy (EE), Fossil Energy (FE), Nuclear Energy, Science and Technology (NE), and Science (SC) participate in the hydrogen initiative. As stated in the DOE Hydrogen Posture Plan, the Office of Energy Efficiency and Renewable Energy leads the effort and is responsible and accountable for DOE's success or failure in carrying out the Plan.

The Hydrogen Posture Plan includes performance-based milestones that will be used to track progress of the hydrogen initiative. Based on a recommendation by the National Academies, the Hydrogen, Fuel Cells, and Infrastructure Technologies Program is establishing an independent systems-analysis activity to help prioritize research, evaluate program risks, and ensure that results meet requirements. The Program will undergo periodic peer reviews of its plans and research such as the one just recently performed by the National Academies.

The approach of the Department's four offices working together has been to:

—Update internal planning documents annually to support the administration's request for the President's Hydrogen Initiative;

—Ensure EE, FE, NE and SC budget submissions to OMB support the DOE Posture Plan and that there are no gaps or redundancies in requested budgets;

—Plan solicitations and evaluate proposals; and

—Evaluate funded research.

No conflicts have arisen between the four DOE offices participating in the hydrogen initiative thus far. Should conflicts arise in the future, the Under Secretary for Energy, Science and the Environment will ensure program and budget integration, as all of the Assistant Secretaries and Directors of the four offices involved in the effort at DOE report to the Under Secretary.

The Department also works closely with the Department of Transportation, which currently has a small role, but whose participation will grow more important as hydrogen technologies advance toward commercialization.

R&D VS. FUNDING FOR DEMONSTRATION PROJECTS

Question. How is DOE deciding on and managing the balance between funding for the necessary research for the required breakthroughs and funding for demonstration projects using current technology platforms?

Answer. A continuum of research and development, from basic science to demonstration, will be needed to develop a long-term hydrogen economy.

Basic science will be performed in areas that are only conceptual but have the potential for making major impacts. An example would be photoelectrochemical production of hydrogen (direct solar conversion without the intermediate step of electrolysis). Although conversion efficiencies are orders of magnitude too low, the potential benefit is great because of the large renewable resource available. This research may take decades to come to fruition.

Exploratory and applied research will be done in areas where there is proven performance but a large gap still exists between current technology and what is needed to meet consumer requirements. An example is hydrogen storage, where approaches such as metal hydrides are proven, but we still need improvement factors of two to three times current values to meet our requirements. As performance improvements are made, cost targets become more important.

Demonstrations are appropriate when technology has matured to the point that system integration issues must be addressed and performance under real-world operating conditions must be evaluated. Further research or significant progress may still be needed to reduce cost, but system performance must be validated. Demonstrations may uncover operating issues not previously considered, such as performance in certain climates, and will guide and refocus future R&D efforts.

The National Academies' hydrogen report recommended that the Department shift away from some development areas towards more exploratory work. Exploratory research involves the application of novel ideas and new approaches to "established" research topics, and is likely to catalyze more rapid advances than basic research and more innovative advances than applied research. The Department is doing this through the Hydrogen Storage Grand Challenge, which includes the establishment of three "Centers of Excellence" led by national laboratories along with multiple university and industry partners. This could be a model for "expert" centers focusing on other priority research areas.

CENTERS FOR EXCELLENCE IN HYDROGEN

Question. How do you plan to fund your soon-to-be announced centers for excellence in hydrogen storage, and future R&D efforts?

Answer. Funding for the Hydrogen Storage Grand Challenge solicitation was requested in the fiscal year 2004 budget. However, due to the number of and funding associated with Congressionally-directed projects in the fiscal year 2004 hydrogen account, no funds are available to start the Centers of Excellence and other projects selected under the Grand Challenge this year. These efforts will be initiated in fiscal year 2005 with fiscal year 2005 funds, subject to the availability of funds.

STORAGE CENTERS

Question. Will you start any activity this year for these storage centers to begin the important groundwork?

Answer. No. Due to the number of and funding associated with Congressionally-directed projects in the fiscal year 2004 hydrogen account, no funds are available to start research in the Centers of Excellence and other projects selected under the Grand Challenge this year.

OMB FUNDING REQUEST

Question. Your [EE] budget has an unusually large funding increase for Program Funding within the Renewable section. Funding increased by 67 percent from $12.3 million in fiscal year 2004 to $20.7 million. How did you get this funding request by OMB and how do you intend to use the funding?

Answer. Of the proposed $8.4 million increase, $3 million is for a new activity, the Climate Change Technology Program (CCTP). These funds will generally be used for support services in developing a CCTP strategic plan and conducting analyses.

Excluding this new activity, the increase we request is $5.4 million, or 44 percent. Much of this proposed increase is in direct response to the committee's exhortations that EERE emphasize better stewardship through stronger project management and increased competition in contracting.

We plan to spend $3.6 million to hire additional Federal staff in order to move away from the practice of using the laboratories to oversee their own contracts, cooperative agreements, and grants. We believe these inherently Federal activities should be performed by Federal employees. Our fiscal year 2005 budget request includes an increase of 22 FTE over the budgeted level of 84 FTE for fiscal year 2004, mostly for project management staff at the Golden Field Office.

It is important to note that hiring Federal staff instead of using laboratory personnel for these 22 FTEs will allow more of EERE's funding to be devoted to actual R&D activities. In fact, we calculate that filling these 22 FTE positions using laboratory personnel would cost roughly $5.8 million, compared to $3.6 million for Federal staff. This action will therefore "save" an estimated $2.2 million in program funding, which is captured in the Program Direction budget line. We do not show the "savings" by program in the budget justification materials because program budgets generally do not include a line item corresponding to overhead costs for laboratory staff to manage contracts. These costs are built into each budgetary line as appropriate. The entire amount of the "savings" within each program is redirected from formerly unstated program overhead costs to actual program activities that contribute to program goals.

Of the remaining portion of the increase ($1.8 million), $1.2 million will be used to sustain the current on-board staff level of 84 FTE. The remaining $0.6 million will be used mostly for support services, information technology investments, consolidation of legacy business practices and systems, and management services for implementing our strategic management system.

NUCLEAR ENERGY BUDGET

Question. Based on this anemic budget should the committee assume that the nuclear energy is no longer a priority for this administration?

Answer. The President's budget request increases the funding for the Department's nuclear energy program by 1.2 percent to about $410 million for fiscal year 2005. This budget advances the policy direction for the Nation's energy security established by the National Energy Policy and allows the Department's priority efforts in programs such as Generation IV and the Nuclear Hydrogen Initiative to proceed vigorously. The Department's request more than doubles the fiscal year 2004 request for each of these programs, demonstrating the administration's commitment to dealing with not just the short-term issues of the energy market, but longer-term, strategic issues.

In addition, the President's fiscal year 2005 budget also lays the groundwork for one very important element of the administration's effort to expand our future use of nuclear energy with the creation of a new national laboratory, the Idaho National Laboratory. This new laboratory's central mission is to pursue research, development, demonstration and education associated with nuclear energy.

Two of the Department's nuclear R&D programs have ended with the fiscal year 2005 budget.

—We request no funding for the Nuclear Energy Research Initiative (NERI) for fiscal year 2005, but the activity will continue as an annual competitive research grants program for university researchers that is tied to mainline programs such as Generation IV and Nuclear Hydrogen Initiative. We believe that, to be relevant, the NERI program must be tied more closely to the Department's mainline nuclear energy programs. We also believe that NERI's greatest benefit is in its support for the Nation's university nuclear technology programs. The restructuring of NERI addresses both of these important concerns.

—The Nuclear Energy Plant Optimization program has accomplished the most important mission it was designed for: addressing many of the aging material and generation optimization issued which have been identified as the key long-term issues facing current operating plants. We are confident that industry will continue supporting the research objectives highlighted by NEPO because these objectives are consistent with industry's interest in the long-term, reliable, and economic operation of existing nuclear power plants.

We are requesting less for two other programs:

—The Advanced Fuel Cycle Initiative requires less funding in fiscal year 2005 because the Department has decided against the rapid development of commercial-scale UREX+ technology. Instead, we are focusing on longer-term, higher-payoff research at laboratory scale in next-generation fuel cycle technologies including advanced aqueous and pyroprocessing spent fuel treatment, advanced transmutation and Generation IV fuels, and detailed systems analysis and modeling.

—The Department has requested only minimal funding for the Nuclear Power 2010 program in fiscal year 2005 to enable the continuation of ongoing licensing demonstration and related analysis projects. Future requirements for the program will be reviewed as Congress completes work on comprehensive energy legislation and the Department assess the responses and requirements associated with its recent solicitation related to New Plant Licensing Demonstration Projects.

NUCLEAR ENERGY TECHNOLOGIES/NUCLEAR POWER 2010

Question. Can you please update me on the status of the Nuclear Power 2010 program and explain to me how this money will be used and how it will benefit the companies participating in this program?

Answer. The Nuclear Power 2010 program is a joint government/industry cost-shared effort to identify sites for new nuclear power plants, develop advanced nuclear plant technologies, evaluate the business case for building new nuclear power plants, and demonstrate untested regulatory processes. These efforts are designed to pave the way for an industry decision by the end of 2005 to order a new nuclear power plant which will be built and begin commercial operation early in the next decade.

As an initial step in the demonstration of the untested regulatory processes, the Department has established cost-shared cooperative projects with three nuclear power generating companies to demonstrate the Nuclear Regulatory Commission (NRC) Early Site Permit (ESP) licensing process. Under these cooperative projects, each of the three power generation companies (Dominion, Exelon, and Entergy) prepared and submitted, in the fall of 2003, an ESP application to the NRC. The program will support the analysis and regulatory interactions required to allow the NRC to issue Early Site Permits to all three sites during fiscal year 2006.

In fiscal year 2003, the Department initiated a cost-shared project with an additional power company, Tennessee Valley Authority (TVA), to evaluate the environmental, seismic and geo-technical suitability of a commercial nuclear plant site in Alabama. This project is expected to be completed in October 2004 and will provide important input for a TVA decision to proceed with ordering and building a new nuclear power plant.

The remaining critical untested regulatory process is the combined Construction and Operating License (COL) process. The COL process is a "one-step licensing" process which results in resolution of all health and safety issues associated with construction and operation of a new nuclear power plant. The importance of this new "one-step licensing" process is that all regulatory and licensing issues are resolved before a power company makes a major investment and begins construction of the plant. In fiscal year 2003, the Department initiated a cost-shared project with industry to develop generic guidance for the COL application preparation and to resolve generic COL regulatory process issues. This project will be completed in fiscal year 2005.

In November 2003, the Department solicited power company proposals to initiate New Nuclear Plant Licensing Demonstration Projects. Under these cost-shared projects, power companies will conduct the necessary activities to select an advanced reactor technology and prepare a license application to build and operate a new nuclear power plant. These projects will also provide for NRC design certification of a standardized nuclear power plant design. The Department expects to receive two or three and proposals from industry teams.

This work and a variety of smaller studies in cooperation with a range of industry partners will advance the public/private effort aimed at the deployment of new nuclear power plants around the beginning of the next decade.

Question. Do you have an estimate as to how much time the DOE proposed contribution of $10 million will save companies in this licensing process?

Answer. The Nuclear Power 2010 cooperative licensing demonstration projects with the power generation companies has made it possible for the companies to seek Early Site Permits (ESPs) and begin planning for a combined Construction and Operating License (COL). Successful demonstration of the licensing processes will encourage future decisions to build new nuclear plants by elimination of industry concerns over regulatory risk and reduction in the overall license process duration. It is estimated an overall reduction of at least 1 year in the ESP licensing application and approval process can be realized from the current projection of 4¼ years. Similar time savings is expected to be realized in the COL licensing process. The savings for COL applicants are in addition to more than 2 years in savings projected to be realized as a result of having certified standardized Generation III+ designs available.

Perhaps more important than the funding provided to support this work is the Department's partnership with the industry in exploring the development of new nuclear power plant projects. Without such aggressive government support, which flows from the National Energy Policy and public encouragement provided by senior administration officials, it is possible that industry would be more hesitant to pursue these activities.

Question. Do you have an estimate as to what you believe the companies will expend over the next year?

Answer. As part of the Nuclear Power 2010 program cost-shared projects, power companies are expected to invest an amount at least equal to DOE spending. For ongoing activities in fiscal year 2005, industry is expected to spend at least $4.5 million on the Early Site Permit Demonstration projects and an additional $1.8 million for generic activities and guidance development for COL applications.

The Department expects to have a firm estimate of industry planned expenditures for fiscal year 2005 and the overall requirement for the licensing and development of Generation III+ designs after assessing the industry responses to its recent solicitation for New Nuclear Plant Licensing Demonstration projects. This solicitation was issued in November 2003 and we expect to receive responses from industry in spring 2004. The most recent industry estimates provided to the Department project an industry cost-share of approximately $60 million to $80 million per year through 2010 to obtain a combined Construction and Operating License and complete associated first of a kind engineering activities.

IDAHO NATIONAL LABORATORY

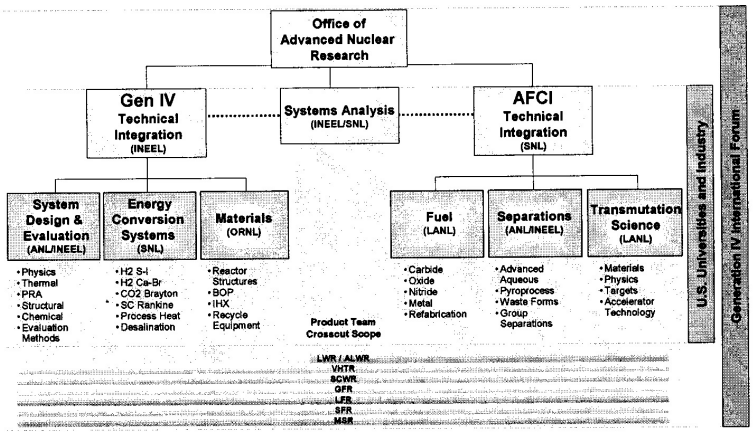
Question. Following the establishment of the Idaho National Laboratory, what role do you see for the other laboratories that currently contribute to the nuclear energy program?

Answer. We anticipate that several of the Department's national laboratories will continue to play key roles in implementing the Office of Nuclear Energy Science and Technology's research and development agenda. While the Idaho National Laboratory will develop a prominent and central role in the nuclear energy technology program, the expertise and capabilities of several other labs—chiefly Oak Ridge National Laboratory and Los Alamos National Laboratory—will be essential in the success of our research efforts.

Question. Do you have a transition plan and budget estimate prepared that will guarantee the success of the nuclear research into the future and continue to draw on the experience of the other national laboratories?

Answer. The execution of our nuclear energy R&D programs is guided by multi-year program plans that have been jointly developed by our Federal and national laboratory personnel. These program plans identify R&D activities will evaluate undertaking over the next 10 years and include estimates of the out-year budgets necessary to carry out those efforts. The continued participation of the national laboratories in executing the multi-year program plans is essential to the overall success of the programs. As an example, the attached chart displays the organization of the Department's Generation IV Nuclear Energy Systems and Advanced Fuel Cycle Initiative programs—note that this organization highlights important roles for several national laboratories. We expect that this approach will endure as these programs progress.

The attached chart illustrates the program integration for the Generation IV and Advanced Fuel Cycle Initiatives.



Question. Can you explain what would happen if full funding of $48 million isn't provided for costs associated with the restructuring of the Idaho National Lab restructuring plan?

Answer. The $43.8 million identified in the President's budget request for Laboratory Transition and Restructuring will assure that all current INEEL personnel remain employed through the contract transition period, thus enabling the new contractors to hire the staff that best fit their very different requirements. Without this funding, we would not be in a position to facilitate an effective transition of the laboratory staff.

Question. Would funding shortfalls delay the Idaho upgrades or will this put the entire nuclear energy R&D effort at risk with further delays?

Answer. Shortfalls in the restructuring request could require the Department to explore taking funds taken from the infrastructure or other programs at the site including the nuclear energy R&D efforts. Alternatively personnel could be terminated before the new contractors have an adequate opportunity to review their qualifications.

Question. The Budget Request includes $46 million for "one-time costs associated with restructuring the Idaho lab." Since EM was the previous landlord for this Lab, why aren't these one-time costs being paid by EM, instead of NE?

Answer. Most of the workers who may not find immediate employment with either new contractor will be support personnel who perform landlord type functions that benefit the entire site. As NE is now the site landlord, it falls to NE to fund this work since that office controls the affected functions.

Question. The Idaho Lab will have a difficult challenge establishing its research programs. In the past, the Idaho Lab could tax EM programs for LDRD to fund internal research. Now those EM funds are being swept into another contract. I am hearing that future EM funds can not be taxed to support the new INL. Is this correct and can you explain that logic?

Answer. The Idaho Cleanup Contract is designed to only fund those activities that directly support accelerated cleanup. As the cleanup work is not expected to continue indefinitely, it is not appropriate for the lab to rely on the cleanup contractor to fund ongoing research activities.

Question. Aren't you worried that the new INL will have too small a base of funding to derive any meaningful LDRD funding?

Answer. We believe that there will be adequate the funding available for LDRD projects in the future as the INL becomes a world class research center for nuclear technology development.

UNIVERSITY PROGRAMS

Question. How can progress in university programs be maintained when the overall pot of R&D funds, for universities and labs is slashed?

Answer. Over the past several years, the Department has had a substantial positive impact on the Nation's university nuclear engineering programs as evidenced by increasing student enrollments, re-establishing stronger academic programs, improving the performance and use of their research and training reactors, and attracting minorities to the nuclear engineering discipline. The University Programs budget for fiscal year 2005 is essentially equal to our fiscal year 2004 appropriation when it is considered without the one-time funding of $2.5 million for spent fuel transportation. In fiscal year 2005 the Office of Civilian Radioactive Waste Management will assume responsibility for university reactor spent fuel transportation and, therefore, the University Programs budget reflects the transfer of this activity. Funding for faculty and student research at our Nation's nuclear universities remains constant for fiscal year 2005.

In fiscal year 2005, the Department will integrate researchers from the Nation's universities into the Department's mainline nuclear energy R&D activities. The Department will use competitive, peer-reviewed solicitations focused on the university community to select the best ideas for meeting the technology challenges of our various research efforts. Funding for this university-based research will be derived from the Department's primary nuclear energy R&D programs, including the Generation IV Nuclear Energy Systems Initiative, the Advanced Fuel Cycle Initiative, and the Nuclear Hydrogen Initiative. Overall, the proposed funding for university R&D is $1.8 million higher in fiscal year 2005 than fiscal year 2004.

Question. I was pleased that additional regional consortia, now six in total, were created to enable students to have access to important research reactors. But how does addition of new consortia match with proposed 10 percent cut in the university program budgets?

Answer. The six consortia, under the Innovations in Nuclear Infrastructure and Education (INIE) program, are an unqualified success. Funding for this important and highly successful program is essentially equal to the level of fiscal year 2004, which supported the increase from four to six consortia.

LOUISIANA ENERGY SERVICES—ENRICHMENT

Question. In written response to questions in last year's review of the fiscal year 2004 budget, you stated:

"The Administration places a high priority on ensuring nuclear nonproliferation safeguards are in place and that access to sensitive technology is controlled. The information available to the Department indicates that URENCO has acted responsibly with regard to the control of sensitive technology and the employment of nonproliferation safeguards.

"The Department believes that LES's plans for the deployment of centrifuge technology in the United States are of considerable national benefit. Deployment of an LES plant will help assure the important energy security objective of maintaining a reliable and economical U.S. uranium enrichment industry.

"The Department believes there is sufficient domestic demand to support multiple commercial uranium enrichment plant operators in the United States and that competition is important to maintain a viable, competitive domestic uranium enrichment industry for the foreseeable future."

Does this response from the Department still stand?

Answer. Yes, we understand that URENCO continues to follow nonproliferation safeguards and controls on access to sensitive technology in accordance to agreements with the U.S. Government regarding to LES' deployment of centrifuge technology.

The Department also continues to believe there is sufficient domestic demand to support multiple commercial uranium enrichment plant operators in the United States and that competition is important to maintain a viable, competitive domestic uranium enrichment industry for the foreseeable future. Currently, domestic uranium enrichment capacity is less than half of U.S. nuclear fuel requirements. Over the next two decades, U.S. demand for electricity is forecasted to grow by 50 percent. Without the deployment of reliable and economical advanced technology and assuming nuclear power maintains its current share of demand, the share of U.S. nuclear fuel requirements met by foreign suppliers could rise to 80 percent in 20 years.

RADIOPHARMACEUTICALS

Question. Is the Department's policy of requiring that researchers, who require new radiopharmaceuticals, pay the full production costs coordinated with the Na-

tional Institutes of Health such that vital research in improved applications of radiopharmaceuticals is continuing at a rapid pace?

Answer. The Department's program requires that researchers pay for isotope development and direct production costs. Isotope production costs are accrued on a batch basis. The Department must obtain funding for the direct production cost for each batch before production can commence. Research customers have not been able to purchase the required isotopes in the manner currently required by the Department. Recognizing this and the impact this approach could have on medical research, the Department has engaged with the NIH. We are working with that agency to develop an approach to address this issue and to ensure that vital isotope-based medical research is not impeded.

Question. Are the two agencies, DOE and NIH in agreement that this is the appropriate place for these costs to be borne?

Answer. There have been positive discussions at the staff level. The Department continues to seek an agreement with the NIH that will lead to a resolution of this issue.

BARTER ARRANGEMENTS

Question. As part of DOE's fiscal year 2005 budget request for its Nuclear Energy Program, DOE is proposing to employ a "barter arrangement" to support the continuation of the technetium-99 activities currently being undertaken by USEC at the Portsmouth Site. Please describe the nature of the "barter arrangement" that DOE is contemplating?

Answer. At the end of fiscal year 2004, substantial quantities of both USEC and the Department's uranium inventories will remain contaminated with technetium-99 above the commercial standard for use as feed in a uranium enrichment process. Currently, processing the uranium at Portsmouth is the only economical means to remove enough technetium-99 contamination to allow it to be used as feed to the Paducah Gaseous Diffusion Plant. Because the cost to continue the technetium-99 removal activities is between one-third and one-half the replacement or market value, both USEC and the Department may benefit from the continuation of this program. A barter arrangement would help achieve realization of the full economic value of the uranium.

Question. Has DOE completed its evaluation of the need for additional legal authority to carry out the proposed "barter arrangement?" If so, please provide a copy of the evaluation. If not, when will this evaluation be completed? When it is completed, please provide a copy.

Answer. The Department has performed an informal evaluation and concluded that an additional authorization is not needed. Under section 3(d) of the Atomic Energy Act (AEA), the Department is to effectuate programs that encourage the "widespread participation in development and utilization of atomic energy for peaceful purposes." All of the material, with the exception of Freon, that is currently being contemplated for barter is "source material" as defined by section 11(z) of the Atomic Energy Act (AEA). Under section 63 of the AEA the Department is authorized to distribute source material, and under section 66 of the AEA the Department is "authorized and directed . . . to effectuate the provisions of this Act" to purchase or otherwise acquire supplies of source material. In addition, under section 161(g) of the AEA the Department is authorized to acquire, sell, lease, grant and dispose of real and personal property that the Department has acquired in connection with carrying out functions under the AEA or property that will be used to carry out objectives under the AEA. Pursuant to these existing authorities, the Department is authorized to enter into any of the barter arrangements that are currently being contemplated.

Question. What products or services is DOE contemplating using as "barter" under the proposed arrangement? Is DOE considering the option of transferring uranium from DOE's stockpile to USEC as part of a "barter arrangement?"

Answer. The products or services being considered for a possible barter arrangement are excess assets related to the Department's former uranium enrichment program, or services that are incidental to activities necessary to the final disposition of that programs legacy. The selection of materials is subject to negotiation and agreement by the other party.

Question. Section 3112 of the 1996 USEC Privatization Act includes a provision that explicitly requires DOE to undertake an evaluation of the impact of any sales or transfers of natural or low-enriched uranium on, among other things, the domestic uranium mining, conversion, and enrichment industry. In the event that any "barter arrangement" were established employing uranium from DOE's stockpile, would DOE agree that the provision in section 3112(d) would apply to any such

transfer? Does DOE consider a "sale or transfer" to include a "barter"? If so, please provide the analysis to support this conclusion.

Answer. The Department is not currently considering proposing to barter material that is subject to subsection 3112(d). However, if the Department were to use material subject to 3112(d), it would comply with the provisions of 3112(d). "Sale or Transfer" is a broad term which encompasses arrangements in addition to normal commercial sales such as barter transfer.

The Secretary is sensitive to his responsibility for the domestic uranium industry as detailed in the USEC Privatization Act and subsection 1014 of the Energy Policy Act of 1992, and has carefully considered the proposed activities. In addition to restoring the economic value to contaminated uranium inventory, any barter proposal would sustain 154 workers employed during fiscal year 2005 in the domestic uranium industry.

Question. Section 3112(d) also requires the recipient of any such uranium sales or transfers to pay the "fair market value of the material." In a barter arrangement, how would DOE address this "fair market value" requirement?

Answer. The Department is not contemplating a barter of material that is subject to subsection 3112(d). However, the barter would be an arms' length transaction for value that would take into consideration the ability to monetize the asset in a fashion adequate to meet the financial needs necessary to provide the services at the Portsmouth facility.

CERAMIC ION TRANSPORT MEMBRANES PROJECT

Question. For the past 7 years the DOE-Office of Fossil Energy (FE) and Office of Energy Efficiency and Renewable Energy (EERE) have supported a development project that uses ceramic Ion Transport Membranes (ITM) to produce hydrogen from natural gas. Selected through a competitive solicitation in 1997, the ITM Syngas project has been co-funded since that time by DOE-FE (75 percent), and DOE-EERE (25 percent). However the fiscal year 2004 funding for the project was reduced by EERE from $1.3 million to $200 thousand. The ITM Syngas project is currently in Phase 2 with the objective of operating a Sub-scale Engineering Prototype (SEP) that will demonstrate full conversion of natural gas to synthesis gas. Achieving this objective is critical to gaining the technical understanding to proceed to the project's next phase, a pre-commercial demonstration of the ITM Syngas technology. From the beginning of the project, EERE had committed to supporting the project through the end of Phase 2, and financial participation through completion of the SEP demonstration is necessary to maintain the project on schedule. After demonstrating full product conversion in the ITM Syngas process, smaller units could be developed that would be amenable to distributed hydrogen production.

In view of this critical stage of the ITM Syngas project, will DOE-EERE revise its fiscal year 2005 budget to provide $1.3 million for the project?

Answer. The ITM Syngas project was one of several hydrogen production projects for which EERE funding was reduced in fiscal year 2004 due to a shortfall caused by the large number of Congressionally-directed projects. The Department plans to meet its total obligations identified in the ITM cooperative agreement, subject to Congressional appropriations, the extent of fiscal year 2005 Congressionally-directed projects, and the results of the annual merit review that helps to guide our prioritization of research projects. EERE will determine its fiscal year 2005 contribution to the project following the completion of the fiscal year 2005 appropriation process.

QUESTIONS SUBMITTED BY SENATOR THAD COCHRAN

BIOMASS R&D AND NATIONAL LABORATORIES

Question. Mr. Garman, you mention in your written testimony that the Department is interested in working with industry and the National Laboratories to reach your goals of a large-scale biorefinery and advanced technologies to transform the Nation's domestic biomass resources into high value power. I believe that our National Labs provide a valuable service and conduct important research. What are you doing to ensure that this research and development is not overly entangled with the industries which fund such activities?

Answer. Our National Bioenergy Center facilitates the coordination of biomass research and development across the National Laboratories. The Center is focused on enabling long-term research needed to convert a wide variety of domestic biomass resources to fuels, chemicals, and heat and power in a sustainable manner. Through partnerships with industry, the Department fosters the nearer term research and

development that leverages the National Laboratories' foundational, enabling work. The public/private partnerships advance biomass conversion processes and integrate them into commercial systems and facilities for testing and performance validation. The National Laboratories are involved with industry's research and development through Cooperative Research and Development Agreements (CRADAs). These CRADAs are carefully constructed to avoid duplicative efforts and to ensure that our participation is an appropriate Federal role.

BIOMASS R&D AND UNIVERSITIES

Question. What role do you see our Nation's universities playing in this ongoing research and development?

Answer. Universities play an important role in the Biomass Program. One example is the Biomass Refining Consortium for Applied Fundamentals and Innovation (CAFI). With support from the National Laboratories, Federal Government, and industry, this group of universities focuses on various possible pretreatment technologies to identify options that enable the integrated industrial biorefinery. In addition, universities are collaborating with the National Laboratories on a variety of research projects as listed below:

—*Colorado School of Mines*.—Impact of Water Structure Modifying Agents and Cellulase Mutations on Cellulase-Cellulose Interactions,
—*University of Arkansas*.—X-Ray Crystallographic Studies of Cellulases,
—*Purdue University*.—Building A Bridge To The Corn Ethanol Industry Follow-On Project—Phase II,
—*University of Colorado*.—Boulder, Mechanistic Model Development for Biomass Thermochemical Conversion Process,
—*Cornell University*.—Molecular Modeling of the Interaction of Cellulose with Cellulases and Catalysts,
—*Cornell University*.—Improving T. fusca Cellulases by Protein Engineering,
—*Dartmouth University*.—The Role of Biomass in America's Energy Future,
—*University of Pittsburgh*.—Biorefinery Optimization Software.

Universities are also funded in fiscal year 2004 through the following congressionally-directed projects: Iowa State University, Iowa State University Center for Catalysis, Purdue University & the Midwest Consortium for Sustainable Biobased Products and Bioenergy, University of Louisville, Louisiana State University Agriculture Center, Mississippi State, and the University of North Dakota. While we do not support continuation of Congressionally directed projects, we expect that many universities would receive funds through a competitive awards process.

The Biomass Program continues to fund multi-disciplinary programs at universities to develop graduate programs that focus on biomass. The approach is to foster collaboration among various departments including business, science, and engineering. The Biomass Program also sponsors research internships at the National Renewable Energy Laboratory involving undergraduate and graduate students majoring in science and engineering. These internships allow the students to gain hands-on research experience under the guidance of prominent researchers.

QUESTION SUBMITTED BY SENATOR LARRY CRAIG

FUNDING A COMMERCIAL BIOMASS PLANT

Question. A biotechnology company is interested in building a commercial bio-ethanol production facility in the State of Idaho. This plant would use agricultural wastes—primarily wheat straw—as its feedstock. Using an enzyme-based process, the plant would convert the carbohydrates from the wheat straw into hydrocarbons for ethanol. The construction of this plant would demonstrate the long-term viability of using agricultural products to provide both energy and chemicals that have thus far been derived from petroleum. The success of this project will create new jobs in the agriculture, energy, technology, research, and construction sectors in Idaho and elsewhere. It will contribute to accomplishing the President's goal of reducing the greenhouse-gas intensity of the economy because the CO_2 emitted by burning ethanol is roughly equal to the CO_2 absorbed by growing the wheat—meaning that burning ethanol created from this process would add no net CO_2 to the atmosphere. Completion of this facility would also demonstrate a realistic way to begin reducing our Nation's dependence on foreign oil.

This cutting-edge project would be eligible for the loan guarantee program described in the energy bill conference report. Because that bill has not been sent to the President by the Congress, and because this project can serve multiple national

interests simultaneously, I seek your assistance in identifying existing authorities that would ensure the rapid construction of this facility.

Please identify any existing programs, funds or authorities that could be used by this company to secure financing and commence construction on this vitally important project.

Answer. The Department of Energy does not have any program funding available to support this effort at this time. The Department of Agriculture (USDA) conducts a loan guarantee program under Section 9006 of the Farm Bill that has funded small grain-based ethanol plants. However, because the proposed plant is a first-of-a-kind facility with a high degree of technical and financial risk, this project may not receive funding under the USDA program. The Department is unaware of any other Federal programs that would fund this project.

QUESTIONS SUBMITTED BY SENATOR TED STEVENS

ALASKA EXAMINATION OF GEOTHERMAL SITES

Question. In September 2003, Assistant Secretary David Garman and Dr. Roy Mink traveled to Alaska to examine geothermal sites, determine their viability for electricity production, and to assess ways in which the Department of Energy can assist in developing this energy resource. What steps has the Geothermal Technologies division and the Office of Energy Efficiency and Renewable Energy taken towards this end?

Answer. The Geothermal Technologies Program has reached out to help Alaska define its geothermal resource and to begin building a base for development of that resource. A database of potential geothermal resources has been developed that targets two areas in Alaska for possible power plant developments (Akutan and Unalaska).

The Program is also providing assistance to private developers, one working with the Native Corporation to establish a basis for development of a power plant at Akutan and another developer who has an interest in working with the Native Corporation for a potential power plant at Dutch Harbor (Unalaska). We are also working with the Kotzebue Electric Association to evaluate existing geothermal data and provide a basis to evaluate potential use of geothermal thermal energy to protect the town sewer system from freezing.

As a result of the September 2003 trip, the Geothermal Technologies Program has included additional funding opportunities for Alaska. The Geothermal Outreach funding opportunity announcement (State Energy Program) closes on April 6, 2004. The Geothermal Resources Exploration and Definition funding opportunity announcement will be released on March 18, 2004, and the Power Plant Development funding opportunity announcement will be released near the end of March 2004. These announcements will provide up to $5 million of geothermal funding in fiscal year 2004.

DOE also provided $100,000 to the Alaska Division of Energy to support development of a working group to promote geothermal energy awareness in Alaska.

ASSISTANCE TO ALASKA COMPANIES

Question. Given the extraordinarily high cost of energy in rural Alaska, many utility companies are exploring the possibility of harnessing wind energy to supply rural communities with electricity. What assistance is the Office of Energy Efficiency and Renewable Energy providing to these companies?

Answer. The Department of Energy supports wind power projects in Alaska through several local and State organizations. There are ongoing wind projects with Kotzebue Electric Association, the City of Unalaska, and TDX Corporation (St. Paul Island) that are aimed at providing lower cost energy alternatives to rural Alaskan communities. Through the Department's Tribal Energy Program, renewable energy studies are underway for Southeast Alaska, the Yukon-Kuskokwim Delta region, and the Bristol Bay region. National Wind Technology Center personnel provide expert technical support to these projects by supplying anemometers, evaluating the wind resources, conducting wind workshops, and sponsoring local representatives to attend technical workshops.

EVALUATION OF RENEWABLE ENERGY SOURCES ON PUBLIC LANDS

Question. In February 2003, the Department of Energy and the Department of the Interior released a report evaluating renewable energy resources on public lands. Alaska was excluded from this report. Will the Department of Energy undertake a similar evaluation of renewable energy resources on public lands in Alaska?

Answer. The Geothermal Technologies Program is working with the United States Geological Survey on a limited geothermal resource assessment for the western United States, including Alaska. Comprehensive energy legislation pending in the Congress requires thorough annual assessments of all renewable energy resources, including solar, wind, biomass, ocean, geothermal, and hydroelectric, in all 50 States.

TIDAL ENERGY PROJECTS COST IN ALASKA

Question. The use of tidal energy is currently being explored in Alaska. As you know, the coast of Alaska has exceptional energy producing potential. Tidal energy projects have high capital costs. Is the Office of Energy Efficiency and Renewable Energy exploring opportunities to harness tidal energy?

Answer. The Department is not currently funding research in tidal energy. Since there are only two areas of the Nation with a significant tidal flux (Cook Inlet, Alaska; Bay of Fundy, Maine) the application of tidal energy is not considered widely applicable.

RENEWABLE ENERGY PROGRAM IN ALASKA

Question. Please describe in detail the Department of Energy's (DOE) renewable energy program in Alaska.

Answer. Some of the activities DOE is funding in renewable energy in Alaska are described below. All of these projects were Congressionally directed. We strongly support competitive awards to ensure that the Department's program goals are advanced and taxpayer dollars are spent wisely.

Biomass

The Department is supporting an ethanol production facility with Sealaska Corporation in Ketchikan that will utilize wood residues produced from various forest industry operations in a process to produce fuel grade ethanol. Regional Biomass Energy Program funds support a biomass energy specialist at the State level who assists developers with regulatory and utility issues, provides technical assistance, and in some cases provide financial assistance. The Regional Biomass Program also contributed to the Dutch Harbor Fish Oil Demonstration Project which demonstrated blending fish oil with diesel oil to power engine generator sets that provides electricity to the town of Dutch Harbor.

Wind

DOE has been supporting wind power projects in Alaska for several years through various local and State organizations. There are ongoing wind projects with Kotzebue Electric Association, the City of Unalaska, and TDX Corporation (St. Paul Island) that are aimed at providing lower cost energy alternatives to rural Alaskan communities. National Wind Technology Center personnel provide expert technical support by supplying anemometers, evaluating the wind resources, conducting wind workshops, and sponsoring local representatives to attend technical workshops. The Department has also tested cold weather wind turbines to mitigate performance problems in extreme-cold climates (e.g. icing on blades and gear box freezing).

Geothermal

The Department assisted the Alaska Energy Authority in completing a statewide assessment of geothermal resources. The assessment concluded that geothermal resources near the community of Akutan have the potential to displace a substantial portion of the 4.3 million gallons of diesel per year used for generating power and heat in the community and fish processing plant. The Department has also supported site specific feasibility investigations. This past September, Assistant Secretary Garman accompanied the Geothermal Program Manager to Alaska to examine several geothermal sites to determine their viability for electricity production. The Geothermal Technology Program is supporting a geothermal working group to promote geothermal energy awareness in Alaska. This group will be visiting Nevada on a trade mission to learn about successes and procedures used by Nevadans to develop geothermal energy.

Hydropower

The Department has supported a number of hydropower technology development efforts in Alaska over the years. Currently, DOE is supporting the Alaska Village Electric Corporation in a hydropower feasibility study at Scammonbay, and a Power Creek hydro-electric project in Anchorage.

State Energy Program

The State Energy Program provides base-level funding for Alaska to maintain energy specialists in State government. Funding is used to conduct resource assessments, fund projects, and provide technical assistance and workshops.

Tribal Energy Program

Renewable energy studies are underway for Southeast Alaska, the Yukon-Kuskokwim Delta region, and the Bristol Bay region.

QUESTIONS SUBMITTED BY SENATOR HARRY REID

FOR INSPIRATION AND RECOGNITION OF SCIENCE AND TECHNOLOGY (FIRST)

Question. In the fiscal year 2004 Conference Report we carried language encouraging the Department to support competitors in the For Inspiration and Recognition of Science and Technology (FIRST) robotics competition, a brainchild of Dean Kamen, the inventor of the Segway and several other remarkable devices. Do you mind describing what the Department has done to follow-up on this direction?

Answer. Brookhaven National Laboratory (BNL) scientists and engineers provided significant support to students of William Floyd High School, Mastic Beach, NY, in the form of technical guidance and assistance in the fabrication of the components to build a robot. BNL is providing the funding necessary to purchase the competition kits for Longwood High School, Middle Island, NY, and Port Jefferson High School, Port Jefferson, NY, to participate for the FIRST event. Additionally, special times for operation of the machine shop were provided by BNL. The FIRST competition is exciting and rewarding with the per team costs typically running between $10,000 to $15,000. The Office of Science provided $20,000 to BNL to support these three high school teams' participation in the FIRST event.

IOWA ENVIRONMENTAL/EDUCATION PROJECT

Question. Is the Iowa Environmental/Education Project, something that has been described to me as a giant, $200 million roadside terrarium, a worthy investment of Federal funds that will generate useful, cutting edge science or is it just a huge waste of Federal taxpayer dollars?

Answer. This Congressionally directed project will develop an environmental and "green energy" education center on a 30 acre Environmental Protection Agency Brownfield site in Coralville, Iowa. It will not be a cutting edge research facility. The project includes an indoor tropical rain forest, aquarium, educational center, and galleries on the prairie eco-system, Midwest geology, and agriculture.

USER FACILITIES

Question. We have a large capital investment in the Office of Science user facilities that serve many users at universities and laboratories. Are we operating these facilities at maximum capacity in the fiscal year 2005 budget to meet the needs of these scientists?

Answer. Overall, Office of Science user facilities are operating at 95 percent of optimum in the fiscal year 2005 request, 3 percent better than in fiscal year 2004. (This metric is straightforward but perhaps too simplistic, and we are working to develop a more sophisticated metric for the fiscal year 2006 President's Budget.) It is always difficult to find the right balance among competing priorities for facility operations, research, construction, etc. We are satisfied that we have allocated the funding in the request to achieve the best balance possible.

INTERNATIONAL THERMONUCLEAR EXPERIMENTAL REACTOR (ITER)

Question. As I mentioned in my opening statement, I am pleased that the United States has resumed its participation in the ITER ("EATER") project. However, the dollar levels look somewhat low, particularly in light of our commitment to fund 10 percent of the total. Are the funds in the budget adequate to fulfill our international requirements?

Answer. The fiscal year 2005 budget request for ITER is adequate because the funds are for preparations for a subsequent ITER construction project. The plan is for the construction project to start in fiscal year 2006, at which time the U.S. funding requirement would increase significantly.

Question. As a follow-up, the U.S. participation seems fairly modest compared to that of several of the international partners. Are you satisfied that it appears that

the United States will be just a junior partner in ITER. Is a larger role something we should aspire to?

Answer. The Department is satisfied that the 10 percent role is appropriate for the United States. With the exception of the host, all of the ITER Parties would be at approximately the same level of participation. Each Party would receive the same benefits in terms of equal access to the scientific and technological results from ITER, as well as an equal role in planning the ITER scientific program. Accordingly, a larger financial contribution for the United States is not considered necessary.

Question. Dr. Orbach, as I understand it, the Department is getting ready to select a site for a U.S. ITER Project Office. Could you please explain the process for that selection?

Answer. The process for selection of the host for a U.S. ITER Project Office consists of review by an independent Evaluation Committee of Federal and non-Federal employees. This process will be managed by the Chicago Operations Office. The conclusions of the Evaluation Committee will be forwarded to the Office of Fusion Energy Sciences for selection of the host by the director of that office.

Question. Given the importance of the ITER project to fusion research and to the fusion community, has an expert independent review board been appointed to guide that selection?

Answer. We are in the process of identifying members of such a board.

FUNDING FOR CONCENTRATING SOLAR POWER

Question. I see that you have a $2 million request for funding for the Concentrating Solar Power portion of the solar energy budget. While I realize this is an improvement from the $0 you requested last year it is a far cry from what I expected given that your office, the National Academy, and many other national organizations all now agree that CSP has merit and promise. Despite your words to the contrary, are you giving up on Concentrating Solar Power?

Answer. We are not giving up on Concentrating Solar Power (CSP). As you pointed out, last year we did not request any funding for CSP. In light of recent studies we sought from an independent engineering firm, a draft of which was reviewed by the National Research Council, we propose $2 million to support a more thorough investigation of the appropriate R&D course needed to realize the potential for CSP. The fiscal year 2005 budget request will be used to maintain CSP facilities at Sandia National Lab, to provide analytical support to States, and to develop a comprehensive program plan to help inform the fiscal year 2006 budget development process and a longer term R&D plan.

Question. If not, what do we need to do to get this program back on track?

Answer. DOE will develop a Concentrating Solar Power (CSP) program plan which will use recommendations from the independent review studies and take a systems approach to identify the highest value technology R&D investments. These findings will then be used to inform the fiscal year 2006 budget development process and a longer term R&D plan.

NATIONAL RENEWABLE ENERGY LABORATORY

Question. In the last three conference reports we have carried language directing the National Renewable Energy Laboratory (NREL) to deploy some of their technologies in Nevada in partnership with industrial and university partners. It is my understanding that this effort is working out well for everyone involved, but I would be interested in your thoughts.

Answer. As a matter of principle and administration policy, we do not support earmarks. Nevertheless, over the past 2 years, the Department has worked closely with NREL and various State interests in order to make the most effective use of these directed funds. A competitive process was used to select projects that would bring laboratory, university, and industrial partners together in the State of Nevada to help develop the solar, geothermal, wind, and related hydrogen resources in the Southwest. Per fiscal year 2004 Congressional direction, the Department will continue these efforts and look for additional opportunities to form alliances between Nevada's university system, other Nevada State agencies, and industry to establish centers of renewable energy expertise in the State. The "RE Centers of Expertise" will likely include, but not be limited to, research and development, training for future workers in renewable energy, and technology demonstration and performance validation.

BIOMASS RATIONALE FOR CUTS

Question. Biomass seems to have taken a substantial cut in the fiscal year 2004 request. By all accounts this program has been very successful. Why are you cutting back at this time?

Answer.

FUNDING SUMMARY

[In thousands of dollars]

Program/Activity	Fiscal Year 2004 Request	Fiscal Year 2004 Comparable Appropriation	Fiscal Year 2004 Earmarks	Fiscal Year 2004 Unencumbered Appropriation	Fiscal Year 2005 Request
Biomass Program (EWD and Omnibus Appropriation)	69,750	86,471	42,805	43,666	72,596
Biomass Program (Interior)	8,808	7,506	.....	7,506	8,680
Total, Biomass Program	78,558	93,977	42,805	51,172	81,276

Excluding all the Congressionally-directed projects in fiscal year 2004, we are actually seeking $30 million more in fiscal year 2005 than was appropriated last year toward the research and development (R&D) goals established in our program plan and budget submissions. Our R&D goals have been developed in consultation with the U.S. Department of Agriculture, National Laboratories and the Biomass R&D Advisory Board established by Congress.

In order to fund Congressionally-directed projects in fiscal year 2004, we have had to modify our program goals. Furthermore, we will experience delays in achieving our key milestones and the broader market acceptance of power, fuels and products derived from biomass. We urge the committee to provide us the flexibility to spend Biomass funds in accordance with our program plans, which will provide the best potential for producing long-term positive returns on the taxpayers' investment.

HIGH TEMPERATURE SUPERCONDUCTOR PROGRAM

Question. Do you think that the High Temperature Superconductor program should be moved back into your organization, particularly in light of the wholesale redirection of funds away from superconductors that the Electricity Transmission and Distribution program has undertaken?

Answer. The new Office of Electric Transmission and Distribution (OETD) has voiced its strong support for High Temperature Superconductivity (HTS). The funding of the High Temperature Superconductor Program is not a result of the office in which the program is housed, but rather the fact that Congress appropriated $10.972 million less for transmission and distribution R&D in fiscal year 2004 than in fiscal year 2003, the year before the new office was created. Of the $69.467 million appropriated for R&D within OETD, $25.75 million was for Congressionally Directed Activities, leaving only $42.49 million ($6.285 million less than in fiscal year 2003) for all R&D work.

FINANCIAL ASSISTANCE TO GEOTHERMAL DEVELOPMENT IN ALASKA

Question. What percentage of the division's budget will be dedicated to providing financial assistance to geothermal development in Alaska?

Answer. The fiscal year 2004 budget for the Geothermal Technologies Program is $26 million. The program provides opportunities for Alaskan entities to participate in open and competitive funding opportunity announcements. Current and upcoming opportunities are valued at a total of $5 million, or 19 percent of the program's budget. Alaskan proposals will be considered alongside others in open competition.

QUESTIONS SUBMITTED BY SENATOR PATTY MURRAY

GENOMICS: GTL FACILITIES

Question. Dr. Orbach, I understand you have recently published a strategic plan for new facilities supporting DOE's missions. PNNL, along with other research Institutions in the State of Washington, is very interested and, indeed, believe we have a strong research infrastructure to be the location of one of the GTL facilities in your strategic plan and facilities plan.

What is your position on the schedule for the various facilities with the genomics program, including the proteome analysis facility?

Answer. Our 20-year facilities plan lays out the time sequence of the scientific user facilities, including those advocated by our Genomics program. As the Genomics program evolves we hope to be able to proceed with the construction and operation of the Genomics facilities. PNNL, along with other research institutions in the State of Washington should be in a strong position to successfully compete for one or more of these facilities. I should also note that while the facilities plan lists four large Genomics facilities, it is conceivable that evolving scientific needs and the competitive solicitation process for each facility could lead to us to fund multiple distributed facilities at a smaller scale. As available funding allows, we intend to let the science drive the ultimate makeup of these facilities.

ULTRA HIGH-SPEED SUPER COMPUTERS

Question. The Department of Energy has recently announced an aggressive computing program, including ultra high-speed super computers. What is your position on competition?

Answer. The Department believes that competition is critical to ensuring effective stewardship of the taxpayers' investment in science as well as selection of the best ideas to ensure the scientific leadership of the country. We have just announced a solicitation to the Office of Science laboratories to begin installation of a leadership class computer for open science. The award will be made on the basis of peer reviewed open competition.

HYDROGEN IN THE PACIFIC NORTHWEST

Question. What are the unique assets that research institutions and the natural resources of the Pacific Northwest provide that will make hydrogen a reality in the Northwest?

Answer. The Pacific Northwest uses renewable energy resources to produce much of its energy. These resources can be tapped to produce hydrogen. Hydropower is a carbon free source of inexpensive electricity that can produce hydrogen via electrolysis. Wind can also be harnessed to create hydrogen via electrolysis, with Washington and Oregon alone possessing over 8,000 megawatts of developable wind generation potential.

The Northwest is home to many organizations with the ability to play a part in developing a hydrogen infrastructure. These include State and city governments, the Bonneville Power Administration, fuel cell developers (Ballard, Avista labs, IdaTech, etc.), major regional universities, heavy truck and aerospace manufactures, Pacific Northwest National Laboratory, and Idaho National Engineering and Environmental Laboratory.

TIME SCALE FOR HYDROGEN IN NORTHWEST

Question. In what time scale do you see hydrogen being a viable source of energy in the Northwest?

Answer. Hydrogen is not a source of energy, but an energy carrier that can be produced from multiple energy resources. Because of the many technical and cost hurdles associated with a transition to a hydrogen economy, we don't expect wide scale use of hydrogen—in the Northwest or elsewhere—before 2020.

INDUSTRY-LABORATORY COOPERATION

Question. Can you tell me more about industry's role in research development and demonstration projects in the effort to develop a more robust grid; specifically efforts underway involving national laboratory and industry cooperation?

Answer. Industry-laboratory partnerships enable the full development and/or deployment of new and promising technologies that form the cornerstone of DOE's efforts to modernize the Nation's Electric Transmission infrastructure.

Within the High Temperature Superconductivity's (HTS's) Strategic Partnership Initiative (SPI), Los Alamos National Laboratory (LANL), Oak Ridge National Laboratory (ORNL), IGC SuperPower, Waukesha Electric Systems, Southwire Company, and American Superconductor are the primary partners working together to develop High Temperature Superconducting (HTS) wire, and four types of HTS electric power equipment prototypes, including cables, motors, generators and transformers. This technology will enable distribution and transmission cables that have three to five times the capacity of conventional copper cables and higher efficiency (especially useful in congested urban areas), and power equipment with half the energy losses and half the size of conventional equipment.

Examples of current research and development projects—all involving DOE-Industry cost sharing—include the Boeing Phantom Works with Argonne National Laboratory to design, fabricate and test a 35 kilowatt hour superconducting flywheel energy storage system as a power risk management system that will give power users and utilities a full-scale device to manage both cost and reliability risks; the General Electric HTS Generator Project involving LANL and ORNL to install a 100 MVA prototype generator; the IGC SuperPower project with LANL to develop and install a transformer component at a HTS substation; and the Long Island Power Authority project with LANL involving the installation of a HTS cable system.

Lawrence Berkeley National Laboratory has the lead for the national laboratory/industry/university consortium that was formed to support cutting-edge research in Transmission Reliability R&D, provided support on the summer 2003 Blackout Investigation, and is integral to projects for developing reliability tools.

The Pacific Northwest National Laboratory (PNNL) is part of the national laboratory/industry/university consortium that was formed to support research on Transmission Reliability R&D to transform the Nation's distribution system. PNNL conducts evaluations of the technological and institutional aspects of recent reliability events on the Nation's electric power system, and is the lead for research activities in real-time monitoring and control of the power grid. PNNL partners with the GridWise Alliance, in which IBM, SEMPRA, the Pennsylvania, New Jersey, Maryland Interconnection (PJM) and others work to modernize the Nation's electric distribution system in potentially revolutionary ways.

In fiscal year 2004, PNNL has provided support on the summer 2003 Blackout Investigation. PNNL supports development of communication and control architectures and technologies, as well as the integration of multi-vendor distributed energy resources into the distribution system. PNNL supports development of technologies for improved load/demand management while responding to market prices and electricity supply/demand conditions.

Sandia National Laboratory (SNL) participates in a national laboratory/industry/university consortium to support research on Transmission Reliability R&D. SNL also works to develop advanced superconductors based on the sol-gel chemical deposition process. For energy storage, SNL develops improved energy storage system components including power conversion electronics and modular multi-functional energy storage systems.

Argonne National Laboratory performs research and development for the HTS Program Activity. Argonne utilizes unique expertise in ceramics and materials science to improve conductor performance and to investigate deposition processes, such as metal-organic chemical vapor deposition. Argonne also performs research on superconducting electric motors, transmission cables, and flywheel electricity systems.

SUBCOMMITTEE RECESS

Senator DOMENICI. So that's it. We stand in recess. Thanks.

[Whereupon, at 11:23 a.m., Wednesday, March 3, the subcommittee was recessed, to reconvene subject to the call of the Chair.]

ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 2005

TUESDAY, MARCH 23, 2004

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 2:32 p.m., in room SD–138, Dirksen Senate Office Building, Hon. Pete V. Domenici (chairman) presiding.

Present: Senators Domenici, Bennett, Craig, Reid, and Feinstein.

DEPARTMENT OF ENERGY

NATIONAL NUCLEAR SECURITY ADMINISTRATION

STATEMENT OF AMBASSADOR LINTON F. BROOKS, UNDER SECRETARY

ACCOMPANIED BY:

ADMIRAL FRANK L. BOWMAN, DEPUTY ADMINISTRATOR, NAVAL REACTORS PROGRAM

DR. EVERET H. BECKNER, DEPUTY ADMINISTRATOR, DEFENSE PROGRAMS

PAUL M. LONGSWORTH, DEPUTY ADMINISTRATOR, DEFENSE NUCLEAR NONPROLIFERATION

OPENING STATEMENT OF SENATOR PETE V. DOMENICI

Senator DOMENICI. Good afternoon. This hearing will come to order.

Today, the subcommittee will take testimony on the fiscal year 2005 budget request for the National Nuclear Security Administration. We will receive testimony from Under Secretary and Administrator of NNSA, Ambassador Linton Brooks; Deputy Administrator for Naval Reactors, Admiral Frank Bowman; Deputy Administrator for Defense Programs, Dr. Everet Beckner; Deputy Administrator for Nuclear Nonproliferation, Paul Longsworth.

It is a pleasure to have all of you here. I look forward to your testimony today.

For the NNSA, the President has requested $9 billion, an increase of 4.4 percent from the current year funding level of $8.6 billion. As a percentage, this is a considerable increase above the 1.2 percent growth in discretionary funding for Department of Energy.

Ambassador Brooks, your responsibilities include the important job of maintaining our shrinking nuclear stockpile and to ensure that it serves its essential mission of deterrence. Funding priorities in this account include continuation of the stockpile refurbishment

activities as well as conducting important stewardship activities to ensure safety and reliability, a vital necessity in the absence of underground testing.

Your budget also continues to make the National Ignition Facility, NIF, a top priority. I am deeply concerned that the fiscal year 2005 budget has slipped the target date for ignition back to 2014 as a result of numerous technical challenges, including the cryogenic targets. To date, we have spent $2.5 billion with another $4 billion that will be spent over the life of the program. I don't believe it is prudent to continue to throw good money after bad. I will do everything in my power to ensure that program managers deal with the most pressing technical issues before we allow the program to go any further. In addition, I will work to ensure there are clear and verifiable programmatic milestones.

I was surprised to see the request that nearly $500 million is provided for the Robust Nuclear Earth Penetrator. The Department should not assume such large sums in its budget without Congressional approval or direction. What we are really talking about is a stockpile plan. A successful report validates design feasibility and need and does not force the inclusion of such a large amount of money. I want it explained to this committee, unequivocally, so what we are doing and what we are authorizing and what we are not doing and what we are not authorizing. Because nobody on this committee is voting to do this. We are voting to study it if it wins but not to do it. To study it is a small amount of money. If we do it it is a lot of money.

The budget also provides $124 million, a 21 percent increase above current year funding in the safeguards and security accounts to respond to the new design basis threat. That new security requirements, that these new ones are driving costs to such a high level it is diverting limited resources from other cash-strapped programs within DoE. While I recognize the need to protect this special nuclear material I fear that there is not a plan to consolidate the nuclear material across NNSA complex in order to lower our security costs and at the same time minimize terrorist threats.

Ambassador Brooks, I am somewhat disappointed that the administration has failed to provide the nuclear stockpile report that was required in the 2004 Energy and Water Bill. This is an important priority within this bill and I would appreciate it if you would take the message back to the Forrestal Building and to the Pentagon that we are eagerly awaiting that report. Soon this committee will begin developing our budget priorities. Failure to produce the stockpile report will have serious consequences for your funding priorities next year. I need not spend any more time; you had better answer it, acknowledging that what I am talking about is right and you had better promise us to fix it or we will have big troubles between you and this committee, I assure you. This should have already been done.

Finally, I am very discouraged with the funding cuts proposed in 2005 for the Mesa Facility at Sandia and the CMR replacement facility at Los Alamos. Shortfalls of a serious budget nature will delay these construction projects, adding to the costs and limiting the lab's ability to perform critical stockpile work.

Now, I understand you are short of money. You get told by the OMB what to do but some of this, you know, we are not going to do what you ask us just because OMB let you, we are going to do what we think and not let you do some of the things that they have told you that you can do. I will have my turn on these laboratories when I ask you the questions.

I will just make a statement ad lib now, that everything that I can now read about America in the globalization and jobs would indicate that what this country needs more than anything else is new technology breakthroughs. And we need them quick. We need new things that follow on the computer with new technologies. And if I understand correctly, those come in the fields of micro-engineering, probably, and nano-science, and the center for those should have been Mesa. Maybe it still will be but if we delay it so long it will not be.

In addition to maintaining the nuclear stockpile, you at the NNSA also have the important challenge of preventing the spread of nuclear material, technology and expertise that could be used to develop and use weapons of mass destructions. The Office of Nuclear Non-Proliferation works very hard to secure weapons-grade material and prevent the sale of technology used by countries to develop nuclear weapons.

Mr. Ambassador, I must compliment you and Mr. Longsworth and his staff for the role DoE played in disarming Libya, as well as uncovering the proliferation activities operated by Pakistan's top nuclear weapons scientist, Abdul Khan. We congratulate you on that. And we only fail to understand how Abdul Khan, with what we know he has already done, is still free. If somebody else in the world had done that, God knows what would have happened.

Another top priority for the office is to ensure the success of the U.S./Russian MOX program that will dispose of 34 tons of plutonium from each of the Russian and U.S. stockpiles. I am very pleased, Senators, to have been part of that. Senator Reid, you remember when I helped put it together and went to Russia with President Clinton, but I am very, very concerned about the lack of progress in these negotiations. How long ago did this start? 1998. U.S. negotiations to work with the Russians where we to try to find an acceptable solution so we can break ground on this project and we are hung up over what I think are trivial negotiating issues. I recently told the White House that maybe they ought to put some bigger people in the position of negotiating. How a little issue of indemnification can hold this up is beyond me. Now I find that indemnification has occurred between Russians and us and some other program where the liability potential might have been more severe than this, and the Russians came to the table. They would not have got that one done, if I would have had anything to do with it, until they get this one done. This is a way to get rid of a huge chunk of nuclear-grade plutonium.

Admiral Bowman, thank you for your participation in what may be your last hearing before the subcommittee. I appreciate your steady hand. The Naval Reactors Program continues to serve as the world's gold standard for safe and reliable operations of nuclear power. I am interested to know how your office has been handed the responsibility of producing the next generation of space reac-

tors. Traditionally this has fallen to the Office of Nuclear Energy, which has developed some expertise in these unique engineering systems. I surmise that part of the reason it went where it did is that you have more expertise than they had in the area.

PREPARED STATEMENT

Dr. Beckner and Mr. Longsworth, I appreciate your participation and welcome your input.

[The statement follows:]

PREPARED STATEMENT OF SENATOR PETE V. DOMENICI

Good morning—this hearing will come to order.

Today, the subcommittee will take testimony on the fiscal year 2005 budget request for the National Nuclear Security Administration.

We will receive testimony from Under Secretary and Administrator of the NNSA, Ambassador Linton Brooks; Deputy Administrator for Naval Reactors, Admiral Frank Bowman; Deputy Administrator for Defense Programs, Dr. Everet Beckner; and Deputy Administrator for Nuclear Nonproliferation, Paul Longsworth.

You have all testified before this subcommittee before and it is a pleasure to have you here again. I look forward to your testimony today.

For the NNSA, the President has requested $9 billion, an increase of 4.4 percent from the current year funding level of $8.6 billion. As a percentage, this is a considerable increase above the 1.2 percent growth in discretionary funding for Department of Energy.

Ambassador Brooks, your responsibilities include the important job of maintaining our shrinking nuclear stockpile and to ensure that it serves its essential mission of deterrence. Funding priorities in this account include continuation of the stockpile refurbishment activities as well as conducting important stewardship activities to ensure safety and reliability—a vital necessity in the absence of underground testing.

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Like many of my colleagues, I was surprised to see in the budget request that nearly $500 million is provided for the Robust Nuclear Earth Penetrator (RNEP) in out-year funding. I want be absolutely clear, without a stockpile plan and a successful report that validates design feasibility and need; the Department should not assume such large sums in its budget without Congressional approval or direction.

This budget also provides a $124 million increase (21 percent above current year funding) in the Safeguards and Security Account in order to respond to the new Design Basis Threat. The new security requirements are driving costs to such a high level, it is diverting limited resources from other cash-strapped programs within DOE. While, I recognize the need to protect this special nuclear material, I fear that there is not a plan to consolidate special nuclear material across the NNSA complex in order to lower our security costs and eliminate potential terrorist threats.

Ambassador Brooks, I am disappointed that the administration has failed to provide the nuclear stockpile report that was required in the fiscal year 2004 Energy and Water bill. This is an important priority within this bill and I would appreciate it if you would take the message back to the Forrestal building and to the Pentagon that we are eagerly awaiting that report. Soon this subcommittee will begin developing our budget priorities. Failure to produce the stockpile report will have serious consequences for your funding priorities next year.

Finally, I am discouraged with the funding cuts proposed for fiscal year 2005 for the MESA facility at Sandia and the CMR Replacement facility at Los Alamos. Serious budget shortfalls will delay these construction projects adding to the overall cost and limiting the labs ability to perform critical stockpile work.

In addition to maintaining the nuclear stockpile, the NNSA also has the important challenge of preventing the spread of nuclear material, technology and expertise that could be used to develop and use weapons of mass destruction. The Office

of Nuclear Nonproliferation works very hard to secure weapons-grade material and to prevent the sale of technology used by countries to develop nuclear weapons.

Ambassador Brooks, I must compliment you, Mr. Longsworth and his staff for the role DoE played in disarming Libya as well as uncovering the proliferation activities operated by Pakistan's top nuclear weapons scientist Abdul Khan.

Another top priority for that office is to ensure the success of the U.S./Russian MOX program that will dispose of 34 tons of excess plutonium from each of the Russian and U.S. stockpiles. This is an important project from a proliferation standpoint, but I am concerned about the lack of progress in negotiations. I have worked hard to push U.S. negotiators to work with the Russians to find an acceptable solution that will allow us to break ground on this important project and forever dispose of the plutonium.

Admiral Bowman, thank you for your participation in what may be your last hearing before this subcommittee. I appreciate your steady hand on the rudder. The Naval Reactor program continues to serve as the world's gold standard for safe and reliable operations of nuclear power.

Admiral, I am interested to know how your office has been handed the responsibility of producing the next generation of space reactors. Traditionally, this responsibility has fallen to the Office of Nuclear Energy, which has developed an expertise in designing these unique energy systems.

Dr. Beckner and Mr. Longsworth, I appreciate your participation in this hearing and welcome your input.

Now, I will yield to Senator Reid for any opening statement he would like to make.

Senator DOMENICI. Now I yield to Senator Reid for comments and then we will proceed. Senator Reid.

Senator REID. Thank you very much, Mr. Chairman. I welcome you back after the recess. I hope your recess went well.

Senator DOMENICI. Thank you. It did.

STATEMENT OF SENATOR HARRY REID

Senator REID. Ambassador Brooks, by and large I believe you and your team are doing a good job. I have met with you on occasion and you have always been forthcoming in spite of the rocky start that you and I had regarding your confirmation. I think you have been candid with me and I have tried to be with you. I have, as with Senator Domenici, a long tenure on this subcommittee; we go back to the days of Dr. Victor Reis where we were trying to come up with a stockpile stewardship program. And I think we came up with one to have a safe and reliable nuclear stockpile, clearly the safest and most secure of any in the world. And even though I fought Senator Domenici initially on establishing the entity which you lead, Senator Domenici was right; I think it has been a tremendous step forward. And General Gordon did such a remarkably good job, he has very large shoes to fill, as you know. He had a commanding personality and his great record, I think, added the prestige needed to get this new entity started.

So, I have reviewed your testimony, budget request, and I will bet there is not a hearing that I have attended, or will attend during this budget cycle, that they would not love to have OMB sign off on what you have gotten. I do not know of an entity that has been treated better than yours that I have seen this whole year. Your problem is not an inadequate budget request, your problem is going to be holding on to what you already have. This subcommittee may be as much as $1.7 billion in the hole due to a combination of inadequate funding requests, especially the Corps of Engineers, budget gimmicks that certainly are just amateurish and the budget committees have chosen not to accept these gimmicks.

Holding NNSA harmless may not be possible unless the subcommittee is given a sizeable increase in its allocation. I read an article during the recess that suggests, Mr. Chairman, you have secured a commitment from the Majority Leader and the Chairman of the Budget Committee that our subcommittee will remain healthy at the end of the budget process. I certainly hope so. It is not just this subcommittee, it is the entire Senate that benefits. And having said that, the entire country benefits from giving us a better budget mark than what we have. And if that is the case, Senator Domenici, you deserve every accolade that you can get, and I would be the leading cheerleader for this if your efforts are successful.

Second, Ambassador Brooks, you are going to hear a lot, as you already have heard, from the chairman of this subcommittee about a number of things. One of the things I know he is frustrated about is the National Ignition Facility. And as we look back at the ability of that project to go forward, I have to say that project would not have gone forward but for Senator Domenici. I was ready to can that whole thing. But Senator Domenici and I try to work together on this subcommittee as much as we can and as a result of our working together we let this project go forward. And Senator Domenici, having been the lead person on this, I on a number of occasions will set aside my personal feelings about what is going on because of his initial involvement in this. So what I am saying is that I think you are going to have to take a closer look at NIF because Senator Domenici certainly is going to take a close look at it. We know there have been some problems in the latest snafu, and I think that this is something that we have to look at closely because I know the chairman is going to look at it closely. NIF has a large number and unless we get our budget allocation changed we are going to have to look there for some of the money to take care of other things.

Third, you are requesting expanded funding for a number of very controversial items: Robust Nuclear Earth Penetrator, Modern Pit Facility, Advanced Nuclear Concepts Program. Last year, the House of Representatives, without a word of dissent to be heard anywhere in the House, slashed funding for these programs. The Senate bill fully funded them; there was an amendment offered on the Senate floor to cut the funding. It failed although it had support of most of the Democratic Caucus. The point I am making is that you need to tread very carefully here. Congressional support for these programs is not very strong and I would encourage you to be very candid on a regular basis with your plans and intentions for all these programs. The memo you sent the laboratories regarding the Advanced Concepts Program last year, the one that seemed to indicate that it was okay to move forward as planned regardless of Congressional guidance, concerns us all. I am willing to give you the benefit of the doubt that you are not encouraging your contractors to ignore our intent but I strongly suggest that you and your staff work very closely with us up here on these initiatives.

I am a little concerned, maybe even put off, by the notion that you have included a half-a-billion dollars in your out-year spending plan as what you call a "placeholder" for bunker busting pending White House and Congressional decisions. I am not sure that we

can allow this to go forward. This is a large "placeholder." Many of us remain unconvinced that this is an appropriate path.

Finally, on the subject of working with us here in Congress, our Conference directed you to submit the Revised Stockpile Plan to us with fiscal year 2005 budget request. We carried these words because we were beyond being fed up with waiting for the Plan half-a-year ago. The budget request has been here for nearly 2 months and we still have no sign of the Revised Stockpile Plan. We set that date in consultation with your staff so we can use that document to assist our financial decision-making. I am not interested in the story about how complicated it is to get such an important document signed or how many people over at the White House or NNSA need to read it, polish it, refine or rewrite it; it is just way overdue and we need to get the document up here. I might even suggest that we write a bill that fences off every dollar above current year levels for NNSA until this is provided. And I hope this gets the White House's attention. And I am convinced, Ambassador, that this is not you personally holding this up and you need not comment on that. But sometimes we get a little put-off by someone who is a Secretary or an Administrator such as you are who comes here and says to us privately, well, I'm not the one holding this up. And you are the person that we look to.

So, I want to thank each of your deputies for being here; Dr. Beckner, Admiral Bowman, Mr. Longsworth, we appreciate that very much.

The chairman's not here so the acting chairman, Senator Bennett, I would ask permission of the chair to be able to submit questions in writing and would ask that you, the witnesses, get back to the subcommittee within 10 days. We have a little parliamentary problem on the floor that I am going to work on.

Senator BENNETT [presiding]. Without objection.

Senator REID. Thank you very much.

STATEMENT OF SENATOR ROBERT F. BENNETT

Senator BENNETT. Thank you, Senator Reid, very much.

When the Chairman returns I will make it clear that I hope to have more than a single round of questioning because I have a number of concerns that I want to raise and a number of issues that I think have to be made very clear for the record.

I assume you know the history of southern Utah with respect to nuclear testing in Nevada. It goes back to the 1950's and the 1960's, and Utahans were not only let down by their government, quite frankly, Utahans were lied to by their government. Things that were done in those periods in retrospect are incomprehensible. Students were let out of school and taken out to the schoolyard to stand in the open air and look for the flash of the above-ground test and then watch the cloud as it went over. And the incidence of cancer and other problems that occurred among people who lived down-wind from the Nevada testing site has been well documented and Congress has taken actions with it and I will not review all of that past. But I think if you are not familiar with that past you should be and therefore understand why the people of southern Utah, in particular, are very suspicious of anything the government says about nuclear testing, above-ground or below-ground, and for

that reason, Mr. Chairman, I intend to use this opportunity to ask a number of questions, quite pointed. I expect that I will get direct answers so that they will be firmly on the record and there will be no ambiguity about some of this.

Now, while I speak with that background as the Senator representing Utah, I want to make it clear that my concern for the safety of the people of Utah is not limited to Utah. I, as a Senator, must be concerned about the safety of all of the people who will be down-wind from any test that will occur, and that would include not only everybody in the United States but given the jet stream and the way we now understand the weather goes around the world, accidents or sloppiness in testing in Nevada can affect far more than just Utah. So while I speak here as the Senator for Utah I want to make it clear that I want to be sure that health and safety for everyone in America, and to the degree it gets beyond our shores, to the rest of the world becomes the primary concern. And I know that none of you were involved in the things that were done back in the 1950's and 1960's when the government lied to its citizens in that part of the world and that is fine.

But that means that we must be even more circumspect and more penetrating in our attempts to make sure that this administration does not repeat, in any way, either inadvertently or deliberately, the things that have happened in the past. There is still a great deal of skepticism among those who live in southern Utah about any government pronouncement on this issue and that is why, Mr. Chairman, I intend to be fairly penetrating in the question period. And I said before you came I hope we will have more than one round so that I will have time to explore all of this properly.

Senator DOMENICI [presiding]. Senator, if we do not finish and you need some more, we would turn the committee over to you and you can spend the whole afternoon.

Shall we proceed? Do you need to make an opening statement, Senator?

Senator FEINSTEIN. I do, Mr. Chairman. I hate to tell you.

Senator DOMENICI. Well, we were not going to have them but I got out of here and it got started. So we have got to let you.

Senator BENNETT. When you relinquished the gavel for 30 seconds I took advantage of it.

Senator DOMENICI. Go ahead.

Senator FEINSTEIN. Thank you very much.

Senator DOMENICI. We want to be brief.

STATEMENT OF SENATOR DIANNE FEINSTEIN

Senator FEINSTEIN. I will try very hard to be brief but I think as Mr. Brooks knows I have very strong views on the proposed nuclear program and I wanted to make a couple of comments about it. Ambassador Brooks was nice enough to spend some time with me in my office, and I appreciate that very much, and went over his views of what the program is. The more I read about the program the more I believe it is something else and I would characterize that something else by saying it is a reopening of the nuclear door.

Just where you sit last year Secretary Abraham sat. He said we have no intentions of proceeding with new nuclear weapons. Secretary of Defense, at a Defense Appropriations hearing, came before us and said that the Robust Nuclear Earth Penetrator is a study, it is nothing more and nothing less. And then, if you look to follow the money, I think you see that it is much more than that. This year's budget request includes the $27.5 million for the Earth Penetrator, the $9 million for the so-called Advanced Weapons Initiative, and the $30 million for the Modern Pit Facility to make up to 450 new pits, which as you know we discussed and you said there was no way of knowing whether we need this kind of improvement in the Pit Facility. And the Revised Stockpile Plan has not yet been presented to the best of my knowledge. But if you look at the Congressional Research Service, they now report that the administration's own long-term budget plan includes $485 million for the Robust Nuclear Earth Penetrator between 2005 and 2009. I think that number casts doubts on the contention that this is just a study and that all we are doing is just a study. Because I do not believe there can be a commitment of nearly $500 million for just a study. And I think it means that the administration is determined to develop and field a new generation of nuclear weapons. And this Senator is strongly opposed to that.

I think by seeking to develop new nuclear weapons, and as indicated in the Nuclear Posture Review, a new doctrine that considers nuclear weapons in the same category as conventional weapons, the United States is sending a message that nuclear weapons have a future battlefield role and utility. And by doing so I believe we are going to make our Nation and our allies less secure, not more secure. And if the United States opens the door to the development, testing and deployment of new nuclear weapons. So I am just here to kind of follow this thing along and I am going to try to oppose it at every step of the road because I do not believe the American people want to support a new generation of nuclear weapons.

PREPARED STATEMENT OF SENATOR LARRY CRAIG

Senator DOMENICI. Senator Craig has also submitted a prepared statement which will be included in the record.

[The statement follows:]

PREPARED STATEMENT OF SENATOR LARRY CRAIG

The DOE's nuclear weapons programs are of great interest to the Nation and to this subcommittee. DOE is a significant national security agency. Both the Chairman and Ranking Member of the subcommittee have parts of the nuclear weapons complex located in their States.

Idaho has a stake in these programs, too. As Admiral Bowman is aware, there isn't a single element of nuclear fuel that gets discharged from a Naval reactor that does not end up in Idaho. The fuel is examined in Idaho and then stored there for the long term. This work is the reason why Navy cores now last "the life of the ship."

Naval Reactors is now being tasked to provide this kind of expertise to space nuclear reactors. Idaho can bring much more to this enterprise than simply being the resting place for the Navy's spent fuel. I ask our witnesses to consider that, as they go about deciding how to approach this new space nuclear mission.

DOE also has the job of stopping the proliferation of nuclear materials which is an important one in the world we face. I believe that DOE should more closely coordinate its nuclear nonproliferation missions with those of DOE's Office of Nuclear Energy. People around the world want cheap, abundant energy. They might decide

nuclear energy is the way to get there. If they decide to build nuclear reactors, I am confident that this country can design reactors that do not cause the spread of enriched materials around the globe. Scientists at the Idaho National Lab can contribute to solving this challenge.

Finally, I would ask all of our witnesses to consider the issue of economic security. A prosperous world will be more secure. A world where resources are scarce and people are in conflict will be a more dangerous world. Energy security is a key part of national security of global security. I challenge each of you to think more broadly about the role of energy technology in our national security. It is an essential element, and we need to devote the resources to it.

Greater support for energy technology should be part of the appropriations bill we craft. For our national security, we also need to pass a comprehensive energy bill as soon as possible. The chairman of the subcommittee has worked diligently on that, as have I. We will continue to do so.

Senator DOMENICI. Well, let me first say, so there is no misunderstanding, I do not favor a new round of the development of nuclear weapons. I think I am just as firm on that as is the distinguished Senator from California. But I do believe research is not static with reference to nuclear activity. And so we will go into this a little more and ask whether we can actually ask our great scientists to just close their minds to these issues and say they cannot study them even if they fall right before their face. So we will have our arguments. The California Senator can contend we are building new weapons; I will contend we are researching them. She can contend we are paying for $500 million worth; I will say we are going to vote for a small number and no more in the language of dollars, and the language will say what it is for and no more. So with that, I would like to proceed.

What is your pleasure? Shall we start with the Ambassador? All right, Mr. Ambassador, please proceed.

STATEMENT OF AMBASSADOR LINTON F. BROOKS

Ambassador BROOKS. Thank you, Mr. Chairman. I want to thank the Members for their support for our national security efforts. I have prepared some detailed written testimony I would like to submit for the record, and I would like to summarize that now. And I would like it if Admiral Bowman could follow me and talk about the Naval Reactors portion which I will not cover.

Senator DOMENICI. On the record.

Ambassador BROOKS. As you said in your opening statement, the fiscal year 2005 request totals just over $9 billion, which is a 4 percent increase over 2004 and is consistent with the long-range plan presented to the Congress last year. For weapons activities we're seeking $6.5 billion. That will maintain the safety and reliability of the nuclear weapons stockpile, enhance stockpile surveillance in the engineering base, refurbish and extend the service life of warheads, maintain an R&D base and support the required facilities and infrastructure. I am pleased with the ability of the Stockpile Stewardship Program to certify the safety, security and reliability of our aging nuclear weapons and I'm pleased that we can do that without having to consider returning to underground nuclear testing. And, the cutting edge scientific and engineering tools that we are requesting in this budget will let us continue these certification efforts with the same kind of confidence.

We are extending the life of several existing weapons; that life-extension program is proceeding well. This year, we will complete

the life-extension for the W87 ICBM warhead and we expect to meet DOD schedules for the submarine launched ballistic missile W76, the B61 bomb and the W80 cruise missile. The National Ignition Facility will perform its first Stockpile Stewardship experiment this year using four of its eventual 192 laser beams. We have recently devised a strategy that will ensure ignition experiments begin in 2010 as previously planned. During the question and answer period we can explain technically why that now appears feasible.

Our Advanced Simulation Computing Program will deliver two new machines, one this year, one next year, which will be the fastest computers in the world and, more importantly, will help us provide important data on the health of the stockpile.

The Nuclear Posture Review gave infrastructure equal priority with offensive and defensive forces. We have two accounts in the budget that are essential to our ability to maintain such an infrastructure. Readiness in Technical Base and Facilities provides the funding to operate and maintain our facilities over the long-term. In contrast, there's a Facilities and Infrastructure Recapitalization Program which is a get-well program the Congress authorized designed to eliminate maintenance backlogs this decade. We expect to meet our goal of eliminating those backlogs and have the so-called FIR-program go out of existence shortly after the end of the decade. These two programs are fixing the backlog and restoring the weapons complex. They're crucial and I urge the committee to fully support them.

Now, these programs will allow us to maintain the stockpile for the next decade. Nuclear Posture Review recognized the need over the long-run to design and build a Modern Pit Facility. That's a poor term, it might better be called a Pit Rework Facility. It'll support the pit remanufacturing needs of the stockpile. It's important to understand we need this facility even if the United States never produces another nuclear weapon of any kind. All existing plutonium pits will ultimately need to be rebuilt due to aging effects caused by the radioactive decay of plutonium. Last year's conference requested that we delay issuing the Final Environmental Impact Statement in selecting a site for the Modern Pit Facility pending the submission of the Revised Stockpile Plan that was referred to in several of the Members' opening statements. This decision to delay site selection doesn't affect our very limited efforts at Los Alamos to manufacture a W88 pit nor to reestablish the capability that we've not had in almost 15 years. We're on schedule to produce a War Reserve pit for our Trident-2 missile by 2007.

Now, I have no reason to doubt the ability of the Stockpile Stewardship Program to continue to ensure the safety, security and reliability of the enduring stockpile. But we must maintain our ability to carry out a nuclear weapons test in the event of some currently unforeseen problems that can't be resolved by other means. Our fiscal 2005 request allows us to meet the requirements of the Defense Authorization Act to achieve by October 2006, a readiness to conduct an underground test within 18 months. The President has made it very clear we have no intention of resuming testing. Our plan is to improve test readiness posture, a prudent hedge against the possibility of a problem arising in the stockpile that can't be

confirmed or fixed or certified without a nuclear test. I also want to make it clear that much of the money that we are requesting goes to ensure, through very detailed analysis, the absolute safety of any hypothetical future nuclear test. We are extremely conscious of our safety responsibilities and intend to ensure that if it ever becomes necessary to resume nuclear testing we can do so safely.

ADVANCED CONCEPTS

The programs I have described let us maintain the stockpile and correct unforeseen problems. The Nuclear Posture Review also highlighted the importance of ensuring the weapons complex can adjust to changing requirements of nuclear deterrence in the coming decade. We're requesting $9 million, about one-tenth of 1 percent of our budget, for research on advanced concepts and we're requesting, as has been mentioned by several Members, $27 million to continue the Nuclear Earth Penetrator feasibility study.

There's been a great deal of discussion on the implications of these programs and I'd like to comment on them in a little more detail. Some of the discussion has been based on a misunderstanding of our intent. In his opening statement, the Ranking Member specifically noted one reason for that, a poorly written memorandum that I sent in December. I'd be delighted to submit, for the record, that memorandum, a criticism of it by another committee and my response, in order to make it clear that what we have here is poor drafting and not an attempt to thwart the will of the Congress.

We intend to use our Advanced Concepts funds to investigate——

Senator DOMENICI. Are you going to make those a part of the record?

Ambassador BROOKS. Yes sir, if I may.

Senator DOMENICI. Yes, please do.

[The information follows:]

DEPARTMENT OF ENERGY,
NATIONAL NUCLEAR SECURITY ADMINISTRATION,
Washington, DC, December 5, 2003.

PETE NANOS,
Director, Los Alamos National Laboratory.

MICHAEL ANASTASIO,
Director, Lawrence Livermore National Laboratory.

C. PAUL ROBINSON,
President, Sandia National Laboratory.

On November 24, 2003, President Bush signed the National Defense Authorization Act for fiscal year 2004. Section 3116 of this law repealed the 1994 law prohibiting the Secretary of Energy from conducting research and development that could lead to the production of a new, low-yield nuclear weapon (i.e., Section 3136 of Public Law 103–160—the so-called PLYWD restriction). The administration had sought to remove this restriction because of the chilling effect it has had on nuclear weapons research and development.

On behalf of the administration, I would like to thank you and your staff for helping to support this important effort, we are now free to explore a range of technical options that could strengthen our ability to deter, or respond to new or emerging threats without any concern that some ideas could inadvertently violate a vague and arbitrary limitation. (Of course, testing, acquisition or deployment of any nuclear weapon—low-yield or otherwise—or commencement of weapons engineering development or subsequent phases, requires authorization by Congress).

Along these lines, I expect your design teams to engage fully with the Department of Defense to examine advanced concepts that could contribute to our nation's secu-

rity. Potentially important areas of such research include agent defeat and reduced collateral damage.

In addition, we must take advantage of this opportunity to ensure that we close any gaps that may have opened this past decade in our understanding of the possible military applications of atomic energy—no novel nuclear weapons concept developed by any other nation should ever come as a technical surprise to us.

Repeal of the PLYWD restriction on nuclear weapons research and development represents, in part, an endorsement by Congress of our efforts to begin to address the nuclear weapons stockpile in accordance with the recommendations of the administration's Nuclear Posture Review to meet the security needs of the 21st century. We should not fail to take advantage of this opportunity.

LINTON F. BROOKS,
Administrator.

CONGRESS OF THE UNITED STATES,
HOUSE OF REPRESENTATIVES,
COMMITTEE ON APPROPRIATIONS,
Washington, DC, January 22, 2004.

The Honorable LINTON F. BROOKS,
Administrator, National Nuclear Security Administration, 1000 Independence Avenue, S.W., Washington, DC 20585.

DEAR AMBASSADOR BROOKS: We are deeply concerned by the tenor and substance of your December 5, 2003, memorandum to the directors of the three National Nuclear Security Administration (NNSA) weapons laboratories. You are well aware of our reservations about embarking on significant new nuclear weapons design initiatives under the advanced concepts proposal, and this issue was a significant point of disagreement with the Senate during the Energy and Water Development conference negotiations last fall. These issues continue to command much of our attention and will do so in our consideration of the Department's fiscal year 2005 budget request.

Therefore, we were troubled to read your guidance that the weapons laboratories are now "free to explore a range of technical options that could strengthen our ability to deter, or respond to new or emerging threats, without any concern that some ideas could violate a vague and arbitrary limitation." Your memo also encourages your "design teams to engage fully with the Department of Defense" and "to take advantage of this opportunity to ensure that we close any gaps that may have opened this past decades in our understanding of the possible military applications of atomic energy . . .".

You should be very well aware of our concerns about this advanced concepts work on new nuclear weapons, and of the language in the fiscal year 2004 conference report for Energy and Water Development Appropriations that fences two-thirds of the advanced concepts funding pending submission to Congress and Congressional review of a revised nuclear weapons stockpile report. However, your guidance memo to the weapons laboratories contained no mention of this funding restriction—the only message conveyed to the weapons laboratories is that of unbridled enthusiasm for new weapons designs and for seeking new military missions for nuclear weapons.

Having had several discussions with you on advanced concepts, we took you at your word that you were willing to redefine the scope of the Advanced Concepts work to address our concerns. Unfortunately, it is now apparent to us that those were hollow assurances and that the NNSA is determined to charge forward with unrestricted efforts on advanced nuclear weapons concepts. Nothing in your direction to the weapons researchers communicates any sense of the measured and thoughtful steps that must be taken by the NNSA before Congress is comfortable with the direction the Department is proposing. In addition, your memo also makes us question the sincerity of your commitment to address our concerns regarding the schedule and sizing of the proposed new Modern Pit Facility.

Although we find your actions unhelpful, they are at least instructive in gauging the actual intent of the Advanced Concepts work proposed by the Administration; we will view future proposals from the Department with this memorandum in mind.

Sincerely,

PETER J. VISCLOSKY,
Ranking Minority Member.

DAVID L. HOBSON,
Chairman, Subcommittee on Energy and Water Development.

DEPARTMENT OF ENERGY,
NATIONAL NUCLEAR SECURITY ADMINISTRATION,
Washington, DC, January 27, 2004.

The Honorable PETER J. VISCLOSKY,
Ranking Minority Member, Subcommittee on Energy and Water Development, Committee on Appropriations, U.S. House of Representatives, Washington, DC 20515.

DEAR MR. VISCLOSKY: Thank you for your letter of January 22, 2004, which expresses concerns over my December 5, 2003, memorandum to the Directors of the three National Nuclear Security Administration weapons laboratories. Your letter clearly conveys that, in your view, my memorandum fails to take into account the concerns of the Congress with regard to advanced concepts development.

I have reviewed the memorandum in question and agree some of the wording could lead to misinterpretation of my intent. I regret any misunderstanding. The memorandum was sent to document the removal of the prohibition on conducting research and development that "could" lead to development of a new, low-yield nuclear weapon. As my memorandum stated, the removal of this provision in the fiscal year 2004 Defense Authorization Act allows us to explore advanced concepts without an artificial constraint. Repeal of this restriction was strongly supported by the House Armed Services Committee.

My memorandum did not direct the conduct of specific research aimed at developing new weapons. We intend to use the advanced concept money to investigate new ideas, not necessarily new weapons. For example, the first two million dollars of the fiscal year 2004 funding will be used for examining the feasibility of adapting an existing weapons carrier and existing nuclear warheads to achieve a delivery system with greater assurance that the intended nuclear mission could not be compromised by either component failure or adversary attack; i.e., greater reliability for nuclear missions. Because the remaining funds will not be available until we have submitted a revised nuclear weapons stockpile report and the Congress has had time to review that report, we have not yet determined how the remaining funds will be used. We will, as my December memorandum states, be engaging closely with the Department of Defense on how best to use these funds. Appropriate uses might include examining the feasibility of improving design margins of existing warheads in order to ensure still greater reliability in the absence of nuclear testing or examining other features to improve safety further.

In your letter, you expressed two additional concerns. First, you noted that I did not indicate that two-thirds of the advanced concepts money is fenced until we submit a revised nuclear weapons stockpile report and the Congress has had time to review that report. I did not include that provision because I had personally delivered to each of the laboratory directors a copy of both the bill and the committee report and had highlighted that provision to them.

You also expressed doubt about the Administration's plans with respect to the Modern Pit Facility. To remove any doubt on our plans, I have enclosed a draft press release for your consideration which will be released on Wednesday, January 28, 2004, indicating our intent to delay issuing the final Environmental Impact Statement and, thus, our intent to delay identifying a preferred site for the facility. At the same time, I respectfully repeat what I have said in previous conversations on this matter which is, if the United States never develops another nuclear weapon, a Modern Pit Facility will still be required. I would welcome the opportunity to review my reasoning with you or to arrange a briefing with your staff.

Finally, I want to make it absolutely clear that it was not my intent to mislead the Committee, and I regret any inference you may have drawn that I have done so. You and other members of the Subcommittee have concerns with some of the approaches that the Administration is advocating. Such disagreements are inherent in the process of developing an overall U.S. position on these important issues. I strongly support the President's program for nuclear deterrence and believe that the proposals we have made in the nuclear area are overwhelmingly in the national interest. But, I also understand the importance of not misleading Congress. I regret that the wording of my December 5, 2003, memorandum may have led to the incorrect assumption that I had done so in this case. I have not. I appreciate your bringing this matter to my attention and will ensure that future correspondence does not lead to similar misunderstandings.

I would be happy to discuss any of these points with you personally at your convenience. If you have any further questions, please feel free to contact me or C. Anson Franklin, Director of Congressional and Intergovernmental Affairs.

Sincerely,

LINTON F. BROOKS,
Administrator.

Ambassador BROOKS. We intend to use Advanced Concepts funds to investigate new ideas, not necessarily new weapons. For example, with that portion of the Advanced Concepts money which is not held in abeyance pending the Stockpile Plan, we will begin to examine the feasibility of adapting an existing nuclear weapon to provide a Cruise Missile capability that involves enhanced safety and use control. We are also looking at improving warhead design margins in order to ensure high confidence in warhead reliability. We're also in discussion with the Air Force on examining the utility of nuclear weapons against chemical and biological agents, although we've made no decisions to study this area. Specific uses of the proposed 2005 funds will be determined jointly with the Department of Defense.

Perhaps the single most contentious issue in our budget is continued funding for the Robust Nuclear Earth Penetrator study. The study is to determine whether existing warheads, either the B61 bomb or the B83 bomb, could be adapted without nuclear testing to improve our ability to hold at risk hardened and deeply buried facilities. I want to make several points about this effort.

First, there's a clear military utility to this weapon. A classified Defense Department report was submitted to the Congress last year on this subject and remains valid.

Secondly, despite this obvious utility to the capability, we will move beyond the study stage only if the President approves and if funds are authorized and appropriated by Congress. We included funds in our out-year projections only to preserve the President's option. There won't be any decision made until the study is completed. What we are asking the Congress to do this year is approve the continuation of the study. The law is extremely clear that beginning development and engineering requires Congressional approval and there's no one in the administration who has any doubt about that feature of the law.

Finally, even if the study shows that it's feasible and the President decides to pursue it and the Congress decides to fund it, this weapon does not represent a change from our policy of deterrence. Deterrence requires that we be able to hold at risk something that an adversary values. Now, I refer you once again to the classified report where we and the Department of Defense speak in specific detail on the potential deterrent benefits of this weapon.

As the Congress evaluates our request it's important to understand that while there have been press accounts of administration plans to develop low-yield weapons, there are no such plans. Further, nothing we will do is intended to lower the nuclear threshold or blur the distinction between nuclear and non-nuclear weapons. Indeed, the intent of the Nuclear Posture Review is to place greater emphasis on conventional weapons rather than nuclear weapons.

I repeat, as I have said to this committee before, only the President can authorize the use of nuclear weapons and no President would make that decision except in the gravest of circumstances.

DEFENSE NUCLEAR NONPROLIFERATION

Let me turn now to Defense Nuclear Nonproliferation. We're asking for $1.35 billion to support activities to reduce the global danger. We're not doing this alone; our G8 partners have committed

to spend $10 billion to help decrease the global proliferation threat over the next 10 years. The largest program in this area involves the disposition of surplus U.S. and Russian plutonium. As you mentioned in your opening statement, Mr. Chairman, one of the key obstacles we encountered is a disagreement with Russia regarding liability protection for plutonium disposition work performed in that country. At the present time, this disagreement has resulted in a 10-month delay in the start of construction of the Mixed Oxide, or MOX, Fuel Facility in Russia as well as the facility in the United States. This issue is being worked at the highest levels of the administration; the President's 2005 budget request supports construction of both MOX facilities starting in May of next year and I am hopeful that we will resolve the liability issue shortly, as soon as the new Russian government is fully organized.

Senator DOMENICI. Who is your negotiator?

Ambassador BROOKS. The Under Secretary of State for Arms Control, John Bolton, has been the primary lead; the Secretary of State has also been involved.

In addition to disposing of existing stocks of surplus weapons-grade plutonium, we're working hard to stop more from being produced by shutting down the last three plutonium production reactors in Russia and replacing them with fossil fuel plants. That will result in halting annual production of about 1.2 metric tons of weapons-grade plutonium, roughly a bomb a day. We are preparing preliminary designs for the fossil fuel replacement plants, and validating cost estimates and we expect to complete these designs by the end of the calendar year, at which time we'll be able to provide the Congress with revised and firm cost estimates.

Given recent threats to the United States, it has become increasingly clear that protecting and securing nuclear materials and detecting nuclear materials destined for the United States at foreign ports, airports, and border crossings is a high priority. Our budget request for material protection, control, and accounting, which includes our Second Line of Defense Program and our Mega-Ports Program, is $238 million. Of that, $15 million will go toward moving ahead with our Mega-Ports Program to train law enforcement officials and equip key international ports with radiation detection equipment. We expect to complete work at ports in Greece and The Netherlands by late summer in 2004. In addition, also under Material Protection, we have made a number of improvements in the security of the Russian Nuclear Navy and are now focused on improving security at Strategic Rocket Forces sites.

In fiscal year 2005, we will assume, NNSA will assume, responsibility for the Off-site Source Recovery Project. The requested program funding is $5.5 million, with a total cost of about $40 million to substantially reduce the risk of source materials within the United States being used for radiological dispersion devices. And, we're working closely with the U.S. Nuclear Regulatory Commission.

Our budget reflects our continued support for the International Atomic Energy Agency and it reflects a renewed emphasis on retrieving material with weapons potential from research reactors worldwide. We've been working to secure materials in Russia and Eurasia for over a decade and our programs have now expanded

worldwide. We've worked to return both U.S.- and Russian-origin highly enriched uranium to convert civilian reactor cores to use low-enriched uranium, which is of less proliferation concern, and to secure and remove vulnerable nuclear and radiological materials. Our efforts are paying off. By the end of this year almost half of the 98 targeted reactors will have been converted to use low-enriched uranium fuel. In 2002, the Department assisted in the removal of vulnerable nuclear material from Yugoslavia. In 2003, we helped return 17 kilograms of Russian-origin highly-enriched uranium from Bulgaria, and 14 kilograms of Russian highly-enriched uranium from Romania. We're now working with Libya and have recently helped remove highly-enriched uranium from that country as well. In Iraq, the Department is securing and disposing of vulnerable radiological sources. To help coordinate all this, last year we established a Nuclear and Radiological Threat Reduction Task Force to combat the threat posed by so-called dirty bombs. This task force is identifying and securing high risk radiological materials and developing an action plan to mitigate these vulnerabilities overseas.

Senator DOMENICI. Who will lead that committee?

Ambassador BROOKS. Mr. Longsworth will be in overall charge.

In all this we have strengthened the security of our Nation and I believe we're making the world safer.

Senator DOMENICI. Mr. Ambassador, I know you have a lot to say but you told us you were going to be brief.

Ambassador BROOKS. Yes sir, I've got two more points to make and then I'll quit, if I may.

Senator DOMENICI. All right.

Ambassador BROOKS. I want to just mention safeguards and security. That's one of Secretary Abraham's and my highest priorities. Our request includes an increase over the past to deal with the safeguards and security consequences of the Design Basis Threat and I believe that we are well on track to meet the Secretary's guidance to have improvements in place by the end of next year.

PREPARED STATEMENT

Finally, let me just say that our budget is consistent with the President's policy to reduce reliance on nuclear weapons. It supports continued progress in certifying our nuclear deterrent and reducing the danger from proliferation. And it will enable us to continue to maintain the safety and security of the stockpile through the 21st century.

This concludes my statement. After you've heard from Admiral Bowman I'm ready for your questions, sir.

[The statement follows:]

PREPARED STATEMENT OF AMBASSADOR LINTON F. BROOKS

Thank you for the opportunity to discuss the Fiscal Year 2005 Budget Request for the National Nuclear Security Administration (NNSA). This is my second appearance before this committee as the Under Secretary for Nuclear Security, and I want to thank all of the Members for their strong support for our important national security responsibilities.

OVERVIEW

The NNSA has four fundamental and unique responsibilities for U.S. national security:

—Stewardship of the Nation's nuclear weapons stockpile,
—Reducing the threat posed by the proliferation of weapons of mass destruction,
—Providing reliable and safe propulsion for the U.S. Navy,
—Management of the national nuclear security complex, which includes both security for our facilities and materials to protect our employees and our neighbors, and sustaining the facilities infrastructure.

In the fourth year of this administration, with the strong support of the Congress, the NNSA programs have achieved a level of stability that is required for accomplishing our long-term missions. As the post-Cold War era evolves, the NNSA is managing the Nation's nuclear warheads according to the guidance in the Nuclear Posture Review. The Department of Energy (DOE), through the NNSA, works to assure that the Nation's nuclear weapons stockpile remains safe, secure, reliable, and ready, and to extend the life of that stockpile in support of Department of Defense (DOD) military requirements. Our Nation will continue to benefit from the security that results from an effective nuclear deterrent, with confidence that the nuclear weapons complex is ready and prepared to respond rapidly and effectively if required.

Stockpile Stewardship activities are carried out without the use of underground nuclear testing, continuing the moratorium initiated by the United States in 1992. I am pleased with the continuing ability of the Stockpile Stewardship Program to certify to the President, through the Annual Certification Assessment Report, the safety, security, and reliability of our nuclear weapons stockpile using science-based judgments using cutting edge scientific and engineering tools as well as extensive laboratory and flight tests. We are gaining a more complete understanding of the stockpile each year. Computer codes and platforms developed by our Advanced Simulation and Computing (ASCI) program are now used routinely to address three-dimensional issues in weapons performance, contributing to continuing certification, baseline studies, as well as supporting the upcoming refurbishment workload.

The NNSA maintains a robust infrastructure of people, programs, and facilities to provide specialized scientific and technical capability for stewardship of the nuclear weapons stockpile. This past year, Los Alamos National Laboratory manufactured the first certifiable W88 pit since the closure of Rocky Flats in 1989. Los Alamos remains on-track to certify a war reserve W88 pit by 2007. Also, in the past year, we began the irradiation of Tritium Producing Burnable Absorber Rods in a TVA reactor, restoring a key nuclear manufacturing technology. We also continue our facilities recapitalization effort. There is a notable improvement across the nuclear weapons complex, and NNSA is delivering on our promise to the Congress to stabilize our deferred maintenance in fiscal year 2005.

The Nation continues to benefit from advances in science, technology and engineering fostered by the national security program activities, including cutting edge research and development carried out in partnership with many of the Nation's colleges, universities, small businesses and minority educational institutions. The University of Rochester's Omega laser is a key facility in NNSA's Inertial Confinement Fusion program. It provides experimental capability for Stockpile Stewardship as well as a user facility for training tomorrow's scientists and engineers. Overall, the NNSA programs, including three national laboratories, the Nevada Test Site, and the production facilities across the United States employ nearly 2,300 Federal employees and approximately 35,000 contractor employees to carry out this work.

In June 2002, the United States championed a new, comprehensive nonproliferation effort known as the Global Partnership. World leaders committed to raise up to $20 billion over 10 years to fund nonproliferation programs in the former Soviet Union. The NNSA contributes directly to this effort by carrying out programs with the international community to reduce and prevent the proliferation of nuclear weapons, materials and expertise. The security of our Nation and the world are enhanced by NNSA's ongoing work to provide security upgrades for military and civilian nuclear sites and enhanced border security in Russia and the Former Soviet Union. In the past year, we have completed comprehensive materials protection control and accountability upgrades at 17 Russian nuclear facilities, and began efforts to install security upgrades at vulnerable Russian Federation Strategic Rocket Forces sites. With the support of the Congress, we are implementing an aggressive Megaports initiative to enhance global nuclear material detection at 15 major seaports shipping large volumes of container traffic to the United States. We are reducing the world's stocks of dangerous materials such as plutonium through NNSA-

sponsored Fissile Materials Disposition programs in the United States and Russia as well as through elimination of Russian plutonium production.

The Nation benefits from NNSA's work in partnership with the Department of Homeland Security to develop and demonstrate new detection technologies to improve security of our cities. Perhaps the most tangible benefits to the Nation following the 9/11 terrorist attacks are the "first responder teams" of highly specialized scientists and technical personnel from the NNSA sites who are deployed across the Nation to address threats of weapons of mass destruction. These teams work under the direction of the Department of Homeland Security and the Federal Bureau of Investigation to respond to nuclear emergencies in the United States and around the world. In the past year, these teams have provided support to such diverse groups and locations as New York City, Operation Iraqi Freedom, Olympic Planning in Athens, and the Government of Thailand. Our teams have participated in major training and exercise events in the United States and overseas. They have developed new capabilities, including Triage, that enables our first responders to rapidly determine if an item of interest includes special nuclear material in yield-producing quantities.

The NNSA also works in partnership with the DOD to meet their needs for reliable and militarily effective nuclear propulsion for the U.S. Navy. In the past year, the Naval Reactors Program has completed 99 percent of the reactor plant design for the VIRGINIA-class submarine, and supported "safe steaming" of another 2 million miles by our nuclear-powered ships. They have continued their unsurpassed record of "clean up as you go", including remediating to "green grass" the former S1C prototype Site at Windsor, Connecticut, and completing a successful demonstration of the interim naval spent fuel dry storage capability in Idaho.

NNSA BUDGET SUMMARY

[In Millions of Dollars]

	Fiscal Year 2003 Comparable Appropriation	Fiscal Year 2004 Original Appropriation	Fiscal Year 2004 Adjustments	Fiscal Year 2004 Comparable Appropriation	Fiscal Year 2005 Request
Office of the Administrator	330	340	−3	337	334
Weapons Activities	5,961	6,273	−39	6,234	6,568
Defense Nuclear Nonproliferation	1,224	1,328	+6	1,334	1,349
Naval Reactors	702	766	−4	762	798
Total, NNSA	8,217	8,707	−40	8,667	9,049

The fiscal year 2005 budget request totals $9.0 billion, an increase of $382 million or 4.4 percent. We are managing our program activities within a disciplined 5-year budget and planning envelope. We are doing it successfully enough to be able to address emerging new priorities and provide for needed funding increases in some of our programs within an overall modest growth rate—notably Safeguards and Security, Nuclear Weapons Incident Response, and Facilities and Infrastructure Recapitalization—by reallocating from other activities and projects that are concluded or winding down.

The NNSA budget justification contains the required 3 years of budget and performance information, as well as similar information for 5 years as required by Sec. 3253 of the NNSA Act, as amended (Title XXXII of the National Defense Authorization Act for fiscal year 2000, Public Law 106–65, 50 U.S.C. 2453). This section, entitled Future-Years Nuclear Security Program, requires NNSA to provide to Congress each year at the time the budget is submitted the estimated expenditures necessary to support the programs, projects and activities of the NNSA for a 5-fiscal-year period, in a level of detail comparable to that contained in the budget. Since the inception of NNSA, the Future Years Nuclear Security Program (FYNSP) has been provided as a separate document supporting the budget request. Starting with this budget, NNSA will meet this statutory requirement by including outyear budget and performance information as part of a fully integrated budget submission.

FUTURE YEARS NUCLEAR SECURITY PROGRAM (FYNSP)

[In Millions of Dollars]

	Fiscal Year 2005	Fiscal Year 2006	Fiscal Year 2007	Fiscal Year 2008	Fiscal Year 2009	Total
Office of the Administrator	334	340	347	353	360	1,734
Weapons Activities	6,568	6,881	7,216	7,353	7,492	35,510
Defense Nuclear Nonproliferation	1,349	1,381	1,410	1,441	1,465	7,046
Naval Reactors	798	803	818	834	850	4,103
Total, NNSA	9,049	9,405	9,791	9,981	10,167	48,393

BUDGET AND PROGRAM HIGHLIGHTS

There are three areas of the NNSA budget where mission priorities require us to request significant increases in funding for fiscal year 2005.

SAFEGUARDS AND SECURITY/DESIGN BASIS THREAT

Protecting NNSA people, information, materials, and infrastructure from harm or compromise is one of our most serious responsibilities and highest priorities. The fiscal year 2005 budget request for NNSA's Safeguards and Security Program is $706.9 million, an increase of 21 percent over the fiscal year 2004 enacted level, that is needed to implement a new Design Basis Threat (DBT) at all NNSA sites and facilities. The Secretary of Energy issued the new DST in May 2003, as a result of a post-September 11 analysis of the threats against which we must protect DOE sites and materials across the country. Implementation plans based on vulnerability assessments for each of the sites are in final preparation. These will delineate the upgrades and associated costs plan to upgrade service weaponry, extend explosive impact zones, consolidate nuclear material, and make additional improvements of a classified nature to bring NNSA facilities into full compliance with the new DBT by the year 2006. The fiscal year 2005 NNSA budget includes $107.9 million ($89.6 in Safeguards and Security and $18.3 million in Secure Transportation Asset) to address the new DBT. NNSA will shortly submit a request for fiscal year 2004 reprogramming and appropriation transfer to allow this important work to continue on schedule. The fiscal year 2006 funding request for DBT implementation will be addressed during this spring's programming process.

In recent months we have had some highly publicized occurrences at some NNSA sites. In each instance, NNSA and DOE have taken immediate and aggressive actions to address these occurrences and to ensure that any potential vulnerability is mitigated as soon as possible and that longer term fixes are put into place as appropriate. Because of these problems, we have chartered two external review groups to provide an independent assessment of our management of security. While I am confident that there has been no compromise of classified material and that no nuclear material is at risk, I believe security can and should be improved. The Secretary and I have both made it clear that we will not tolerate any reduction, perceived or real, in our protective force readiness or in our ability to protect the complex. Funding for Safeguards and Security in NNSA has increased over 70 percent during this administration, which is strong indicator of the priority we place on this responsibility. The Secretary and I join together in making it well known that we will not tolerate any reduction, perceived or real, in our protective forces and our abilities to protect the complex.

FACILITIES AND INFRASTRUCTURE RECAPITALIZATION

The Facilities and Infrastructure Recapitalization Program (FIRP) is essential to NNSA's ability to maintain a responsive robust infrastructure. I am pleased to note that its mission and performance is commended in the recent preliminary assessment by the National Research Council on DOE's facility management. The fiscal year 2005 budget request for FIRP is $316.2 million. This increase follows a 2-year period of flat funding. The request restores the program to our previously requested FYNSP levels; it places the program back on our previously planned schedule and reflects our commitment to fulfill the direction of the Congress to end the program by 2011.

NUCLEAR WEAPONS INCIDENT RESPONSE

The third growth area in the fiscal year 2005 budget request is the Nuclear Weapons Incident Response Programs. The fiscal year 2005 request of $99.2 million reflects an increase of 11 percent over the fiscal year 2004 level, recognizing the greatly increased number of deployments of these assets within the United States and abroad. The long term sizing of this effort in terms of dollars and people continues to evolve along with its critical role in homeland security. We have relocated this account separately within the Weapons Activities appropriation to provide additional visibility into these programs and funding request.

At this time, I would like to focus on the remainder of the President's budget request for NNSA Weapons Activities including Defense Programs, Defense Nuclear Nonproliferation, Naval Reactors, and the Office of the Administrator accounts.

WEAPONS ACTIVITIES

The fiscal year 2005 budget request for the programs funded within the Weapons Activities appropriation is $6.568 billion, an increase of 5.4 percent over fiscal year 2004 due largely to the increase in security and facilities infrastructure. Within Weapons Activities, the budget structure has been changed in response to Congressional concerns to align Directed Stockpile Work funding with individual weapon systems, and to highlight Nuclear Weapon Incident Response as a separate line.

The Nuclear Posture Review (NPR) guidance directed that NNSA maintain a research and development and manufacturing base that ensures the long-term effectiveness of the Nation's stockpile; and, support the facilities and infrastructure that are responsive to new or emerging threats. The NPR also directed NNSA to begin a modest effort to examine concepts that could be deployed to further enhance the deterrent capabilities of the stockpile in response to the national security challenges of the 21st century.

The United States is continuing work to refurbish and extend the life of the B61, W76 and W80 warheads in the stockpile. Within the fiscal year 2005 request of $1.4 billion for Directed Stockpile Work (DSW), funding for the life extension programs increases by 7 percent to $477.4 million. This reflects the expected ramp up in the three systems with First Production Units scheduled in fiscal year 2006–2009, and the completion of life extension activities for the W87. In fiscal year 2005, DSW funding will support research and development of advanced weapon concepts to meet emerging DOD needs that will enhance the nuclear deterrent, and to ensure a robust and capable NNSA for the Future. The NPR highlighted the importance of pursuing advanced concepts work to ensure that the weapons complex can provide nuclear deterrence for decades to come. In fiscal year 2005, $9.0 million is requested to support the modest research and development effort in the Advanced Concepts Initiatives (ACI) to meet emerging DOD needs and to train the next generation of nuclear weapons scientists and engineers. The Robust Nuclear Earth Penetrator (RNEP) is the most mature concept being studied in this program. Funds for the RNEP study are included in the fiscal year 2005 budget as a separate line item from the rest of the advanced concepts study activity. A request for $27.6 million is also included for the continuing RNEP feasibility, design definition and cost study. The RNEP study was requested by the Nuclear Weapons Council in January 2002.

The RNEP study is to determine whether either of two existing warheads—the B61 or the B83—can be adapted without resuming nuclear testing to improve our ability to hold at risk hardened, deeply buried facilities that may be important to a future adversary. The request for advanced concepts funding is to investigate new ideas, not necessarily new weapons. For example, we are currently examining the feasibility of adapting an existing weapons carrier and existing nuclear warheads to achieve a delivery system with greater assurance that the intended nuclear mission could not be compromised by either component failure or adversary attack, thus giving greater reliability for nuclear missions. Appropriate uses for additional work in advanced concepts might include examining the feasibility of warheads with improved design margins, easier manufacturing, greater longevity and improved safety. Any of these ideas would only be pursued for future development if directed to do so by the President and the Congress.

Progress in other parts of the Stockpile Stewardship Program continues. The fiscal year 2005 request for Campaigns is $2.4 billion, essentially level with fiscal year 2004. This request funds a variety of Campaigns, experimental facilities and activities that continue to enhance NNSA's confidence in moving to "science-based" judgments for stockpile stewardship, and provide cutting edge technologies for stockpile certification and maintenance.

While there is no reason to doubt the ability of the Stockpile Stewardship Program to continue to ensure the safety, security, and reliability of the nuclear deterrent, the Nation must maintain the ability to carry out a nuclear weapons test in the event of some currently unforeseen problems that cannot be resolved by other means. Within the guidance provided by the Congress, we are beginning to improve our readiness posture from the current ability to test within 24 to 36 months to an ability to test within approximately 18 months. The fiscal year 2005 budget request of $30 million supports achieving an 18-month readiness by September 2005. But let me be clear, there are no plans to test.

National Ignition Facility at Lawrence Livermore National Laboratory (LLNL) remains on budget and schedule. The fiscal year 2005 request of $130.0 million continues construction installation and commissioning of laser beams. Once complete in 2008, the 192-laser beam facility will be capable of achieving temperatures and pressures found only on the surface of the sun and in exploding nuclear weapons. We are anticipating the first Stockpile Stewardship experiments in 2004 using four laser beams. As a result of recent technical advances in capsule design, target fabrication and computer simulations, we expect to begin the fusion ignition campaign in fiscal year 2009 with a goal of achieving fusion ignition in fiscal year 2010. The Advanced Simulation and Computing Campaign request for fiscal year 2005 is $741.3 million, an increase of nearly 3 percent over fiscal year 2004. Working with IBM and Cray Research, the program expects delivery of Red Storm in fiscal year 2004 and Purple in fiscal year 2005. These will be the world's fastest machines, operating at 40 and 100 Teraops, respectively, and they will continue to revolutionize supercomputer capabilities and three-dimensional modeling. Having these machines on-line will begin to redress the capacity and capability issues raised in the September 2003 JASONs report required by the Congress.

The NPR recognized a need, over the long run, for a Modern Pit Facility (MPF) to support the pit manufacturing needs of the entire stockpile. NNSA's fiscal year 2005 request for the Pit Manufacturing Campaign is $336.5 million, an increase of 13 percent over fiscal year 2004, but with some changes since the last budget request. We delayed the final environmental impact statement (EIS) for the MPF in order to address Congressional concerns that it is premature to pursue further decisions on an MPF at this time. The decision to delay the final EIS also delays identification of a preferred site for constructing the MPF.

This decision will in no way affect the W88 pit manufacturing and recertification program underway at Los Alamos, which is reestablishing the technological base to manufacture pits and which thereby will inform many of the technology decisions which will be contained in the eventual MPF design.

Readiness Campaigns are requested at $280.1 million in fiscal year 2005, a decrease of about 14 percent. The decrease is attributable mainly to continuing progress in construction of the Tritium Extraction Facility that is funded within this account.

NNSA's Readiness in Technical Base and Facilities activities operate and maintain current facilities and ensure the long-term vitality of the NNSA complex through a multi-year program of infrastructure construction. About $1.5 billion is requested for these efforts, a slight decrease from fiscal year 2004 that is attributable to a 20 percent decline in funding needed to support line-item construction project schedules. Three new construction starts are requested.

In fiscal year 2005 the President's budget provides a total of $201.3 million for the Office of Secure Transportation, which is responsible for meeting the Department's transportation requirements for nuclear weapons, components, special nuclear materials and waste shipments.

The remainder of the Weapons Activities appropriation funding is for Nuclear Weapons Incident Response, Facilities and Infrastructure Recapitalization, and Safeguards and Security, discussed earlier in this statement.

DEFENSE NUCLEAR NONPROLIFERATION

The Defense Nuclear Nonproliferation Program works to prevent the spread of nuclear weapons and materials to terrorist organizations and rogue states. The administration is requesting $1.35 billion to support activities to reduce the global weapons of mass destruction proliferation threat, about a 1 percent increase over comparable fiscal year 2004 activities. This reflects a leveling off of growth in these important programs that have increased over 60 percent in the past 4 years.

Given recent threats to the United States, it has become increasingly clear that protecting and securing nuclear materials and detecting nuclear and radioactive material at foreign ports, airports, and border crossings is a very high priority. The administration's leadership in the Global Partnership is one way that we are trying

to address these issues. The fiscal year 2005 request for programs supporting the Partnership is $439 million. This includes a fiscal year 2005 request of $238 million for the International Nuclear Material Protection and Cooperation (MPC&A) Program, which supports Second Line of Defense activities and the Mega-ports Program. The Mega-ports Program was jump-started with $99 million appropriated in fiscal year 2003. Progress is continuing, and with the $15 million requested in fiscal year 2005, we will have work underway or complete at 9 of the 15 planned international ports. The $15 million in fiscal year 2005 is requested to train law enforcement officials and equip key international ports with radiation detection equipment to detect, deter, and interdict illicit trafficking of nuclear and other radioactive materials. We are scheduled to complete work at ports in Greece and the Netherlands by the summer of 2004. We have made a number of security improvements to Nuclear Navy sites in Russia and we are now focusing resources on securing Strategic Rocket Forces sites. In addition to this work, we are also pursuing a dialogue with countries we believe are of particular concern. We hope that these activities will lead to broader MPC&A cooperation in the coming years.

The largest activity funded by this appropriation is the Fissile Materials Disposition program. We are working to design and build facilities to dispose of inventories of surplus U.S. weapons-grade plutonium and highly-enriched uranium, and supporting concurrent efforts in Russia to obtain reciprocal disposition of similar materials.

One of the key obstacles encountered this year is a disagreement with Russia regarding liability protection for plutonium disposition work performed in that country. This has resulted in a 10-month delay in the planned start of construction of a MOX Facility in Russia as well as a similar facility in the United States. The liability issue is being worked at high levels of the administration. The President's fiscal year 2005 budget request seeks $649 million for this program to begin construction of both the U.S. and Russian MOX facilities in May 2005, as we work to resolve the liability issue by this spring. Our outyear funding profiles reflect the administration's full commitment for proceeding with plutonium disposition.

Not only are we pursuing the disposition of weapons-grade plutonium but also we are working hard to stop more from being produced. NNSA has assumed the responsibility from the DOD for shutting down the last three plutonium production reactors in Russia and replacing them with fossil fuel plants by 2008 and 2011. This will result in the cessation of the annual production of 1.2 metric tons of weapons-grade plutonium. Under the Elimination of Weapons-Grade Plutonium Production Program, we have selected the Washington Group International and Raytheon Technical Services to provide oversight for Russian contractors who will actually be performing the work. The fiscal year 2005 request for this effort is $50.1 million.

In fiscal year 2005, NNSA assumes responsibility for the Off-site Source Recovery Project from the Office of Environmental Management. The requested program funding is $5.6 million, with a projected cost of about $40 million over the next 5 years to substantially reduce the risk of these source materials being used for radiological dispersion devices. The program works closely with the U.S. Nuclear Regulatory Commission to prioritize source recovery.

The Russian reactor safety efforts under the International Nuclear Safety Program were completed successfully in 2003. The remaining $4 million for emergency management and cooperation efforts was shifted to the Nonproliferation and International Security Program. These funds provide for the orderly shutdown of the BN 350 reactor in Kazakhstan ($1.5 million) and continue activities to strengthen international emergency cooperation and communications ($2.5 million). The Accelerated Materials Disposition initiative was not supported by the Congress in fiscal year 2004 and in consideration of overall NNSA priorities, is not requested in the fiscal year 2005 budget or outyears.

NAVAL REACTORS

The NNSA is requesting $798 million for the Naval Reactors Program in fiscal year 2005, an increase of about 4 percent. This program continues to be a prime example of how to manage unforgiving and complex technology. The Naval Reactors Program provides safe and reliable nuclear reactors to power the Navy's warships. It is responsible for all naval nuclear propulsion work, beginning with technology development, through reactor operations, and ultimately to reactor plant disposal. The budget increase will support 70 percent completion of the design of the next generation nuclear reactor on an aircraft carrier, and continue work on the Transformational Technology Core, which will deliver a significant energy increase to future submarines, resulting in greater operational ability and flexibility. The request includes $6.2 million for a new construction start, the Materials Development Facil-

ity Building, in Schenectady, NY. The TTC facility is estimated at $20.4 million, and it is expected to be completed in 2008.

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NNSA is in the final implementation phase of a re-engineering effort that follows the principles of the President's Management Agenda to modernize, integrate, and streamline operations. As a result, at the end of fiscal year 2004, NNSA will achieve its goal of a 15 percent reduction in Federal personnel since fiscal year 2002. It is likely that the Congress will receive a request for reprogramming in fiscal year 2004 to fund the remainder of these realignment and reengineering activities.

The fiscal year 2005 budget request of $333.7 million is about 1 percent below the fiscal year 2004 appropriation. This reflects cost avoidance due to reduction of about 300 positions since 2002, and no further request for incremental funding needed to accomplish re-engineering in NNSA HQ and field organizations. The budget request assumes that personnel reductions are achieved, restructuring finished, and associated employee transfers are complete at the end of fiscal year 2004.

The Defense Nuclear Nonproliferation (NN) and Nuclear Weapons Incident Response programs have been excluded from staff reductions due to increased program requirements in those areas. NNSA is not requesting a separate funding control for the Office of Defense Nuclear Nonproliferation because it is no longer necessary to assure that Federal hiring goals are met for these activities that are experiencing rapid mission growth. Based on hiring to date in fiscal year 2004, it is projected that this organization will meet or exceed its managed staffing plan goal of 244 by fiscal year 2005. A single funding control for the appropriation is necessary to facilitate NNSA's corporate efforts to rebalance the NN's office transition from reliance on support service contractors to permanent Federal staff.

MANAGEMENT ISSUES

I would like to conclude by discussing some of NNSA's management challenges and successes. We are all aware of the management difficulties that beset the weapons laboratories last year. The contractors and NNSA/DOE have made many changes to the laboratories' management and reporting/oversight requirements in response to the problems. Soon their contracts are coming up for renewal. Secretary Abraham has outlined the Department's strategy for competing the Management and Operating contracts for our nuclear design labs in accordance with Section 301 of the Energy and Water Development Appropriations Act, Fiscal Year 2004 (Public Law 108–137). On April 30, 2003, the Secretary announced that we intend to compete the Los Alamos National Laboratory contract on a full and open basis to have a contract in place by September 30, 2005, when the old contract expires.

On January 21, 2004, the Secretary reiterated his decision concerning Los Alamos National Laboratory. At that time, he also announced his decision to compete the Lawrence Livermore National Laboratory contract, as well as three other DOE laboratories, but indicated that the precise timing and form of these competitions were under consideration.

NNSA, with the concurrence of the Secretary, is establishing a Source Evaluation Board (SEB) for the Los Alamos competition. I have named Tyler Przybylek as the Chairman of that SEB and he is in the process of identifying members and advisers to the SEB. We see no obstacle to meeting the Secretary's schedule for competing and awarding a new contract or managing Los Alamos.

On the "success" side, I am proud that the Department of Energy was ranked first among cabinet-level agencies in the most recent scorecard to assess implementation of the President's Management Agenda. The scorecard, which evaluates agency performance in the areas of human capital, competitive sourcing, financial management, e-Government, and budget/performance integration, was issued by OMB. We at NNSA take very seriously the responsibility to manage the resources of the American people effectively and I am glad that our management efforts are achieving such results.

CONCLUSION

In conclusion, I am confident that we are headed in the right direction. Our budget request will support continuing our progress in protecting and certifying our nuclear deterrent, reducing the global danger from proliferation and weapons of mass destruction, and enhancing the force projection capabilities of the U.S. nuclear Navy. It will enable us to continue to maintain the safety and security of our people, information, materials, and infrastructure. Above all, it will meet the national security needs of the United States of the 21st century.

Mr. Chairman, this concludes my statement. A statistical appendix follows that contains the budget figures supporting our request. My colleagues and I would be pleased to answer any questions on the justification for the requested budget.

NATIONAL NUCLEAR SECURITY ADMINISTRATION APPROPRIATION AND PROGRAM SUMMARY

[In Millions of Dollars]

	Fiscal Year 2003 Comparable Appropriation	Fiscal Year 2004 Original Appropriation	Fiscal Year 2004 Adjustments	Fiscal Year 2004 Comparable Appropriation	Fiscal Year 2005 Request
Office of the Administrator	330	340	−3	337	334
Weapons Activities	5,961	6,273	−39	6,234	6,568
Defense Nuclear Nonproliferation	1,224	1,328	+6	1,334	1,349
Naval Reactors	702	766	−4	762	798
Total, NNSA	8,217	8,707	−40	8,667	9,049

FUTURE YEARS NUCLEAR SECURITY PROGRAM (FYNSP) SCHEDULE

[In Millions of Dollars]

	Fiscal Year 2005	Fiscal Year 2006	Fiscal Year 2007	Fiscal Year 2008	Fiscal Year 2009	Total
Office of the Administrator	334	340	347	353	360	1,734
Weapons Activities	6,568	6,881	7,216	7,353	7,492	35,510
Defense Nuclear Nonproliferation	1,349	1,381	1,410	1,441	1,465	7,046
Naval Reactors	798	803	818	834	850	4,103
Total, NNSA	9,049	9,405	9,791	9,981	10,167	48,393

WEAPONS ACTIVITIES APPROPRIATION

[In Thousands of Dollars]

	Fiscal Year 2003 Comparable Appropriation	Fiscal Year 2004 Original Appropriation	Fiscal Year 2004 Adjustments	Fiscal Year 2004 Comparable Appropriation	Fiscal Year 2005 Request
Weapons Activities:					
Directed Stockpile Work	1,259,136	1,340,286	−13,630	1,326,656	1,406,435
Science Campaign	260,867	250,548	+23,300	273,848	300,962
Engineering Campaign	270,502	344,387	−79,472	264,915	242,984
Inertial Confinement Fusion and High Yield Campaign	499,230	517,269	−3,018	514,251	492,034
Advanced Simulation and Computing Campaign	674,453	725,626	−4,250	721,376	741,260
Pit Manufacturing and Certification Campaign	261,807	298,528	−1,738	296,790	336,473
Readiness Campaign	270,147	247,097	+81,819	328,916	280,127
Readiness in Technical Base and Facilities	1,480,872	1,664,235	−123,590	1,540,645	1,474,454
Secure Transportation Asset	168,548	162,400	−948	161,452	201,300
Nuclear Weapons Incident Response	81,114	0	+89,167	89,167	99,209
Facilities and Infrastructure Recapitalization Program	235,474	240,123	−1,368	238,755	316,224
Safeguards & Security	558,161	585,750	−3,280	582,470	706,991
Subtotal, Weapons Activities	6,020,311	6,376,249	−37,008	6,339,241	6,598,453
Use of Prior Year Balances	−29,981	−74,753	−2,000	−76,753	0
Security Charge for Reimbursable Work	−28,985	−28,985	+0	−28,985	−30,000
Total, Weapons Activities	5,961,345	6,272,511	−39,008	6,233,503	6,568,453

DEFENSE NUCLEAR NONPROLIFERATION APPROPRIATION

[In Thousands of Dollars]

	Fiscal Year 2003 Comparable Appropriation	Fiscal Year 2004 Original Appropriation	Fiscal Year 2004 Adjustments	Fiscal Year 2004 Comparable Appropriation	Fiscal Year 2005 Request
Defense Nuclear Nonproliferation:					
Nonproliferation and Verification Research and Development	256,092	231,997	0	231,997	220,000
Nonproliferation and International Security	130,873	110,107	+3,977	114,084	124,000
International Nuclear Materials Protection and Cooperation	333,029	258,487	0	258,487	238,000
Russian Transition Initiatives	39,081	39,764	0	39,764	41,000
HEU Transparency Implementation	17,118	17,894	0	17,894	20,950
International Nuclear Safety	33,570	3,977	−3,977	0	0
Elimination of Weapons-Grade Plutonium Production	49,221	49,735	+15,300	65,035	50,097
Accelerated Material Disposition	894	0	0	0	0
Fissile Materials Disposition	445,528	652,818	0	652,818	649,000
Offsite Source Recovery Project	2,172	0	+1,961	1,961	5,600
Subtotal, Defense Nuclear Nonproliferation	1,307,578	1,364,779	+17,261	1,382,040	1,348,647
Use of Prior Year Balances	−84,125	−45,000	−3,000	−48,000	.....
Total, Defense Nuclear Nonproliferation	1,223,453	1,319,779	+14,261	1,334,040	1,348,647

NAVAL REACTORS APPROPRIATION

[In Thousands of Dollars]

	Fiscal Year 2003 Comparable Appropriation	Fiscal Year 2004 Original Appropriation	Fiscal Year 2004 Adjustments	Fiscal Year 2004 Comparable Appropriation	Fiscal Year 2005 Request
Naval Reactors Development (NRD):					
Operations and Maintenance	666,927	723,100	−4,264	718,836	761,211
Program Direction	24,043	26,700	−148	26,552	29,500
Construction	11,226	18,600	−110	18,490	7,189
Subtotal, Naval Reactors Development	702,196	768,400	−4,522	763,878	797,900
Less Use of prior year balances	0	−2,000	.....	−2,000	0
Subtotal Adjustments	0	0	0	0	0
Total, Naval Reactors	702,196	766,400	−4,522	761,878	797,900

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[In Thousands of Dollars]

	Fiscal Year 2003 Comparable Appropriation	Fiscal Year 2004 Original Appropriation	Fiscal Year 2004 Adjustments	Fiscal Year 2004 Comparable Appropriation	Fiscal Year 2005 Request
Office of the Administrator Program Direction	330,314	339,980	−3,154	336,826	333,700

FUNDING BY GENERAL GOAL

[Dollars in Millions]

	Fiscal Year 2003	Fiscal Year 2004	Fiscal Year 2005	$ Change	Percent Change	Fiscal Year 2006	Fiscal Year 2007	Fiscal Year 2008	Fiscal Year 2009
General Goal 1, Nuclear Weapons Stewardship:									
Directed Stockpile Work	$1,259	$1,327	$1,406	+$79	+6.0	$1,521	$1,648	$1,778	$1,812
Science Campaign	261	274	301	+27	+9.9	301	308	328	341
Engineering Campaign	271	265	243	−22	−8.3	268	226	284	237
ICF and High Yield Campaign	499	514	492	−22	−4.3	521	535	437	441
Advanced Simulation and Computing Campaign	674	721	741	+20	+2.8	782	826	834	848
Pit Manufacturing and Certification Campaign	262	297	336	+39	+13.1	324	314	155	158
Readiness Campaign	270	329	280	−49	−14.9	331	307	357	376
Readiness in Technical Base and Facilities	1,481	1,541	1,474	−67	−4.3	1,600	1,753	1,839	1,916
Nuclear Weapons Incident Response	81	89	99	+10	+11.2	100	101	98	101
Secure Transportation Asset	169	161	201	+40	+24.8	185	186	190	195
Facilities and Infrastructure Recapitalization Program	235	239	316	+77	+32.2	373	426	472	476
Safeguards and Security	529	553	677	+124	+22.4	575	586	580	591
Office of the Administrator	279	283	277	−6	−2.1	282	288	293	299
Use of PY Balances	−30	−77	0	0	0	0	0	0	0
Total Goal 1, Nuclear Weapons Stewardship	6,237	6,513	6,845	+332	+5.1	7,163	7,504	7,646	7,791
General Goal 2, Control of Weapons of Mass Destruction:									
Nonproliferation and Verification Research & Development	256	232	220	−12	−5.2	229	235	246	248
Nonproliferation and International Security	131	114	124	+10	+8.8	119	120	120	120
International Nuclear Material Protection and Cooperation	333	258	238	−20	−7.8	244	250	258	260
Russian Transition Initiative	39	40	41	+1	+2.5	42	43	43	44
HEU Transparency Implementation	17	18	21	+3	+16.7	21	21	20	20
International Nuclear Safety	34	0	0	0	0	0	0	0	0
Elimination of Weapons-Grade Plutonium Production	49	65	50	−15	−23.1	56	59	60	67
Accelerated Materials Disposition	1	0	0	0	0	0	0	0	0
Fissile Materials Disposition	382	653	649	−4	−0.6	661	673	685	697
Offsite Source Recovery Project	2	2	6	+4	+200.0	9	9	9	9
Office of the Administrator	54	57	57	0	0	58	59	60	61
Use of PY Balances	−20	−48	0	.....	.....	0	0	0	0
Total Goal 2, Control of Weapons of Mass Destruction	1,278	1,391	1,406	+15	+1.0	1,439	1,469	1,501	1,526

FUNDING BY GENERAL GOAL—Continued

[Dollars in Millions]

	Fiscal Year 2003	Fiscal Year 2004	Fiscal Year 2005	$ Change	Percent Change	Fiscal Year 2006	Fiscal Year 2007	Fiscal Year 2008	Fiscal Year 2009
Goal 3, Defense Nuclear Power (Naval Reactors)	702	762	798	+36	+4.7	803	818	834	850
Total, NNSA	8,217	8,667	9,049	+382	+4.4	9,405	9,791	9,981	10,167

NNSA Program Direction expenditures funded in the Office of the Administrator appropriation have been allocated in support of Goals 1 and 2. Goal 1 allocation includes Federal support for programs funded by the Weapons Activities appropriation, as well as NNSA corporate support, including Federal staffing at the site offices. Goal 2 allocation includes Federal support for all Nuclear Nonproliferation programs. Program Direction expenditures for Naval Reactors, supporting Goal 3, are funded within the Naval Reactors appropriation.

FUNDING SUMMARY BY SITE

[In Millions of Dollars]

	Fiscal Year 2003	Fiscal Year 2004	Fiscal Year 2005 Office of the Admin	Fiscal Year 2005 Weapon Activities	Fiscal Year 2005 Nuclear Nonprolif	Fiscal Year 2005 Naval React	Total Fiscal Year 2005
Chicago Operations Office:							
Ames Laboratory	0.2	0.2			0.2		0.2
Argonne Nat. Laboratory	24.7	19.2		1.9	20.5		22.4
Brookhaven National Laboratory	25.4	44.5		1.6	33.3		34.9
Chicago Operations Office	209.5	428.4		25.2	446.3		471.5
New Brunswick Laboratory	1.5	1.1			1.1		1.1
Idaho Operations Office:							
Idaho National Laboratory	59.5	58.0			2.0	56.0	58.0
Idaho Operations Office	1.4	1.1		1.4			1.4
Kansas City Site Office:							
Kansas City Plant	390.3	403.8		378.0	1.4		379.5
Kansas City Site Office	6.2	6.2	6.0				6.0
Livermore Site Office:							
Lawrence Livermore National Laboratory	1,048.7	1,004.1		963.3	70.4		1,033.7
Livermore Site Office	12.8	16.1	16.5				16.5
Los Alamos Site Office:							
Los Alamos National Laboratory	1,410.0	1,415.6		1,395.6	123.6		1,519.2
Los Alamos Site Office	12.0	14.6	15.9				15.9
National Engineering Technology Laboratory	1.7	0.0					0.0

NNSA Service Center:							
Atomic Energy of Canada, Ltd.	2.4	1.2	.....	.....	1.2	.....	1.2
General Atomics	10.8	11.0	.....	13.1	0.2	.....	13.3
Lawrence Berkeley National Laboratory	5.2	4.0	.....	.....	4.1	.....	4.1
Naval Research Laboratory	22.3	13.3	.....	11.0	.....	.....	11.0
NNSA Service Center (all other sites)	487.8	467.2	98.7	232.2	83.4	.....	414.4
Nonproliferation and National Security Institute	0.1	.....	.....	.....	.....	.....	.....
University of Rochester/LLE	46.8	62.6	.....	45.5	.....	.....	45.5
Nevada Site Office:							
Nevada Site Office	104.1	92.5	17.5	45.7	7.4	.....	70.6
Nevada Test Site	247.7	285.4	.....	282.9	1.0	.....	283.9
Oak Ridge Operations Office:							
Oak Ridge Institute for Science and Engineering	7.8	8.8	.....	7.1	.....	.....	7.1
Oak Ridge National Laboratory	110.6	95.8	.....	7.5	136.9	.....	144.4
Office of Science and Technical Information	0.1	0.1	.....	0.1	.....	.....	0.1
Y–12 Site Office	9.6	16.3	11.7	.....	.....	.....	11.7
Y–12 National Security Complex	734.3	728.2	.....	727.0	61.0	.....	788.0
Pantex Site Office:							
Pantex Plant	413.0	431.1	.....	463.5	10.3	.....	473.8
Pantex Site Office	9.9	10.8	11.6	.....	.....	.....	11.6
Pittsburgh Naval Reactors Office:							
Bettis Atomic Power Laboratory	351.6	396.2	.....	.....	.....	401.2	401.2
Pittsburgh Naval Reactors Office	7.8	8.2	.....	.....	.....	8.7	8.7
Richland Operations Office:							
Richland Operations Office	0.4	0.8	.....	1.3	.....	.....	1.3
Pacific Northwest National Laboratory	132.5	85.6	.....	4.4	70.1	.....	74.5
Sandia Site Office:							
Sandia National Laboratories	1,306.8	1,376.7	.....	1,167.7	144.3	.....	1,312.0
Sandia Site Office	8.6	12.1	12.5	.....	.....	.....	12.5
Savannah River Operations Office:							
Savannah River Operations Office	14.0	26.5	.....	.....	32.4	.....	32.4
Savannah River Site Office	3.5	3.1	2.9	.....	.....	.....	2.9
Savannah River Site	305.3	303.3	.....	238.9	55.5	.....	294.4
Schenectady Naval Reactors Office:							
Knolls Atomic Power Laboratory	269.5	282.0	.....	.....	.....	308.2	308.2
Schenectady Naval Reactors Office	6.3	6.7	.....	.....	.....	7.0	7.0
Washington DC Headquarters	501.3	688.2	137.9	577.5	41.9	13.8	771.1
Other	5.7	7.0	2.4	.....	.....	3.0	5.4
Subtotal, NNSA	8,360.4	8,842.0	333.7	6,598.5	1,348.6	768.4	9,078.7

FUNDING SUMMARY BY SITE—Continued

[In Millions of Dollars]

	Fiscal Year 2003	Fiscal Year 2004	Fiscal Year 2005 Office of the Admin	Fiscal Year 2005 Weapon Activities	Fiscal Year 2005 Nuclear Nonprolif	Fiscal Year 2005 Naval React	Total Fiscal Year 2005
Adjustments	−143.5	−176.2	0.0	−30.0	0.0	0.0	−30.0
Total, NNSA	8,216.9	8,665.8	333.7	6,568.5	1,348.6	768.4	9,048.7

STATEMENT OF ADMIRAL FRANK L. BOWMAN

Senator DOMENICI. Thank you very much. Are you next, Admiral?

Admiral BOWMAN. Yes sir.

Senator DOMENICI. Please proceed.

Admiral BOWMAN. Mr. Chairman and members of the committee, thank you very much for the opportunity to testify, as you said, Mr. Chairman, maybe one last time before this committee in my last 8 years as Director of Naval Reactors.

Sir, with your permission I would like to submit a detailed statement for the record.

Senator DOMENICI. Please do.

Admiral BOWMAN. And also the normal environmental, radiation and occupational safety health reports.

[CLERK'S NOTE.—The reports referenced above will be retained in committee files.]

Admiral BOWMAN. Let me begin by thanking you and the committee for the support you've continued to provide the Naval Nuclear Propulsion Program, and Senator Domenici, especially, on a personal note, your support of me and my program for these years. Many of the impressive capabilities of our nuclear-powered ships were developed with funding that was supported by you. As you know, nuclear propulsion provides the mobility, the flexibility and the endurance that today's Navy needs to meet a growing number of important missions with fewer and fewer ships.

Today our 10 nuclear-powered aircraft carriers continue to be the centerpiece of U.S. military presence worldwide in support of our interests and commitments. In war they deliver strike sorties, protect friendly forces and engage in sustained combat operations.

Our 54 operational attack submarines are the envy of navies around the world. Because of their stealth, endurance, mobility, firepower and multi-mission flexibility they guarantee access to the world's oceans and littorals, monitor those who may act counter to our interests and conduct reconnaissance in preparation for conflict. In the event of hostilities they conduct Tomahawk strike missions, deploy and support special operations forces, and destroy enemy ships and diesel submarines.

Our 14 Trident ballistic missile submarines, down from 18 as a result of the last NPR, are the most survivable and efficient leg of our strategic deterrent arsenal and continue to represent a cornerstone of our national security.

And then finally, the deep-diving, nuclear-powered research submarine, NR–1, provides unique military mission support to the Navy and valuable oceanographic research to the scientific community.

When I testified before this committee last year, Mr. Chairman, our Armed Forces had been engaged in Operation Iraqi Freedom for 3 weeks. I reported then that our nuclear-powered warships were playing a leading role in combat operations. My written, detailed statement reports more details of the superb performance of our ships and their crews. Today our nuclear-powered fleet is deployed around the world, protecting our interests, deterring aggression and continuing to fight terrorism. At the center of this new

surge Navy, our nuclear-powered warships are ready for any and all missions our Nation's leaders may direct.

As we look to the near future, the first of the Virginia-class attack submarines will be delivered this summer, remarkably close to the schedule established over a decade ago. You recall that the operational requirements document for that Virginia-class was approved some 4 years after the fall of the Berlin Wall. As such, the Virginia-class is the first submarine designed specifically for post-Cold War missions. It's designed to prevail in both the littorals and the open ocean.

Our work also continues on the design of the nuclear propulsion plant for the CVN–21, the next generation class of aircraft carriers. The modern technologies of this design will enable increased war fighting capability and operational availability with lower life cycle costs.

We're also continuing work on the Transformational Technology Core (TTC). It will use new core materials, new reactor materials, to achieve a greater energy density, more energy in the reactor without increasing the size, weight or space and at a reasonable cost for future Virginia-class submarines. That TTC core is a direct outgrowth of the Programs advanced reactor technology work, funded by this committee. It will also be a stepping stone for future reactor development.

Though new designs are important, Naval Reactors' number one priority is ensuring that the men and women at sea defending our Nation are operating safe, effective and reliable nuclear propulsion plants. Most of Naval Reactors' funding is devoted to this.

With your vital support, I'm confident we will continue to build on our success. Naval Reactors' fiscal year 2005 DOE budget request is for about $798 million, an increase of 3 percent after inflation compared to fiscal year 2004. The funding increase mainly supports the continued development of the Transformational Technology Core.

PREPARED STATEMENT

Mr. Chairman, as the Director of Naval Reactors for the last 7½ years, I can assure you that the ongoing support of your committee is one of the most important factors in our success story. The unique capabilities inherent in nuclear power have played a vital role in our Nation's defense over the past 50 years. This legacy is as strong and vibrant today as ever. Our Navy continues to face a growing need for power projection and forward presence far from home, which places even greater demands on our nuclear fleet. With your continued support Naval Reactors' success will continue far into the future. Our record is strong, the work is important, and the funding needs have been very carefully scrubbed by me personally.

Mr. Chairman, other members of the committee, I thank you very much for your continued support.

[The statement follows:]

PREPARED STATEMENT OF ADMIRAL FRANK L. BOWMAN

Thank you for inviting me to testify today on Naval Reactors' Fiscal Year 2005 Department of Energy/National Nuclear Security Administration budget request in what will be my last of 8 years as Director, Naval Reactors.

Let me also thank you for the faith you continue to demonstrate in the Naval Reactors Program. Through your steadfast support, our nuclear fleet remains deployed around the world today, prosecuting the Global War on Terrorism while protecting our interests and deterring aggression. Nuclear propulsion continues to prove itself essential by providing the flexibility, speed, endurance, and multimission capability required for the United States Navy to meet its global commitments. The nuclear propulsion plants, developed with funding supported by this subcommittee, enable many of the impressive capabilities our nuclear-powered ships possess. Let me begin by discussing the capabilities and accomplishments of the nuclear-powered Fleet—the Program's principal product.

TODAY'S NUCLEAR-POWERED FLEET

Our nuclear fleet includes 10 of our Nation's 12 aircraft carriers, each of them providing 4½ acres of sovereign U.S. territory from which we can rapidly begin and sustain continuous combat operations, without having to negotiate basing rights on—and overflight rights across—foreign soil. Nuclear power enhances the capability of these warships to surge and to sprint where needed and arrive on station ready for round-the-clock power projection and other combat operations. Sustained high-speed capability enables a rapid response to world circumstances, giving the Combatant Commanders the ability to surge these ships from one crisis to the next without dependence on slower fleet tankers.

Our 54 operational attack submarines (SSN's) possess the inherent characteristics of stealth, endurance, mobility, firepower, and multimission flexibility. They provide guaranteed access to the world's oceans and littorals, monitor those who may act counter to our interests, and conduct reconnaissance in preparation for conflict. Our SSN's can covertly monitor an adversary's actions without the risk of political or military escalation—a particularly valuable capability since adversaries understand and can sometimes avoid other methods of reconnaissance. If tensions escalate, these SSN's can provide Tomahawk strikes or deliver special operations forces from their undisclosed locations without warning, inside an adversary's defensive umbrella. Our "high-tech" SSN's make our Navy the envy of other navies throughout the world.

This summer, the Navy will deliver the first-of-the-class USS VIRGINIA to the Fleet, close to the shipyard's schedule that was established over a decade ago. Float-off and christening occurred in August 2003 and the reactor was taken critical for the first time on January 27, 2004. Final construction work is being completed, and shipboard acceptance testing is ongoing. When the reactor went critical for the first time, the actual control rod position was virtually the same as predicted by our analysis over 6 years ago—within 0.2 percent.

The VIRGINIA Class Operational Requirements Document, approved in September 1993, called for the ship to be the first nuclear-powered submarine designed for post-Cold War missions. Specifically, VIRGINIA is built to dominate the littorals without sacrificing undersea dominance in the open ocean. In a single platform, the VIRGINIA class will combine a unique mix of stealth, endurance, agility, and firepower to fulfill vital national security roles, even in areas denied to other U.S. assets. There are nine follow-on VIRGINIA-class submarines under contract, five of which are in the multiyear contract authorized by Congress last year.

The remaining ships in the nuclear fleet include 14 strategic ballistic missile submarines (SSBN's), four former SSBN's being converted to guided missile/multimission submarines (SSGN's), and one deep submergence vehicle (NR–1). Our 14 TRIDENT ballistic missile submarines are the survivable leg of our strategic deterrent arsenal and therefore provide the cornerstones of our national security at the lowest cost. The four TRIDENT submarines now undergoing conversion to SSGN's will exploit the submarine's tremendous mission volume and 22 large interfaces with the sea to deploy futuristic payloads and special operations forces. These multi-mission stealth platforms will provide the combatant commanders with littoral warfare and land-attack capabilities that will be truly transformational. The deep-diving, nuclear-powered research submarine NR–1 provides unique military mission support to the Navy and valuable oceanographic research to the scientific community.

Now I'd like to discuss our work in a little more detail. Naval Reactors' No. 1 priority has always been and continues to be providing safe, effective, and reliable nuclear propulsion to the men and women who are at sea, defending our national interests. Most of our funding goes to that purpose.

Today, Naval Reactors supports 104 reactor plants (one more than the number of commercial reactors in the United States) in 83 nuclear-powered warships, the NR–1, and 4 training and test reactor plants. The ships are welcomed in more than 150 ports of call in more than 50 countries. In all, we have operated safely for more than 5,500 reactor years and steamed over 130 million miles.

Naval Reactors' technical support for these ships is more important than ever. Today, the average age of a nuclear-powered warship in our Navy is 18 years, but it will increase to more than 24 by 2012. As these ships age, the technical work necessary to maintain their performance places a greater demand on Naval Reactors' DOE budgets. This challenge is my primary concern. As I said earlier, your support remains vital, and I am confident we will continue to build on our successes.

On March 8 of this year, the Secretary of Energy assigned to Naval Reactors a project to develop, design, deliver, and operationally support a civilian nuclear reactor for space exploration missions under NASA's Project Prometheus. Since this work is exclusive of our core naval nuclear propulsion work and is assigned as a DOE civilian project to NR, NASA will budget for and fund this work throughout the effort. Our initial work will begin this year to establish a working relationship with our new partners at NASA and to define the elements of the reactor design.

FISCAL YEAR 2005 DEPARTMENT OF ENERGY BUDGET REQUEST

Naval Reactors' fiscal year 2005 DOE budget request is $797.9 million, an increase of about 3 percent (after inflation) compared to fiscal year 2004. One of the major activities enabled by this modest increase is continued development of the Transformational Technology Core. Additionally, this increase supports continuing development of a production-line system for the preparation of dry storage of spent nuclear fuel. This production-line system is needed to meet a court-ordered obligation to move all spent fuel stored in Idaho into dry storage by 2023 and to be among the early shipments of fuel to the national spent fuel repository. Finally, this increase supports ongoing facility upgrades at Program sites.

The majority of the Naval Reactors fiscal year 2005 DOE budget request funds our work in sustaining 104 operational reactors. This work involves continual testing, analysis, and monitoring of plant and core performance especially as these plants age. The nature of our business demands a careful, measured approach to developing and verifying nuclear technology; designing needed components, systems, and processes; and implementing them in existing and future plant designs. Demanding engineering challenges and long lead times to fabricate the massive, complex components require many years of effort before technological advances can be introduced into the Fleet.

Most of this work is accomplished at Naval Reactors' DOE laboratories. These laboratories have made significant advancements in extending core lifetime, developing robust materials and components, and creating an array of predictive capabilities. These advancements allowed the Navy to extend the service life and intervals between major maintenance periods for nuclear-powered warships to reduce ship offline time for maintenance. Increasing ship availability also increases the Navy's warfighting capabilities and supports the Navy's ability to surge when needed.

For example, a recent Navy decision to delay a major overhaul and refueling of the aircraft carrier, USS CARL VINSON (CVN 70), was made possible in part by our continual monitoring of core performance and subsequent analysis to establish that the ship had sufficient nuclear fuel remaining to safely operate during this extended period. This decision enabled the Navy to fund nearer term priorities without adversely impacting the Fleet.

New plant development work at the Program's DOE laboratories is focused on continuing the reactor design for the CVN–21 aircraft carrier. Design for the CVN–21 nuclear propulsion plant is well underway. CVN–21 is the first new aircraft carrier designed since the 1960's NIMITZ class. The CVN–21 reactor plant will build on technology developed for the three generations of submarines designed since NIMITZ. Compared to the NIMITZ-class propulsion plant, the CVN–21 propulsion plant will provide three times the electrical generation and distribution capacity, and will require about 50 percent fewer Reactor Department personnel. This modern technology will enable increased warfighting capability and operational availability, while lowering life-cycle costs.

Another aspect of DOE laboratories' development work is the Transformational Technology Core (TTC). The TTC is a direct outgrowth of the Program's advanced reactor technology work. The TTC will use new core materials to achieve a significant increase in core energy density (that is, more energy in the core without increasing reactor size, weight, or space). The TTC will be forward-fitted into the VIRGINIA-class submarines, which will be the mainstay of the submarine fleet for fu-

ture decades, without the need to redesign the ship. The importance of TTC is becoming more evident as we depend on our SSN's more in the current national security environment. The goal is to achieve at least a 30 percent increase in energy.

We are also prudent stewards of the environment. The four prototype reactors at the Naval Reactors Facility (NRF) in Idaho are defueled and in an environmentally benign, safe layup condition; site and reactor plant dismantlement work is planned for future years. The two shutdown prototype reactors at the Kesselring site in New York have been inactivated and defueled, and major dismantlement work was completed in fiscal year 2003. Other dismantlement work at Kesselring Site is continuing. Dismantlement work and unrestricted radiological release at the Windsor site in Connecticut are complete, and approval from the EPA and the State for chemical release for unrestricted future use and property transfer is expected later this year.

NAVAL REACTORS FISCAL YEAR 2005 DEPARTMENT OF ENERGY BUDGET DETAIL

Naval Reactors' technical budget request is categorized into four areas of technology: Reactor Technology and Analysis; Plant Technology; Materials Development and Verification; and Evaluation and Servicing. This approach supports the integrated and generic nature of our DOE research and development work. The results of Naval Reactors' DOE-funded research, development, and design work in the following technology areas will be incorporated into future ships and retrofitted into existing ships.

—The $232.1 million requested for Reactor Technology and Analysis will continue work on the design for the new reactor for CVN–21. These efforts also support a portion of the design of the TTC, a new high-energy core that is a direct outgrowth of the Program's advanced reactor technology work. TTC will support national security demands by providing additional energy for one or a combination of:
  —Extended ship life,
  —More operating hours per operating year,
  —Higher ship transit speed,
  —Increased available energy to enable future innovations, such as the ability to recharge off-board undersea and air autonomous vehicles, or any other use for energy yet to be conceived.

  The increasing average age of our existing reactor plants, along with future extended service lives and reduced maintenance periods, place a greater emphasis on our work in thermal-hydraulics, structural mechanics, fluid mechanics, and vibration analysis. These factors, along with longer-life cores, mean that for years to come, both the reactor plants and the reactor cores will be operating beyond our previously proven experience base. To counter this, our improved analysis tools and understanding of basic nuclear data will allow us to predict performance more accurately and thereby better ensure safety and reliability throughout the extended life.

—The $155.5 million requested for Plant Technology provides funding to develop, test, and analyze components and systems that transfer, convert, control, and measure reactor power in a ship's power plant. Reactor plant performance, reliability, and safety are maintained through a full understanding of component performance and system condition over the life of each ship. The request supports both the goal of enhancing steam generator performance and the goal of reducing lifecycle costs by eliminating the need for expensive inspection and maintenance. In addition, development work for improving VIRGINIA steam generator performance is needed for the plant to exploit the additional energy available from the TTC. Naval Reactors is developing components to address known limitations or to improve reliability of instrumentation and power distribution equipment by replacing obsolete equipment that is increasingly difficult to support. Additional technology development in the areas of chemistry, energy conversion, plant arrangement, and plant components will continue to improve reactor performance and support Fleet operational requirements.

—The $150.8 million requested for Materials Development and Verification funds material analyses and testing to provide the high-performance materials necessary to ensure that naval nuclear propulsion plants meet Navy goals for extended warship operation and greater power capability. More explicitly, materials in the reactor core and reactor plant must perform safely and reliably for the extended life of the ship. Testing and analyses are performed on the fuel, poison, and cladding materials to verify acceptable performance, as well as to develop materials with increased corrosion resistance and lifetime capability. Testing and development of reactor plant materials also leads to improvements

such as more resilient materials that we are incorporating into our newest designs.

Funds in this category also support a portion of Naval Reactors' work at the Advanced Test Reactor (ATR), a specialized materials testing facility operated by the DOE Office of Nuclear Energy, Science, and Technology that we use to test reactor core and plant materials specimen. The specimen are subsequently examined at the Expended Core Facility (ECF) at NRF or the Radioactive Materials Laboratory at Knolls Atomic Power Laboratory to obtain data used to support both core and plant materials development. This enhanced knowledge of materials performance has been key to technical breakthroughs in extending core life. Although Naval Reactors is not responsible for ATR, it is important to our continued efforts to understand material behavior. ATR is more than 35 years old now, and I understand that the Department of Energy's Office of Nuclear Science and Technology has identified a need for increased funding to keep it viable for years to come. I support this funding.

—The $172.0 million requested for Evaluation and Servicing sustains the operation, maintenance, and servicing of land-based test reactor plants and part of Naval Reactors' share of ATR operations. Reactor core and reactor plant materials, components, and systems in these plants provide important research and development data and experience under actual operating conditions. These data aid in predicting and subsequently preventing problems that could develop in Fleet reactors. With proper maintenance, upgrades, and servicing, the two operating test reactor plants and the ATR will continue to meet testing needs for quite some time.

Evaluation and Servicing funds also support the implementation of a dry spent fuel storage production-line that will allow us to put naval spent fuel currently stored in water pits at the Idaho Nuclear Technology and Engineering Center and at ECF into dry storage. Additionally, these funds support ongoing cleanup of facilities at all Naval Reactors sites to minimize hazards to personnel and reduce potential liabilities due to aging facilities or changing conditions.

PROGRAM INFRASTRUCTURE AND ADMINISTRATIVE REQUIREMENTS

In addition to the budget request for the important technical work discussed above, infrastructure and administrative funding is required for continued support of the Program's operation and infrastructure. Specifically, the fiscal year 2005 budget request includes:

Facility Operations.—Fifty-point-eight million dollars are requested to maintain and modernize the Program's facilities, including the Bettis and Knolls laboratories and ECF, through Capital Equipment purchases and General Plant Project upgrades.

Construction.—Seven-point-two million dollars are requested to refurbish and replace Program facilities. This includes funding for the construction of the ECF Dry Cell project in Idaho, a project that will significantly improve Naval Reactors' ability to process naval spent fuel for dry storage. The requested funding also supports construction of a replacement industrial facility building at the Knolls Atomic Power Laboratory to consolidate non-irradiated material development fabrication and characterization (i.e., determining material properties) activities, which are currently located in five separate, aging buildings.

Program Direction.—Twenty-nine-point-five million dollars are requested to fund Naval Reactors' DOE personnel at Headquarters and the Program's field offices, including salaries, benefits, travel, and other expenses. This staff maintains oversight of the Program's extensive day-to-day technical and administrative operations, while continuing to ensure compliance with environmental, safety, and other regulatory requirements—all of which, notwithstanding our excellent record, necessitate substantial effort.

PERFORMANCE MEASUREMENTS, GOALS, AND ACCOMPLISHMENTS

Naval Reactors has a long history of operating with the highest levels of integrity and operational accountability. The Naval Reactors Program has always been dedicated to continual improvement. We use semiannual reviews of short and long-range plans to adjust and refine work priorities. Work is broken up into thousands of discrete "deliverables," each assigned to an individual responsible for completion of the task on schedule. Monthly financial reports from contractors are used to compare actual performance against projected performance. Additionally, Naval Reactors Headquarters closely oversees its management and operating contractors through periodic reviews, formal audits, performance appraisals, and close integration with our resident field offices.

For the fiscal year 2003 end-of-year performance results, my Program met or exceeded all major performance targets. We ensured the safety, performance, reliability, and service life of operating reactors for uninterrupted support of the Fleet. We exceeded 90 percent utilization availability for our training and test reactor plants. As of today, U.S. nuclear-powered warships have safely steamed over 130 million miles. Naval Reactors developed new technologies, methods, and materials to support reactor plant design, which included attaining the fiscal year 2003 goal of 99 percent design completion of the next-generation submarine reactor. We continued design of the propulsion plant for the next-generation aircraft carrier, which is on schedule to meet the planned ship construction start in fiscal year 2007. Additionally, Naval Reactors maintained its outstanding radiation protection program and its environmental performance: no Program personnel have ever exceeded the applicable annual or lifetime Federal limits for radiation exposure, and Program operations had no adverse impact on health or on the quality of the environment.

Naval Reactors has met or expects to meet or exceed all fiscal year 2004 performance targets, which are to achieve 90 percent utilization availability for operation of our training and test reactor plants; to safely steam on nuclear power about 2 million more miles; to complete the next-generation submarine reactor design deliverables (design is complete); to complete 60 percent of the CVN–21 reactor plant design; to have no personnel exceed the annual Federal limit for radiation exposure; and to have no adverse impact on human health or the quality of the environment.

CONCLUSION

The ongoing support of the Senate Appropriations Committee Subcommittee on Energy and Water Development is one of the most important factors in our success story. The subcommittee has recognized the requirements and demands the Program confronts daily: a continuing need for power projection and forward presence far from home, which strains our limited number of nuclear ships; an aging nuclear fleet; and the funding required to meet these commitments today and in the future.

The unique capabilities inherent in nuclear power have played a vital role in our Nation's defense over the past 50 years. With your support, this legacy will continue far into the future as the Nation meets each new threat with strength and resolve. Naval Reactors' record is strong, the work important, the funding needs modest.

Thank you for your support.

Senator DOMENICI. Well Admiral, I'll just tell you the truth. We serve around here as elected officials and we meet people who give their lives to the government and do services for our people. And sometimes we run into some that we do not know what to tell them in terms of how much we appreciate them. We use the typical words but they are not enough. But we really think the United States Navy's use of nuclear power is one of the most fantastic achievements of mankind. And when they have done it since Nautilus without one single nuclear mistake and have had as high as 123, I think, nuclear reactors floating around the oceans of the world, it is tremendous. And you are in charge of that and you made it go along just like it had been, or better. We do not need any accolades or thanks from you because they all run the other direction.

Admiral BOWMAN. Thank you, sir.

Senator DOMENICI. Now, who is next? The other two do not need to testify?

Ambassador BROOKS. No sir, that's why I was so long, I was doing for all three of us.

Senator DOMENICI. All right. Well, I am going to ask a few questions and yield to you two Senators and if we do not finish we will submit the rest of them.

ROBUST NUCLEAR EARTH PENETRATOR

Mr. Brooks, I do not have this question written up but I would like you to do something again for me. I have been a budgeteer, until this year, part of the budget process for 28 years, Chairman 10 times, maybe. Now, you are asking us to approve how much money for the research on the penetrating warhead?

Ambassador BROOKS. Twenty-seven-point-five million dollars.

Senator DOMENICI. Now, the Senator from California says that you have $500 and some million.

Senator FEINSTEIN. Four-hundred-and-eighty-four.

Senator DOMENICI. Four-hundred-and-eighty-four million dollars that you are going to spend and she says that is why she will not vote for it, among the reasons, because that is what you are going to spend, that is what you are going to do. Tell me why that number is in there at all.

Ambassador BROOKS. One of the things we tried to do starting 3 years ago was to get to true 5-year budgeting so that when we submitted a budget to the Congress we submitted a 5-year plan that really meant something. That's important for the Congress and it was also important for us because otherwise you would start things that you couldn't finish. When we prepared this 5-year plan we had no idea, and we don't know now, whether the research will show this is feasible or whether the President will decide to pick it up. But if he does, we wanted to have the wedge to support the funding in the out-years. So we put the money in there because it was our interpretation of the right thing to do in terms of making sure the Congress knew the implication of the research that we were doing and making sure that if the President did so choose, after the completion of the study, that we had preserved his options financially. It was not intended to suggest that we made a decision, let alone that we think that you've made a decision.

Senator DOMENICI. Well I'll tell you, Mr. Ambassador, you get hit both ways. If you leave it out somebody says you are underselling the program and it costs a lot more than 27 or 24. And if you put it in as the outside you get beat over the head because that is what you are going to spend. But we have to figure out a way, in the next 5 or 6 weeks, 7, to make the case that putting that number in does nothing with reference to this program in terms of its future, that its future is capsulized in the funding as described to be used that you ask for right now. I am willing, in this bill, to fight it out. If we lose, we lose, if we win, I am willing to put any kind of language in that says that is it. There is no other expenditure. You do it and no more. And before you do anymore you must get concurrence. Now, that is all right with you, right?

Ambassador BROOKS. Yes sir. That's completely what the law says.

NIF

Senator DOMENICI. Okay. Now, let me move to Dr. Beckner. I understand, Dr. Beckner, that NIF is still at least 6 years and $1 billion away from completion of this project. Is it accurate to say that NIF is both the largest laser and the most expensive diagnostic tool

in the NNSA stockpile? When we develop any technology, we need to ask ourselves, is this outcome worth the cost? Right?

Dr. BECKNER. A fair question.

Senator DOMENICI. If you do not achieve ignition, the American people have purchased a laser that is 25 times more expensive than the Z Machine, which proved its worth 1 year too late. It came into existence one year after we started funding NIF. It is proceeding along as a much cheaper machine but I think we need to understand that the project is viable before we spend billions more on the life of this program.

So my question to you, how much money are you willing to spend above ignition? Excuse me, how much money are you willing to spend to achieve ignition and at what point do you say, we have spent too much?

Dr. BECKNER. Our present plan shows the expenditures out through the year 2010 in the budget that we've submitted, and it's close to a billion dollars, as you've said. I believe we need to get to that point in order to, in any sense, have a chance at achieving ignition. You can't do it with a smaller laser, based on everything that we know today. That's only part of the answer, however. The second part really is that absent ignition, we require this laser for a large number of applications that are specific to the sustenance and the study of phenomena associated with nuclear weapons themselves. In other words, it is a very significant element of Stockpile Stewardship. Ignition, of course, is important, make no mistake about it, and we will use it aggressively to achieve that goal. But we do have this additional reason to need NIF. And I don't want us to forget that.

Senator DOMENICI. Do you mean for the Stockpile Stewardship?

Dr. BECKNER. Yes sir.

Senator DOMENICI. Well of course, that is why we put it in there.

Dr. BECKNER. Yes sir.

Senator DOMENICI. But if it does not work it does not matter where we put it, right?

Dr. BECKNER. Well, there are many things you can do with a laser without achieving ignition, that's my point. We will use it for those other things.

Senator DOMENICI. But will those help with Stockpile Stewardship?

Dr. BECKNER. Yes sir.

Senator DOMENICI. And would we need $5 or $6 billion to achieve that?

Dr. BECKNER. No, I think we would not have embarked upon this mission if we did not believe we had a reasonable opportunity to achieve ignition.

Senator DOMENICI. Ignition.

Dr. BECKNER. Yes sir.

Senator DOMENICI. So let me go on. If the 2005 budget specifies that NIF ignition has been delayed until 2014, that gives me great concern regarding the project. Delaying the ignition start date is contrary to news that the project is ahead of schedule. I understand that the laser installation is 18 months ahead of schedule and the beam light infrastructure was achieved nearly 3 years ahead of schedule. As a result of these conflicting statements, I am

very skeptical as to the actual status of NIF. To date, $2.5 billion has been spent and another billion required before we know whether or not this project will work. I do not share this all or nothing attitude because the costs are very high and the budget is very slim. So I believe we need a more measured approach to address the significant technical measures and technical challenges that lie ahead.

George Miller, the NIF Associate Director, is he here today?

Dr. BECKNER. Not to my knowledge.

Senator DOMENICI. Is he still doing this job?

Dr. BECKNER. Yes he is.

Senator DOMENICI. Did he move out there?

Dr. BECKNER. Yes. George is an employee of Lawrence Livermore National Laboratory.

Senator DOMENICI. Well, whoever sees him, give him my regards. Thank you.

Dr. BECKNER. I'll do that.

Senator DOMENICI. Terrific guy. He is the Associate Director, he stated that the most significant technical challenge he has is the full ignition of the lasers. I believe the first cluster, which is 48 lasers, or one-quarter of the total, would certainly give a clear indication of whether ignition is feasible. Is that what you think?

Dr. BECKNER. I believe it's more complicated than that.

Senator DOMENICI. You what?

Dr. BECKNER. It's more complicated than that.

Senator DOMENICI. Okay.

Dr. BECKNER. Let me back up to your earlier statement. First of all, I've met with the staff of this committee as well as the other three committees to clarify our recent decisions to change course on some of the milestones in order to pull back the ignition target to 2010, as opposed to 2014. And we've done that because of our realization that this committee and the other committees as well have a very strong view that we must maintain that schedule. We had allowed it to move out because of priorities in other elements of the program and without the full understanding that this was unacceptable. So we have changed that plan and we've done it also because we've had some technical progress in target design which makes it now possible to do that. So we are very much aware of the committee's determination that we stay on target with ignition. That's the first part.

Secondly, we agree with you that we need more milestones for this committee and the other committees of the Congress to track. We're going to put those in place; we will provide them to you annually; and we'll report to you at regular intervals to be sure that you are satisfied with the progress of the program.

Now, the third part of your question regarding demonstration of significant events at the time we have one cluster operational, I think is not likely to be—we would not want to see that as an end point. That's my concern. We certainly see that as a very important target in program progress and we have that as a goal.

Senator DOMENICI. Well, I am going to yield here shortly because I understand these Senators have more interest than just NIF. But I am not finished with you, even if we have to do it another day. I have two questions. First, I want everybody here to know that I

know him very well; he worked in my State and, you know, I have been with him many times when he was not in such a hard position. And he smiles no matter what, when he was doing the other work or this so, I guess it does not really matter. He has got a good brain.

Dr. Beckner, I would like you to put together a budget and a schedule that will accelerate the installation and testing of the first cluster in fiscal year 2005. Can you do that?

NIF PLAN

Dr. BECKNER. I can certainly put together the plan. I don't know the results of your instructions but we'll certainly be responsive to your request.

[The information follows:]

It is not possible to complete the first cluster milestone in fiscal year 2005 without a significant increase in the Total Project Cost. Procurement logistics and lead times limit our ability to complete the scope of work required to accelerate the first cluster into fiscal year 2005. The ability does exist to marginally accelerate the first cluster and project completion dates if the funding profile is changed without increasing the Total Project Cost (TPC).

The first cluster milestone is currently scheduled for completion in June 2006 with Project completion in September 2008. We believe it is possible to accelerate these dates by modifying the funding profile for the project beginning in fiscal year 2005. The first cluster milestone could be accelerated by 1 to 3 months, and the project completion date could be accelerated by 3 to 5 months, by moving $59 million from fiscal year 2007 to fiscal year 2005 and fiscal year 2006. Of the $59 million total, $27 million would be required in fiscal year 2005 and $32 million required in fiscal year 2006.

Please let me know if you would support such a change in the funding profile in order to achieve the schedule acceleration described. This would allow the ignition campaign to begin sooner and support the goal of ignition in fiscal year 2010. I ask you to recognize that if we must achieve the change within the FYNSP plans, it will likely be at the expense of other activities which are vital to the Stewardship mission. We will not proceed with additional planning until we receive your input.

Senator DOMENICI. Now, I want to state, and then I yield and will come back for a number of questions. I want to say, you know how I feel right now, Dr. Beckner, is that I have been hoodwinked. And not a little hoodwink, a big one. Because I think what we are going to get out of this is a big civilian tool that can be used at that laboratory for a lot of research. And we are going to run around saying that is the best research laser facility the world has ever seen. And I tell you, if I see that coming, they better not be asking me for any money because I would close it down. Because that is not fair. We never intended to spend $5 to $6 billion to build a laser facility for a laboratory that would provide civilian research and visitations from around the world. So I know you all look at this and say well, it is going to do something. And it is sure going to be extraordinary. But that is not why I agreed to pay for it.

Dr. BECKNER. I understand.

Senator DOMENICI. I agreed in a very, very highly debated, that this was going to reach ignition and that would be the best part of science-based stewardship. Think of that. The best part. Now right now we are moving with Z also.

Dr. BECKNER. Yes sir.

Senator DOMENICI. And we are.

Dr. BECKNER. Yes sir.

Senator DOMENICI. And nobody is going to stop us from doing that. It may do three-quarters of the work but it is a little tiny weeny $100 million project and it may do three-quarters of your work, or more. So, in any event, we will make sure that everybody understands that.

Now, Senator Bennett, you are next. We are going on time of arrival, and then the Senator from California.

NUCLEAR TESTING

Senator BENNETT. Thank you very much, Mr. Chairman. Ambassador Brooks, I think I heard the answers to my questions in your statement but let us go over them again so that they are very clear.

There is a moratorium currently in place. Is that correct?

Ambassador BROOKS. Yes sir.

Senator BENNETT. And testing is not imminent, is that correct?

Ambassador BROOKS. That's correct.

Senator BENNETT. You said that there is no anticipation of testing at any foreseeable time in the future. Is that correct?

Ambassador BROOKS. Yes.

Senator BENNETT. None that you can now foresee?

Ambassador BROOKS. That's correct.

Senator BENNETT. And that the testing will not happen unless the President makes a very public finding and the Congress acts in funding that finding. Is that correct?

Ambassador BROOKS. That's correct.

Senator BENNETT. So the newspaper stories, I think I heard you say, are not correct? That say that nuclear testing is now imminent as a result of the vote we took last year?

Ambassador BROOKS. I haven't seen stories that blamed me for that one, but in any event, if there are such stories they're not correct.

Senator BENNETT. Not you, they blame us. So there is no testing pending at the present time?

Ambassador BROOKS. No sir.

Senator BENNETT. Or in the future circumstances that you currently can see?

Ambassador BROOKS. No sir.

Senator BENNETT. All right.

Ambassador BROOKS. But I don't want to mislead the committee. If I find a problem that can only be verified through testing I would not hesitate to recommend to the Secretary and he would not hesitate to recommend to the President that we test. I have no reason to believe I'm going to find that problem, but it is a hedge against the possibility of finding that problem that we've asked for the money to ensure that we are ready if that contingency occurs. We have no reason to believe it's going to occur.

Senator BENNETT. All right. Here is a postcard that is currently circulating. I am sure you have seen it. I get copies of it. I cannot respond to most of them because they do not put return addresses on them, they just send them in. And it says, for those that are not familiar with it, "This is an underground nuclear test." And it shows an obvious spew into the atmosphere. Would you comment on that, because it has great currency right now.

Ambassador BROOKS. Yes sir. The United States started doing only underground tests following the Limited Test Ban Treaty in 1963. In 1970, a test called Baneberry vented. That is to say, although we thought it would all be contained, it was not. Radioactivity was spread off the test site to an area north and west of the site, all within Nevada; there was no radioactivity above background levels detected in Utah, although there had, obviously been fallout in Utah and indeed worldwide and from the atmospheric tests of the 1950's and 1960's. After Baneberry, we took a 6-month moratorium on underground tests. Now, in the context of today, when we haven't tested for over 10 years, that doesn't sound like much but in the 1970's when we had a very robust test program that was a significant step. We made a number of both analytic and technical corrections. What had happened was, there was a fissure, a crack in the Earth that we had not detected. So first, we required that for future tests we drill more exploratory holes to make sure we find fissures. We put together an evaluation panel that included both testing experts and geologic experts to evaluate the containment design of each test and then we required that those findings be peer-reviewed, in accordance with standard scientific procedures. We set up a series of environmental monitoring stations and those networks operated continuously.

Now, that was a long time ago. But we have not had a repeat of Baneberry. We had some far less significant events, three I believe, in the 20-some odd years following that, two of which resulted in nothing leaving the test site. We are confident that with the combination of the corrective actions we put in place then and the greater scientific understanding that we have now of geology and hydrology, and the greater formality that we build into all aspects of nuclear safety, and the funding that the Congress has given us in the last 2 years to make sure we do careful safety analysis, that if, at some future date, the President decides we need to do an underground test there will be a policy debate, but there won't be any public health issue because we are confident that we will make sure that we do not have a repeat of that 1970 event.

Senator BENNETT. So just to summarize what you have told me, since this occurred in 1970, for the intervening quarter of a century, there has never been a reoccurrence of something like this postcard?

Ambassador BROOKS. There certainly has been nothing like that. As I said previously there has been minor venting, but nothing like Baneberry.

Senator BENNETT. How many tests are we talking about? If we had three occasions, is that three out of thirty or?

Ambassador BROOKS. Between 1970, in 22 years, oh, I don't know. I'd have to give you that for the record, a couple hundred.

Senator BENNETT. Couple hundred?

Ambassador BROOKS. Yes sir. Let me supply that for the record to make sure I'm giving you the right answer.

NUCLEAR TESTS SINCE BANEBERRY

Senator BENNETT. I would appreciate knowing that, for the record, so that, we are within 1 percent?

Ambassador BROOKS. I think so sir, yes sir.

Senator BENNETT. And I would like to know the date of the last one.

Ambassador BROOKS. Yes sir. I'd be more than happy to supply that.

[The information follows:]

There were 384 underground nuclear tests at the Nevada Test Site since the 1970 Baneberry test.

The last underground nuclear test was conducted at the Nevada Test Site on September 23, 1992.

Senator BENNETT. So that if it was 15 years ago there is a little bit higher sense of confidence than if it was 5 years ago, when the last leak.

Ambassador BROOKS. Yes sir.

Senator BENNETT. I would appreciate it.

Ambassador BROOKS. It was more than 11 years ago because we've done no testing in the last 11 years.

NUCLEAR RESEARCH

Senator BENNETT. Okay. You say you want to do research, that there is no pressing indication now that that research would lead to testing, indeed, there is nothing you have in your mind that would suggest that it would lead to testing. But you want to do the research anyway. Are you aware of research that is being done outside of the United States that you feel you want to catch up with? Is that part of the impetus here?

Ambassador BROOKS. There are multiple impetuses. We don't want to be surprised by developments outside of the United States. That's one reason for looking at advanced concepts and making sure that you understand what the laws of physics will allow. But I think we also want to make sure that we are paying attention to maintaining the safety and reliability of the existing stockpile. So I think there are multiple reasons why we want to look. I don't rule out that someday the President will want us to have a capability that we don't have. Nuclear Earth Penetrator, in my view, both as a matter of practice and as a matter of law, is a capability we sort of have now, we're just trying to make it better. So that's a somewhat special case. But the principle reason for advanced concepts and the projects that we have looked at are primarily, I think, motivated by making sure we're not overlooking an opportunity to improve safety, security and reliability. There's a secondary motivation to make sure that we are not subject to technological surprise by someone outside this country. We know that there is a vigorous program in Russia. We don't understand everything we'd like to and I can't, in an open hearing go into what we do understand. Some of the things they're doing we don't completely understand so it would be useful to make sure we understood the technology. But I think we're more motivated by safety, security, and reliability than by sort of a technological keeping up with others.

Senator BENNETT. All right. But I want to get back to one of the things you said when you outlined the reasons for looking at existing warheads to see if they can be adapted. Clear military utility would move only if the President approves and Congress funds. And number three caught my attention because I have not seen it

before. Maybe I have not been paying attention. When you say this is not a change in our policy, that this is deterrence.

Ambassador BROOKS. Yes sir.

Senator BENNETT. If that is the case, that means, for example, this would not have been used in Iraq. Let's assume there was a circumstance where this particular weapon that you are researching, or this adaptation, let me get the words right, that this adaptation of a weapon that you are researching, might strike the Joint Chiefs as being a good weapon to use in Iraq. Under no circumstances would that be considered a deterrent to anyone else who might attack us. So you are saying it is the position of this administration that the weapon would not be used in that circumstance, even if it were available.

Ambassador BROOKS. We have, as a matter of policy, in every administration I am familiar with, been very careful not to make dogmatic statements about what a President will or will not do in support of national security. And I don't want to be the one to break that tradition. Let me explain what I did mean.

Senator BENNETT. Okay. I will accept that. You do not need to go any farther than that.

Ambassador BROOKS. Okay.

Senator BENNETT. But, just to make the comment, that if indeed this President or some future President, we are going to decide who is going to be President, come November, this President or some future President were to come to Congress while I was sitting in Congress and say, okay, we have done the research, we think this is a viable weapon, we want now to fund it and we are going to use it in a situation quite like Iraq, this Senator would not vote in favor of that. My view of a deterrent and the use of the nuclear stockpile through the Cold War, is that it is never used unless the other side puts you in a position where you do it. You never use it as an offensive weapon, you never use it in order to project American power. You use it held in reserve as part of the deterrent capacity of the United States of America, which is the Polaris submarines and their nuclear weapons and all of the rest of them. The Polaris submarine has never fired a nuclear weapon in an offensive way and it is there to say to a potential aggressor, if you proceed with your aggression, this is what awaits you.

Ambassador BROOKS. That's correct.

Senator BENNETT. And just for the record, that is how I would view, if such a weapon at some point by some future President were ever proposed. In the context of what you have said I would view that as having to have that same kind of restriction that I currently see on Polaris weapons, Polaris missiles and so on. I will not put you into that box. I understand that you cannot make that firm statement because you are a member of the administration. But I can make that statement because I am answerable to the people of Utah, all of whom have a very great concern, which I most thoroughly share, that we do not want to disarm this country, we do not want to do anything that will harm our national security. But in the end we want to make sure that as we move down the road to protect our national security we do not, in any way, endanger the health and safety of any of our citizens, regardless of the state in which they live. I am assuming you could support that.

Ambassador BROOKS. I'm confident I can speak for the President on this one. We agree with that. We have no interest in harming the health and safety of anybody, sir.

Senator BENNETT. We just may give you a little help legislatively at some future point. I have not made up my mind firmly as to what I might do in terms of legislation that I will offer. But I appreciate your assurance and we want to do everything we can on this side to make sure that that assurance is not forgotten by whomever replaces you in whatever kind of administration that might come along.

Ambassador BROOKS. Yes sir.

Senator BENNETT. Thank you, Mr. Chairman.

Senator DOMENICI. Thank you, Senator. I do not know how long you are going to stick around but I have some different views than you. I am not going to make them until it is my turn. Senator?

ROBUST NUCLEAR EARTH PENETRATOR

Senator FEINSTEIN. Thank you very much, Mr. Chairman. Ambassador Brooks, I just want to get some of the figures. I think we have anticipated that the Nuclear Earth Penetrator figure, 5-year figure, is $484 million. Does that take us up to phase 6.3?

Ambassador BROOKS. Actually I think it takes us beyond 6.3. So those numbers assume decisions we can't make without your permission.

Senator FEINSTEIN. Okay, at 6.3, according to the Defense Authorization Bill, the Earth Penetrator needs authorization from Congress?

Ambassador BROOKS. Yes ma'am.

FUNDING SCHEDULE FOR DIRECTED STOCKPILE WORK

Senator FEINSTEIN. So it is somewhere, I would like to know for the record, how much will be spent up to that point. What is the 5-year figure on the battlefield low-yield nuclear weapons?

Ambassador BROOKS. Senator.

Senator FEINSTEIN. Well, give me the advance concepts.

Ambassador BROOKS. Do you remember? Is it $9 million a year?

Senator FEINSTEIN. Number for 5 years?

Dr. BECKNER. I think it actually goes a bit beyond that.

Ambassador BROOKS. I'll get it for the record, Senator.

[The information follows:]

FUNDING SCHEDULE BY ACTIVITY

[In thousands of dollars]

	Fiscal Year 2003	Fiscal Year 2004	Fiscal Year 2005
Directed Stockpile Work:			
Stockpile Services Advanced Concepts	.....	6,000	9,000
Stockpile Services Robust Nuclear Earth Penetrator	14,577	7,435	27,557

FYNSP SCHEDULE

[In thousands of dollars]

	Fiscal Year 2005	Fiscal Year 2006	Fiscal Year 2007	Fiscal Year 2008	Fiscal Year 2009	FYNSP Total
Stockpile Services Advanced Concepts	9,000	14,425	14,874	14,595	29,472	82,366
Stockpile Services Robust Nuclear Earth Penetrator Research and Development	27,557	94,955	145,371	128,431	88,416	484,730

FUNDING SCHEDULE FOR PIT MANUFACTURING AND CERTIFICATION CAMPAIGN

Senator FEINSTEIN. Okay. And the 5-year figure for the pit facilities.

Ambassador BROOKS. Yes ma'am. May I get that for the record as well? Although I may have that here.

[The information follows:]

FUNDING SCHEDULE BY ACTIVITY

[In thousands of dollars]

	Fiscal Year 2003	Fiscal Year 2004	Fiscal Year 2005
Pit Manufacturing and Certification Campaign Modern Pit Facility	4,242	10,810	29,800

FYNSP SCHEDULE

[In thousands of dollars]

	Fiscal Year 2005	Fiscal Year 2006	Fiscal Year 2007	Fiscal Year 2008	Fiscal Year 2009	FYNSP Total
Pit Manufacturing and Certification Campaign Modern Pit Facility	29,800	43,291	94,570	101,434	105,168	374,263

Senator FEINSTEIN. Okay. Now, as I understand it, the Advanced Weapons Concept will not require Congressional approval prior to going into the engineering phase. Is that correct?

Ambassador BROOKS. I'm always reluctant to give away prerogatives but I didn't think so.

Senator FEINSTEIN. Defense Authorization Bill, page 855.

Ambassador BROOKS. I mean.

Senator FEINSTEIN. And it is just the, unfortunately, just the Robust Nuclear Earth Penetrator.

Ambassador BROOKS. The Advanced Concepts work is really less far along. I mean, as a practical matter for us to take something that came out of an Advanced Concept and do something significant with it, at a minimum we would require Congressional line-item funding. Whether we would need, I mean, you're correct that the National Defense authorization bill speaks specifically of 6.3, other legislation speaks of production. That unambiguously requires a separate decision by Congress. If you're asking a technical, legal question I'd like to get back to you for the record. If you're asking a practical question, of course nothing that we do in Advanced Concepts can move into any sort of meaningful program without the Congress because we have to come back to you for money.

Senator FEINSTEIN. I am trying to find out is how much are we going to spend, up to the point of engineering build on these pro-

grams. What is the total 5-year cost up to that point of these three programs, RNEP, Advanced Concepts, Pit?

Ambassador BROOKS. All right. May I provide that for the record to make sure I'm precise?

[CLERK'S NOTE.—See preceding tables.]

Senator FEINSTEIN. I would appreciate it. Now, we have discussed this and——

Senator DOMENICI. Senator, would you yield for a moment?

Senator FEINSTEIN. Of course.

Senator DOMENICI. First step, I would like to make the point and seek your thoughts, Senator. Here we have the Penetrator and whatever we are doing with reference to its research, and we are going to look carefully at building a plant to make pits. If this idea had never been invented we would still be doing this.

Senator FEINSTEIN. You mean the pit?

Senator DOMENICI. Yes.

Senator FEINSTEIN. Yes.

Senator DOMENICI. It has nothing to do with it.

Senator FEINSTEIN. To field old warheads that are in stock, right.

Senator DOMENICI. Yes. So, you know, when we talk about and add them up, the public assumes that they are in some way related so that all this money that we're spending for the Pit is related to this work for the Penetrator, they are unrelated. I mean, you are out there thinking about how many more years can we not have a Pit, right? It has nothing to do with whether we build Penetrators, right?

Ambassador BROOKS. That's correct.

Senator FEINSTEIN. You are correct, Mr. Chairman, as always. However, there is one thing. The money for the Pit is huge. And it is based on 450.

Senator DOMENICI. Correct. It might be too much.

Senator FEINSTEIN. And it may well be very much too much because a study has not been completed yet to let us know whether it is 30 or 40 years or whatever we would need the Pit.

Ambassador BROOKS. May I make a correction?

Senator FEINSTEIN. Of course, please.

Ambassador BROOKS. We are required, under the National Environmental Policy Act, and we do an analysis, we have to be able to look everybody in the eye and say there's no plausible alternative that has been excluded. So, the Environmental Impact Statement that we've now suspended work on, analyzes between a capability of 125 pits a year and 450 pits a year. I think it would be, I don't want to prejudge decisions that haven't been made, but it's very hard for me to see, based on what we know, that we're going to be anywhere near that upper limit. But I've got to make sure that the analysis is broad enough, because if there's an option that's outside this analysis, I'm in violation of the law because I haven't examined all analyses. So I would urge you not to look at the upper limit of what we're analyzing under the National Environmental Policy Act and assume that that's a program. The lower level is probably roughly right. I could explain why now but it would be easier if you'd let me send you a paper.

Senator FEINSTEIN. I would appreciate that. For somebody like me, when you indicate a capacity of 450 pits, you send a major sig-

nal that a whole major new program is going into place. At 125, it may be a servicing unit, you know, based on what you need to do to replenish and fix old stock. But I am very suspicious. I think I know where you are going and I think it is a wolf in sheep's clothing. I think to spend all this money on the Nuclear Earth Penetrator, which as I understand it will produce 1.5 million tons of radioactive debris that is going to spew out with no present way of controlling it is beyond sanity. I mean, I do not know why anyone would even want to do that.

FALLOUT

Let me ask you this: is there any known way, from a physics point of view, because I have spent some time now, with Dr. Drell, of containing the radioactive fallout from 100 kiloton nuclear bunker buster?

Ambassador BROOKS. There's no way that I know of. I don't know of anyone in the administration who advocates that and nothing in our proposal for the Earth Penetrator or for the previous B61–11, which was the previous administration's less robust penetrator, was ever intended to suggest that you can contain fallout; you can't. I have no idea how you would do that. And, as I think you and I have discussed before, if I have said or anyone in this administration has said, anything that suggests that we believe that nuclear use is anything other than absolutely horrible and a decision a President would only take in the most severe circumstances, then we have misspoken. The issue that we have is, there are facilities in the world that are beyond our ability to threaten except with nuclear weapons. We think it is possible that the country may decide it wants to threaten those facilities anyhow. We think we ought to spend some money to find out if this country can have that option by finding out whether I can take an existing weapon and threaten those facilities.

Senator FEINSTEIN. All right. Just for the sake. But you know you cannot contain the fallout.

Ambassador BROOKS. That's correct.

Senator FEINSTEIN. And you know how big you have got to get to get down deep enough let alone have the sufficient casing to enable the weapon to go down that deep. Therefore you are going to have tremendous radioactivity.

Ambassador BROOKS. Yes ma'am.

Senator FEINSTEIN. So why does it become even a viable option? If used in North Korea you jeopardize Japan, you jeopardize South Korea. Who in their right mind would ever do this?

Senator DOMENICI. Senator, would you yield?

Senator FEINSTEIN. Of course.

Senator DOMENICI. Senator, the problem with the argument is, I have heard you here and I do not think you are for disarmament, are you, of our nuclear weapons? Do you want to get rid of them all?

Senator FEINSTEIN. Well, I will tell you, I am for no first use.

Senator DOMENICI. That is not my question. Do you want us to have some or not have some?

Senator FEINSTEIN. I am not for the Nuclear Posture Review. You asked a question.

Senator DOMENICI. Yes.

Senator FEINSTEIN. That cites seven nations against whom we would countenance a first use of nuclear weapons. I am not for that.

Senator DOMENICI. I understand.

Senator FEINSTEIN. Therefore, when we are going to spend a half-a-billion dollars up to engineering to develop a 100-kiloton nuclear bunker buster, which you cannot contain the radiation, I have got to wonder well, who is smoking something? Why are we doing this if you cannot contain the radiation?

Senator DOMENICI. Senator, I do not know who is smoking it, but let me tell you. There is more radiation exposure, uncontrollable, from existing nuclear weapons than from the underground bunker possibility. So the logic is, we should not have any of those because there is no way to control a nuclear explosion, the radioactivity, from the hydrogen bombs we have. And I do not know today how many we have but down from many thousands to a controllable number. But the issue is not an issue of damaging the world. Because if that is the issue, we have got to get rid of all of our nuclear weapons in the event that we are saying we do not want to harm anything. They are there so that nobody will ever use them. That is why they are there.

Senator FEINSTEIN. But that is not the issue. The issue is, these are new classes of nuclear weapons.

Senator DOMENICI. But the argument that they are going to pollute the world more than the weapons we have is not a valid argument. The rest of your arguments are valid but not the pollution argument.

NUCLEAR DETERRENCE

Senator FEINSTEIN. You were out of the room when Senator Bennett made a very interesting point, and the point was one of deterrence, and what is, in effect, a deterrent. And a nuclear arsenal of missiles may well be some form of deterrent. A nuclear Earth Bunker Buster, I do not see as a deterrent. And if we are going to build tactical battlefield nuclear weapons, God help our sons and daughters that go on that battlefield. So I become very upset. And Ambassador, you say the included out-year funds are only to preserve a President's option. And then, if you think about the option, how would a President ever, ever say, use a 100-kiloton—Hiroshima was 15 kilotons—use a 100-kiloton nuclear Earth Penetrator and have no way to control the nuclear fallout, the radioactive fallout?

Ambassador BROOKS. May I try it?

Senator FEINSTEIN. Of course.

Ambassador BROOKS. First of all, part of the problem in open hearings is that we can't talk about specific yields. But let me just make the technical point that if there is a bunker that you want to hold at risk, it takes far more energy if it bursts in the air to hold that at risk than it does if you can get it just a little way into the ground. So it is quite possible that a penetrator can be of lower yields. But the more general point, I think, is the problem we've always had with nuclear deterrence, Senator. On the one hand, nobody can think of a situation in which a rational human being

would want to use nuclear weapons. On the other hand, in order to deter, we have to tell people who think differently than we that if they did something that was so serious that it would warrant retaliation, we're capable of doing it. It is the case that increasingly, we believe, facilities can be put where we cannot reach them with existing nuclear or conventional capabilities. It is the case, we believe, that at least some dictators—I don't want to suggest any country, I would simply point out that the popular countries to talk about lately are countries in which it's clear the leadership, whatever else they value, doesn't care about the suffering of their people. And their people are, in fact, victims. So we need to be able to tell those leaders there is nothing you can do that is beyond the reach of American power. And, a whole different Department is spending a whole different set of money on working to improve that. My job is to say, suppose conventional doesn't work, can we do something with a nuclear weapon and then, if we can, then there's the question is it worth both the financial and the policy cost? It's a perfectly fair debate but I guess I don't accept the view that it's only worth spending this money if we're prepared, as soon as we have this, to go out and start using it casually. I think this is an example of improving the deterrent, just like the various things, many of them contentious at the time, that we did during the Cold War, as an example, of improving deterrent.

Senator FEINSTEIN. I will not belabor it. I appreciate the time. I profoundly differ with you.

Senator DOMENICI. You what?

Senator FEINSTEIN. I profoundly differ. I think morally, ethically, to create weapon systems that are so bizarre and so catastrophic goes beyond the moral code. I really do.

Ambassador BROOKS. Yes ma'am, with the greatest respect, and I think to have only the ability to destroy cities and kill people has its own set of problems.

Senator DOMENICI. Let us proceed. Let us make sure we understand here where some of us are. But I am profoundly concerned if we have nuclear weapons at all. I wish we could get rid of them all. I wish we could find a way that we do not need them and that we could prove that nobody else would ever have them, which is going to be the issue, so that we could get rid of them. I am terribly concerned that the damage that one of them might do, that we do have, and I am not supporting anything, ever, that says we should have more nuclear weapons in our arsenal. I should not say ever but right now we are building them down, not upward. In fact, we are having a terrible time building them down as fast as we can because we cannot get rid of the pollution that is coming out of them. I mean, we cannot get rid of plutonium fast enough as we destroy Russian nuclear weapons. We cannot find a way to do it. You are in charge of one now, we cannot even get them to agree on something so we can get rid of them, right?

MOX

I am going to just close by saying the biggest change in American policy, overruling policy since President Carter said we will build a MOX refinery in America. And we had said no, never, never. He

said, we will build it if the Russians will build it because we will both get rid of plutonium that way. Right?

Ambassador BROOKS. Yes sir.

Senator DOMENICI. So we made a profound change in our policy. I would have never been against the MOX but I mean, the President's decided against it, I would give you the reasons, I think you would not agree that his reasons were right. The reason was to build MOX you enhanced the production of fissile material to produce bombs. Turned out nobody in the world ever did it, so probably the fear was not there. So here we come along and what changes it? The Russians change it because they are going to do it, we say we will do it. Now we cannot get it done because we cannot get an agreement, right? That is a tough one for you.

Ambassador BROOKS. That's right, sir.

Senator DOMENICI. Okay. So, I am on the side of trying to get rid of this stuff. I do not want them to use it again, I do not want us running around, leaking around, being transferred around. So, my record is pretty good on that.

Now, I want to just be parochial and I want to tell you that I do not like the idea of the Los Alamos schools being treated differently all of a sudden than they have been for a long time. If you want to treat them differently, Mr. Ambassador, then we ought to start treating them differently and give them an opportunity to be treated differently over a long period of time. Either buy them out or something be done elsewhere but just say this year they do not get funded and so you did not put it in the budget, you know I have to find it somewhere so I will. But I am just telling you I do not think it is the right way to do it. And you have to get a team and let us get started finding out how do we solve this problem, not just the budget issue.

Z MACHINE

The Z Machine, very quickly, I just want to make sure that I am correct, that it is being maintained and the little bit of money that is needed for it is going to be there and that is moving ahead?

Dr. BECKNER. Yes sir.

Ambassador BROOKS. Yes sir.

Senator DOMENICI. And everybody is satisfied with its performance?

Dr. BECKNER. Yes sir.

Senator DOMENICI. Is it a good piece of equipment for the price?

Dr. BECKNER. Yes sir.

Senator DOMENICI. Will not take the place of what we expected NIF to do, right?

Dr. BECKNER. No sir. It is not of adequate size to do that.

Senator DOMENICI. But if NIF fails it may do what a failed NIF will do?

Dr. BECKNER. That's a possibility and we certainly intend to continue to support that program and to have milestones in that program so that we can measure its progress.

NUCLEAR NONPROLIFERATION

Senator DOMENICI. Mr. Longsworth, have you read the "Wall Street Journal" article, how the Pakistani nuclear ring managed to skirt export laws?

Mr. LONGSWORTH. Yes, I have.

Senator DOMENICI. Are you receiving adequate international cooperation in stopping the activities outlined in this article?

Mr. LONGSWORTH. We are working very diligently on that. In fact, we've asked for an increase in our budget this year to address those kinds of issues.

Senator DOMENICI. You haven't got everything you need yet?

Mr. LONGSWORTH. Well, we hope to if we get this increase we've asked for in our budget, yes sir.

Senator DOMENICI. Mr. Ambassador, what is the likelihood that the liability issue will be resolved in a timely fashion so we can move ahead with construction so we can get rid of some of that plutonium that is sitting around in Russia and America?

Ambassador BROOKS. I am hopeful that we will get it resolved soon but the last 12 years have told me predicting Russia is risky. And I just don't know. The problem is not in this country; the problem is in the Russian Federation.

Senator DOMENICI. Okay. So it is high enough that we ought to encourage our President, if we can, to ask the Kremlin to get with it on this one?

Ambassador BROOKS. Yes sir.

Senator DOMENICI. This Libya situation. We added $5 million, I think, in the Senate to initiatives focused on removing nuclear weapons useable material from volatile sites around the world. I understand your office was able to make use of this earmark to quickly respond in the Libyan situation?

Mr. LONGSWORTH. Yes sir. Let me just say, we would not have been able to respond quickly without that authorization.

Senator DOMENICI. I am glad we did it. The role your office and the Department played in removing the nuclear materials, can you explain that in a minute or two?

Mr. LONGSWORTH. Yes sir. We had three missions into and out of Libya. The first mission was using the money you just referred to to immediately remove the core of their nuclear weapons capability; their nuclear fuel cycle capability. We removed key components, not all of the components, but the components that would, if we had not been invited back, have posed the most serious proliferation concern. The second shipment was a fairly large shipment which has just arrived back in the United States of the remaining centrifuge parts. The third shipment was to remove the HEU fuel, fresh fuel, from the Tajura reactor. That was sent back to the Russian Federation. That material was under IAEA safeguards, so it was accounted for and they were legally allowed to have it, but they agreed to remove it at our request and it went back to Russia. It will be recycled back into civilian low-enriched fuel.

Senator DOMENICI. Good. Well, Senator, do you have any other questions?

Senator FEINSTEIN. I have one quick question. When we discussed, and I will just put it in a general category, the warhead redesign, the general fixing that may have to be done, does that come out of any of these programs' budget? The Advanced Concepts, the Pit, the Earth Penetrator?

Mr. LONGSWORTH. If we look at problems with fixing an existing warhead that's usually done as part of the Life Extension Program, which is a separate line item.

Senator FEINSTEIN. That is in another?

Mr. LONGSWORTH. Yes ma'am.

Senator FEINSTEIN. So nothing in this goes for that?

Mr. LONGSWORTH. In general that's correct, ma'am.

Senator FEINSTEIN. Thank you.

Senator DOMENICI. Thank you, Senator.

Senator FEINSTEIN. Thank you.

Senator DOMENICI. That is a very good hearing because you came. Thank you.

Senator FEINSTEIN. Thank you.

Senator DOMENICI. We will have another big fight, huh?

Senator FEINSTEIN. Oh, I welcome it.

Senator DOMENICI. The thing is, we get a second round, they may win it before.

Senator FEINSTEIN. You never know, you never know.

Senator DOMENICI. See and then ours might not be terribly relevant because they already won in Armed Services. If they lose——

Senator FEINSTEIN. Well, we will try with the House.

Senator DOMENICI. We lose in Armed Services we are in terrible shape. You will win.

NUCLEAR STOCKPILE REPORT

Nuclear Stockpile Report.

Ambassador BROOKS. Yes sir.

Senator DOMENICI. Mr. Ambassador, I noted in the opening statement that you talked about it and I am very disappointed that the Departments of Defense and Energy have not produced the Stockpile Report as requested. I think the distinguished Senator who is here because of what she worries about, ought to be very concerned that we do not have that report. Priorities of the future seem to be very much dependent upon it. So, Mr. Ambassador, it is the fault of the government of the United States that we do not have it, right?

Ambassador BROOKS. Yes sir.

Senator DOMENICI. Should have been done.

Ambassador BROOKS. Yes sir.

Senator DOMENICI. Will it be done?

Ambassador BROOKS. Yes sir.

Senator DOMENICI. When?

Ambassador BROOKS. I don't know.

Senator DOMENICI. Well, that is not good enough.

Ambassador BROOKS. I don't want to make promises to the Senator that I can't keep.

Senator DOMENICI. Okay. But give me some talk. Are you working on it? Who is holding it up?

Ambassador BROOKS. The Secretary of Defense said it would be submitted in the spring. Spring started 2 days ago. It is being worked on, literally, as we speak, but because of the importance I think this will have to be personally approved by the President and I can't predict how long that will take.

ADDITIONAL COMMITTEE QUESTIONS

Senator DOMENICI. Okay. I am going to wrap up the hearing in just a minute. And Senators that are here or not here that want to submit questions, please do so. Thank you.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR PETE V. DOMENICI

REVISED NUCLEAR STOCKPILE PLAN

Question. I noted in my opening statement, I am disappointed that the Department of Defense and Department of Energy have not produced the stockpile report requested in the fiscal year 2004 Energy and Water Development bill. I believe this report is critical in establishing the priorities of the administration. This report was requested to be delivered with the President's budget. However, that deadline has come and gone and we still don't have our report. When do you expect that this committee will receive a copy of this report?

Answer. The Departments of Defense and Energy understand the importance of completing this plan promptly and providing it to the Congress. Both departments are working together to complete this complex task. I anticipate that the plan will be forwarded to the Hill in the Spring.

Question. We are beginning to put together our budget priorities and the failure to produce the report will have significant consequences for your budget priorities. Will you convey that message back to the Department?

Answer. Yes, sir. I have already done so.

ROBUST NUCLEAR EARTH PENETRATOR

Question. I was surprised to see in the budget request that nearly $500 million is provided for the Robust Nuclear Earth Penetrator (RNEP) in out-year funding. I believe many members are concerned that you have already made a decision on the need for this type of weapon without any input from Congress. Would you like to clarify what the President's budget provides for this project and outline the role Congress will play in the future development of this weapon?

Answer. We have not decided whether to proceed with the Robust Nuclear Earth Penetrator beyond the 6.2/2A study that is currently underway. Our fiscal year 2006–2009 funding estimates are only placeholders within the FYNSP, based on predecisional data and in no way represent a signal that we intend to proceed with the RNEP. That study will be competed by the end of fiscal year 2006, and will cost an estimated $71 million from fiscal year 2003 through fiscal year 2006.

Consistent with section 3143 of the fiscal year 2003 National Defense Authorization Act, Public Law 108–314, and section 3117 of the fiscal year 2004 National Defense Authorization Act, Public Law 108–136, the administration may request congressional approval to proceed with phase 6.3 (engineering development) in the first quarter of fiscal year 2007. This request is contingent on the identification of a feasible and affordable design using either the B61 or B83; the determination by the Department of Defense that the design meets military requirements; and the approval of the joint DOD/DOE Nuclear Weapons Council.

SAFEGUARDS AND SECURITY

Question. Ambassador Brooks the new Design Basis Threat has elevated the security requirements at DOE and NNSA sites. The President's budget requests a $106.9 million increase (8.6 percent) in the Safeguards and Security budget. As a result of the increased security requirements, we are able to spend less on important research. TA–18 in Los Alamos is a good example of the need for the NNSA to consolidate the special nuclear material in safer, better defended areas. I would like the NNSA to undertake a study that will be the basis for a plan to develop

a clear understanding of our future security needs and the benefit of consolidating the special nuclear material across the complex. Can you do this study and report to me on your findings?

Answer. We have already begun the study you requested on the benefits of consolidating nuclear materials with a focus on security. This effort is being conducted jointly by the NNSA and the Office of the Under Secretary for Energy, Science, and Environment and should be completed in Fall 2004. I will provide you with the report of this effort by December 31, 2004. We're also not waiting for the results of the reports to take action to consolidate nuclear materials as we identify opportunities to do so for increased security, on efficiency of security arrangements.

Question. How are you planning to handle the transfer of TA–18 at Los Alamos?

Answer. The Secretary has directed the NNSA to begin a near term shipping campaign that will move approximately 50 percent of the Los Alamos National Laboratory Technical Area (TA–18) Category I and II Special Nuclear Material to Nevada. This campaign will begin in September and last approximately 18 months. NNSA will immediately start preparing the Device Assembly Facility (DAF) to support storage of these nuclear materials while scheduling packaging and transportation resources. The movement of these materials will be handled by NNSA's Office of Secure Transportation. In parallel, the design modifications to DAF to assume program responsibilities will continue, and the modifications will be made in the next several years to receive the additional material to support the associated missions.

Question. What is the timetable for this decision?

Answer. We will begin the shipping campaign this September. Between now and then Los Alamos National Laboratory, the Office of Secure Transportation and Nevada personnel will identify, characterize and pack materials in approved shipping containers for transfer to the Device Assembly Facility in Nevada.

Question. If TA–18 is moved from Los Alamos, will Los Alamos still maintain the mission associated with this facility?

Answer. Yes, Los Alamos will continue to perform the vital Category I and II mission work associated with TA–18 at the Device Assembly Facility at the Nevada Test Site. LANL will retain security Category III and IV missions at Los Alamos and TA–18 program personnel will remain on-site. These people will relocate to DAF, as necessary to conduct experiments with Category I and II materials. Experiments with Category III and IV will occur at another LANL location. NNSA and LANL are working to identify locations for these activities and will issue a separate ROD pending completion of this assessment.

LOS ALAMOS SCHOOLS

Question. I would like an answer as to why the budget has failed to provide the necessary and authorized funding for the Los Alamos School system. You may be interested to know that the $8 million that has been included in previous budgets makes up a third of the total school budget. I would also point that many of the scientists who support your stewardship programs also have strong views about the education of their children. If you hope to continue to recruit top people to this Lab, this funding will help achieve your goal. What was the justification for not funding the Los Alamos Schools or the Los Alamos Foundation?

Answer. I understand and appreciate the importance that a high quality education system provides for the recruitment and retention of quality scientists and engineers at Los Alamos National Laboratory. The administration however doesn't feel that the President's budget for stockpile stewardship activities is the proper funding vehicle for this activity. NNSA recently submitted a report to the Congress on Los Alamos schools and funding options that could take the place of the annual authorization and appropriations approach. Option 1 would rely on the State of New Mexico and the citizens of Los Alamos County to ensure that adequate funding is available for the schools. Option 2 would reestablish a charitable foundation funded by annual appropriations for a limited period of time so that Los Alamos Schools would receive approximately $8 million annually from the endowment. Finally, Option 3 would allow the M&O contractor for LANL to support the school system by modifying the provisions in Appendix N of the contract. Currently under Appendix N, Los Alamos provides a few million dollars to the school systems in the vicinity of Los Alamos County.

RUSSIAN HIGHLY ENRICHED URANIUM (HEU)

Question. Mr. Longsworth, the administration has consistently identified the need to reduce the hundreds of metric tons of Highly Enriched Uranium stocks in the Russian Federation as a critical part of our non-proliferation efforts. In fiscal year 2003, the committee provided $14 million for the Accelerated Materials Disposition

(AMD) Program to meet those commitments. However, no progress has been made since that appropriation and your fiscal year 2005 request eliminates funding for the AMD Program. Therefore, the only current U.S./Russian program to address the dangerous stockpiles of HEU is the existing HEU agreement and the research reactor initiatives. This later projects result in the equivalent of one-tenth of a metric ton per year. Unfortunately, this will not have the address the long-term strategic objectives of HEU disposition. Has the administration abandoned its efforts to accelerate reduction in Russian HEU stockpiles beyond what is covered in the HEU deal?

Answer. No, the administration has not abandoned its efforts to accelerate the reduction of Russian HEU stockpiles. Several initiatives were identified by the Experts Group on Nuclear Materials, with two initiatives approved for immediate action that are being pursued: (1) Purchase of low enriched uranium (LEU) derived from HEU to be used as a U.S. strategic LEU reserve, and (2) Purchase of HEU for use in U.S. research reactors. We have been pursuing these initiatives with varied success, and some progress has been made.

For the first initiative, we have been advocating expansion of the HEU disposition from Russia by blending down additional HEU to LEU and then using this LEU to establish a U.S. Strategic LEU Reserve so as not to adversely affect the current enrichment market. Because of House budget concerns regarding the up-front cost of the strategic reserve approach, Congress did not fund this initiative in fiscal year 2004. Following the guidance of the Appropriations Committee, the funding for these initiatives has been subsumed into the base program for Reactor Fuel return. Concurrently, in order to address Congressional concerns, DOE is developing a more comprehensive approach that would make these initiatives acceptable as separate line items. As part of this development, we are also addressing the long-term strategic objective that Ambassador Brooks has requested that includes both a follow-on strategy for negotiating the extension of the HEU purchase agreement beyond 2013 as well as interim strategies for expanding beyond the 500 MTs included in the current agreement.

With respect to the second initiative, the contract with the Russians for the purchase of HEU for the research reactor initiative has been negotiated with only two points of contention remaining: (1) the price to be paid for the HEU material; and (2) transportation method. The price problem exits because there is no commercial market basis for HEU sales that can be used to establish a fair price. Currently negotiations are underway to establish a fair price. The transportation concerns should be resolved without much delay once price is agreed upon.

In addition to the specific purchase contract for HEU for U.S. research reactors, we are still engaging the Russians in developing the framework for accelerated disposition of HEU in the form of a Memorandum of Understanding that would act as an umbrella agreement for additional purchases or other initiatives. It should be noted that, in addition to our direct actions on these initiatives, we are also cooperating with and providing appropriate support to other organizations to engage the Russians in identifying other options that are acceptable both to the Russian Federation and the United States.

As you can see, we have not abandoned our efforts to accelerate reduction of Russian HEU stockpiles, but we have encountered obstacles associated with the economics of these approaches that we are working to resolve. We appreciate the continued support of Congress in these endeavors.

In addition to the two programs you have mentioned, my office also includes the Material Consolidation and Conversion (MCC) Project, which supports the conversion of HEU, which is not from weapons, to LEU. This HEU is excess to the needs of the sites where it is currently located and is transferred to one of two down blending sites in Russia for conversion to LEU. The MCC Project began in fiscal year 1999 and to date has supported the down blending of almost 5 metric tons of HEU. We are currently engaging the Russian Federation in discussions to increase the rate of conversion under the MCC Project.

Question. Could more be done to remove more HEU material from poorly defended facilities in Russia?

Answer. Yes, more can be done to remove additional HEU material from poorly defended facilities in Russia. One part of this effort would be to attempt to purchase more material. This aspect was discussed in the previous question.

The MPC&A and MCC programs are other avenues that could be followed. The MCC Project was designed to support the transfer of HEU from less secure sites in Russia to more secure sites and to down blend that material to LEU. We are actively engaged with the Russian Federation to try to accelerate that process.

MOX PROGRAM

Question. I am deeply concerned about the future of the Russian/U.S. MOX program that will remove 34 metric tons of plutonium from the respective stockpiles. I have personally contacted Secretary Powell to urge the State Department to find an acceptable resolution in order to keep this program on track.

It is my understanding that negotiations regarding the liability concerns have yet to be resolved. What is the likelihood that the liability issue will be resolved in a timely fashion allowing the construction of the Russian and U.S. facilities to go forward in the near future?

Answer. The United States and Russia have yet to resolve liability protections that will be needed for the U.S. Government and its contractors for plutonium disposition work in Russia. If this issue cannot be resolved in the near future, the start of construction of the Russian MOX program will be further delayed. Because the United States and Russian programs are to proceed in parallel, any further delays in the Russian effort will mean additional delays in the U.S. program as well. However, this would in no way indicate a lessening of the administration commitment to this effort.

Question. How will the recent reelection of President Putin affect these negotiations?

Answer. Given that President Putin will not fully stand-up his new government until May 7, it is too early to comment definitively on how the reorganization of the Russian Government will affect these negotiations.

Question. Ambassador Brooks, are you aware of any changes within the administration including the State Department or within the White House that might indicate a change in policy or a reluctance to finalize this deal?

Answer. I believe that the administration is committed to moving forward with this important nonproliferation program. The liability issue is being addressed at the highest levels of the government.

LOWER LIABILITY STANDARD

Question. I understand that Russia has signed a liability agreement with our G–8 partners that does not provide the same level of protection as the United States is seeking as part of the Cooperative Threat Reduction plan. How is this affecting the negotiations?

Answer. Russia and some of our G–8 partners have accepted, in another context, a less comprehensive liability provision than what the United States has under the Cooperative Threat Reduction plan. Specifically, this provision does not cover the liability of an individual who intentionally causes a nuclear accident or the liability resulting from a non-nuclear accident. Russia has been insisting on a similar reduced scope for the liability provisions for the MOX program.

EMERGING THREAT—PAKISTAN

Question. The Nonproliferation budget seems to assume a general status quo in future funding. It reflects an expectation that our primary nonproliferation concern will remain Russia and its former republics. However, in light of the news over the past several months regarding Libya, Iran and Pakistan, are you concerned that this budget places too great a focus on Russian stockpiles and doesn't adequately fund efforts to address proliferation in other countries?

Answer. The budget appropriately focuses on Russia where most of the weapons-usable material of proliferation concern is located. However, it also includes funds for activities in other countries. As those latter activities develop we will revisit the appropriate balance between work in Russia and work outside of the former Soviet Union (FSU).

Question. Does this budget adequately provide for this new reality and how will your office respond to these threats?

Answer. We are working very carefully to develop prudent and effective activities that address proliferation concerns outside of the FSU, and will carefully monitor these activities to ensure that they are adequately funded.

Question. Would additional resources accelerate your ability to contain the emerging proliferation threats?

Answer. As our work outside of the FSU develops, we will certainly keep you informed about its progress and whether additional funding would be helpful. We will continue to work with the administration and Congress to assess priorities and develop budgets.

Question. Mr. Longsworth, on the front page of the Wall Street Journal this morning is an article that explains how Pakistani officials were able to avoid export laws

that prohibit the sale of material and technology that can be used in the development of nuclear weapons. This article details a very complicated scheme that took advantage of weak export controls in various countries to avoid detection. It is obvious from this article your job of tracking and preventing the proliferation of technology and material is a terrific challenge.

Mr. Longsworth, have you read this article and do you agree with the characterization of the Pakistani efforts?

Answer. Yes. It is a fair characterization of what occurred, as far as we know it. Though it's clear that A.Q. Khan was deeply involved with the procurement and supply effort, it is not known if his actions were in some way associated with his official duties or if he was abusing his official position, knowledge, and connections for personal benefit only. In any event, the United States and Pakistan are now dismantling the A.Q. Khan network responsible for proliferating nuclear weapons-related technologies, and we are working with our interagency colleagues and Pakistan on steps to bring its export control system in line with international standards.

Question. Also, are you receiving adequate international cooperation in stopping the activities outlined in this article?

Answer. Yes. We have underway an increasingly coordinated international effort to detect and destroy these proliferation networks. We are working in the Nuclear Suppliers Group to tighten up controls on sensitive materials and technologies. We are also working on enhanced targeting techniques and more in-depth training of inspection and enforcement personnel and conducting more industry outreach to sensitize the private sector on the importance of some of these technologies.

In addition, we have recently started export control assistance to the government of Pakistan.

LIBYA

Question. Last year the Senate added $5 million for initiatives focused on removing nuclear weapons-usable material from vulnerable sites around the world. I understand that your office was able to make use of this earmark to quickly respond to Libya's decision to open their weapons program to outside review. Please explain the role your office and the Department of Energy played in removing the nuclear threat from Libya.

Answer. The Department of Energy (DOE)/National Nuclear Security Administration (NNSA) is participating in an interagency effort to remove materials and equipment from Libya and assist the Libyan government with its efforts to eliminate its weapons of mass destruction programs. We have been involved in three removal missions to date. For the first two missions, a U.S. team composed of representatives from DOE/NNSA headquarters staff, our National Laboratories, and the interagency community helped remove nuclear materials, equipment (such as finished components for centrifuges, specialized materials and manufacturing equipment for centrifuge construction, as well as components for a uranium conversion facility), and highly sensitive nuclear weapons design documents from Libya.

The third mission in Libya repatriated to Russia approximately 17kg of unirradiated highly enriched uranium (HEU) fuel from a research reactor in Libya. Coordinated with the Russian Federation and the International Atomic Energy Agency (IAEA) under the Russian Research Reactor Fuel Return program, this effort has been, and continues to be, a crucial part of our efforts to secure at-risk weapons usable nuclear materials around the world.

The funding Congress provided to NNSA was critical for our work in Libya. It gave my organization the flexibility and capability needed to support the mission to assist Libya in its effort to rid itself of weapons of mass destruction and the ability to create them. We continue to need authority and flexibility to carry out our mission outside the former Soviet Union and not constrain our ability to address the threats at targets of opportunity.

This swift movement suggests the seriousness with which the U.S. Government treats proliferation threats. Congressional support is fundamental to the success of these efforts. The expedited removal of this material from Libya certainly advanced the U.S. national security goals and represents a tremendous success for our nonproliferation efforts.

RUSSIA—UNCOSTED BALANCE & ACCESS ISSUES

Question. It appears from your budget that there remain large amounts of uncosted balances associated with the Russian programs. I assume that these balances remain due to the fact that your Russian counterparts are unenthusiastic about allowing U.S. teams in to either dispose of or secure their precious nuclear stockpile. A GAO report from last year noted that DOE was having better luck than

DOD in gaining access to sites that contain special nuclear material. Has there been any improvement with relations that will allow you to secure Russian material?

Answer. We have made significant progress with the Russian Ministry of Atomic Energy (MinAtom), especially at "civilian" facilities with less stringent access restrictions imposed by MinAtom. Barring any unanticipated delays, we expect to complete the security upgrade phase of our cooperation at four sites within the next 16 months Novosibirsk Chemical Concentrates Plant (NCCP), Institute of Physics and Power Engineering (IPPE), Research Institute for Atomic Reactors (RIAR), Lytkarino. This will mark a significant step forward for our program.

We are making progress at some of these sites—contracts for upgrades have and will continue to be signed at places like Tomsk, Krasnoyarsk-26, and Mayak. We will continue to focus our efforts on providing upgrades to sites containing materials of concern to which we have access in order to reduce the threat as quickly as possible, while we negotiate access to or a suitable alternative assurance for the remaining weapons sites. Additionally, we are working on a pilot project that could improve our access to sensitive MinAtom facilities.

With the Ministry of Defense, we have signed comprehensive contracts for the last two Navy warhead sites, which finish the major contracts upgrading 50 Navy-related sites—39 warhead sites and 11 fuel sites. We are cooperating with the Strategic Rocket Forces to upgrade the security of a total of 17 approved nuclear sites located at 11 different Intercontinental Ballistic Missile (ICBM) bases. Currently, we have contracts in place (varying from vulnerability assessments to rapid upgrades) for the first 13 sites. We have had fewer access issues with the Ministry of Defense and cooperation continues to be very good.

These improvements in our relations with the Russians are allowing our work to proceed and begin a drawdown of our uncosted balances as security upgrades to the Ministry of Defense and MinAtom facilities are completed over the next several years.

Question. How and when do you expect to commit the available appropriated balances?

Answer. As a result of a number of recent successful contractual negotiations, we expect to commit the majority of International Nuclear Materials Protection and Cooperation (MPC&A) non-Megaport appropriated balances by the end of this fiscal year. With the Russian Ministry of Defense, we have signed comprehensive contracts for the last two Navy warhead sites, which finish the major contracts upgrading 50 Navy-related sites—39 warhead sites and 11 fuel sites. We are cooperating with the Russian Strategic Rocket Forces to upgrade the security of a total of 17 approved nuclear sites located at 11 different ICBM bases. Work at sensitive MinAtom facilities continues, but the pace is limited mostly by the need to negotiate access to facilities. We are making progress at some of these sites. Contracts for upgrades have and will continue to be signed at places such as Tomsk, Krasnoyarsk–26, and Mayak. Agreement has been reached with Greece and we are nearing agreement with Kazakhstan to implement a Second Line of Defense program in those countries. In Kazakhstan alone we expect to complete installations of radiation detection equipment at approximately 20 sites over the next year.

The ability to commit funds for the Megaports program has so far been limited by the pace of successful negotiations with host countries. We are currently negotiating with several countries and expect those negotiations to result in a number of agreements, which will allow us to commit funds for the installation of radiation detection equipment at these ports.

As of March 31 the current total funding for the MPC&A program with carryover, is $655 million. This consists of Start of Year uncosted balances of $378 million plus Year to Date Approved Funding Profile of $277 million. Of the $655 million in MPC&A, $124 million is allocated to the Megaports program and $75 million to the Radiological Threat Reduction (RTR) Program (Radiological Dispersion Devices and MPC&A Activities in Iraq). Both Megaports and the RTR programs are less than 2 years old, and are working feverishly to ramp up.

We consider that the real measure of funding is commitments to contractors, that is, signed contracts should be considered "costed" as the U.S. Government has "committed" to provide funding for deliverables that are underway. Given the length of time it takes to complete sensitive nonproliferation work in foreign countries, we have begun to track funds that have been committed but not yet costed as a more accurate measure of true requirements. We have made changes to the DOE accounting system to track these obligations and expect our first preliminary report of uncosted commitments in coming weeks. We expect that the April 2004 report to Congress on uncosted "commitments" will show that our true uncosted balances are under control.

Question. Are there alternatives that the Russians have suggested, other than providing full access to sensitive facilities, which may accomplish U.S. objectives?

Answer. We are currently working with the Russians on a pilot project that could improve our access to sensitive MinAtom facilities. This project incorporates a new strategy for access that was negotiated by the MPC&A acceleration working group, convened by Secretary Abraham and Minister Rumyantsev last year. If this pilot effort is successful, it is anticipated that this will allow MPC&A upgrades to be carried out at Russian sites that were previously too sensitive to support cooperative work with the Department of Energy to improve nuclear material security. The first site visit of this project has been completed and contracts have been signed. A second visit will take place early this summer.

COOPERATION WITH OFFICE OF NUCLEAR ENERGY

Question. The current light water reactor fuel cycle in widespread use was developed prior to today's emphasis on safeguards to prevent proliferation from the civil nuclear energy cycle. The International Atomic Energy Agency (IAEA) has been forced to establish new safeguards into an existing cycle and into the existing facilities. The AFCI program is exploring new options for fuel cycles that would reduce waste, enhance more efficient use of nuclear fuel and reduce proliferation concerns.

Do you concur that review of proliferation aspects of new fuel cycles should be coordinated among the Department of Energy's (DOE) Office of Nuclear Energy and the National Nuclear Security Administration's (NNSA) Nuclear Nonproliferation?

Answer. Yes, in fact we are coordinating just such an effort between Office of Nuclear Energy, Science and Technology, and the National Nuclear Security Administration. Our joint Proliferation Resistance and Physical Protection (PRPP) Working Group is an excellent example of our coordination. Under PRPP, we are bringing together experts from all facets of the nuclear fuel cycle. Beyond the safeguards and physical protection experts, we also are engaging the engineers who design all the components and processes of the entire fuel cycle. Such an approach will ensure that the ideas to enhance PRPP actually will be applied and used to reduce proliferation concerns.

REMOVAL OF ADDITIONAL HIGHLY ENRICHED URANIUM (HEU)

Question. There are a number of programs within your office including the Reduced Enrichment Research and Test Reactor Program charged with developing technologies to reduce the threat of proliferation and increase the amount of low enriched uranium that is used in research reactors worldwide. What barriers exist to more rapid progress on removing HEU from research reactors?

Answer. The Reduced Enrichment Research and Test Reactor (RERTR) Program has a number of technological and political limitations that slow the speed by which progress can be accelerated, regardless of the amount of funding provided for the program. The development of low enriched uranium (LEU) fuels suitable for conversion of reactors requires the following steps, which comprise the primary challenges facing the program: analyses of the performance and safety characteristics of research reactors undergoing conversion; determination of the detailed technical specifications of the LEU fuel assemblies for each reactor; and regulatory approval of the conversions.

Once LEU conversions are determined to be technically feasible, adequate incentives need to be identified to make the conversions happen. Countries that have HEU fuel stockpiles are often aware that they have a "valuable" commodity and it can be difficult to persuade them to release the fuel. Incentives are often case-dependent and could include, for instance, removal of spent fuel, supply of fresh LEU fuel, or facility upgrades. Negotiated government-to-government agreements may be required to implement the incentives.

Question. Are you resource constrained?

Answer. Yes, in that the facilities, equipment, and trained personnel that can perform the necessary fuel development are limited. We are actively addressing this situation through international collaboration to study the characteristics of the new LEU fuels to determine if there are any limitations to the use of the proposed fuel.

RESEARCH & DEVELOPMENT (R&D) FUNDING

Question. The Proliferation and Verification R&D account has been reduced by $11 million. This account performs a critical role in developing nuclear detection technologies, including space-based surveillance. Our ability to detect, monitor and verify the transfer, production or testing of special nuclear material will be critical to preventing proliferation of weapons of mass destruction and putting U.S. citizens

at risk. Why has this account been reduced and will this budget cut allow for the research, testing and deployment of new detection technology?

Answer. Our budget request for the Nonproliferation and Verification R&D Program is, in fact, $16 million higher than our request in fiscal year 2004. This reflects, in particular, the need to begin the development of new space-based nuclear explosion monitoring sensors to replace the capability on the Defense Support Program satellites which are due to be retired before the end of the decade.

In the appropriation for fiscal year 2004, the Congress added $29.5 million to our request for the R&D program for critical research in nuclear and radiological national security and for particular projects important to the members. Our fiscal year 2005 budget request was formulated last fall, before we knew the details of the Congressional action on our fiscal year 2004 request. Consequently, that result did not figure into the baseline level for fiscal year 2005 funding request. We appreciate the confidence expressed by the Congress in the importance of our R&D program.

Question. If this account received level funding at the fiscal year 2004 level, how would you spend the additional funding and how would it assist in detection?

Answer. We agree that the need to improve the Nation's ability to detect proliferation and testing of nuclear weapons and materials is becoming ever more important in the world today given the proliferation challenges facing us. If the level appropriated by the Congress for our R&D program in fiscal year 2004 were continued, we would be able to pursue further demonstration of new detection methods and begin to realign our program to address the expanding proliferation threat. We would focus our research to develop methods to more confidently detect and characterize enrichment of uranium and reprocessing of plutonium in areas of concern around the world. We would also increase our effort to provide the scientific basis for attributing the source of any detected nuclear materials.

We would also seek to accelerate our nuclear explosion monitoring R&D program by achieving our goals to calibrate new seismic monitoring stations sooner and enable our partnering agencies to meet their monitoring requirements. We also anticipate a change to those requirements in the near future, to achieve a much lower threshold of yield to detect any nuclear explosions. At this time, this challenge would be addressed only at a lower level of effort until the seismic calibration program is completed.

INTERNATIONAL NUCLEAR FUEL MARKETS

Question. There are a number of utilities that are concerned about the amount of available nuclear fuel there is in the international market. Recently, several companies have found their contracts with Russian suppliers are not being honored and they are forced to find other sources to meet their fuel needs. As a result of this tight market, fuel prices are rising and there are few opportunities to increase production. In fact, the limited number of nuclear fuel vendors makes OPEC look like a free and open market. Are you familiar with these concerns and, if so, are there any opportunities in either the U.S. or Russian stockpiles of HEU that would provide an opportunity to down blend in order to add more supply to the market?

Answer. We are familiar with these concerns and have been monitoring the situation closely. I believe the question should address the supply situation for natural uranium, not fuel-grade low enriched uranium, of which there is no shortage. Tight supplies of natural uranium feed are responsible for the price increases. The connection is that utilities must provide natural uranium feed to the fuel supplier in order to get fuel.

Supplies into the natural uranium market were interrupted when the Russian supplier Techsnabexport (Tenex) cut off supplies of natural uranium to Globe Nuclear Services and Supply (GNSS) as of January 1, 2004. The problem was not only the cut-off of supply to GNSS but the short notice provided by Tenex. Tenex notified the world on November 3, 2003, just 2 months prior to the cutoff, that supplies under contract to GNSS would not be honored. As a result, beginning in January 2004 GNSS has been unable to supply natural uranium under contracts to U.S. utilities.

The Department of Energy and the U.S. Government have communicated to Russia our concern on the possible supply shortfalls to U.S. utilities. In that regard, Secretary of Energy Abraham was informed by former Minister, now Director Rumyantsev of the Russian Atomic Energy Agency, that Tenex is now in negotiations with several U.S. utilities to supply uranium with a view to resolving the GNSS shortfall. DOE also understands that the uranium would be provided at the same prices and delivery times as under original contracts with GNSS.

Unfortunately, the Honeywell facility in Metropolis, IL, which is the only U.S. facility for converting uranium to the gaseous form for the next stage of uranium proc-

essing (i.e. enrichment), had to cease production on December 22, 2003, due to an accident. It appears that Honeywell has implemented procedures and other changes at the plant, so that the Nuclear Regulatory Commission could allow the plant to resume operations, which have already begun the process of re-starting. With that and the supply of natural uranium now being negotiated with Tenex, we expect balance to be restored to the natural uranium market.

Nevertheless, it appears that the market is coping with the temporary supply shortfall. We suspect that utilities have exercised provisions for supply flexibilities in their contracts with uranium vendors to alleviate at least some of the shortfall. The Department, of course, continues to closely monitor the situation.

Since this is primarily a commercial, not a non-proliferation, issue, I would suggest that the Office of Nuclear Energy, Science & Technology or the Office of the Undersecretary could provide further details.

NATIONAL IGNITION FACILITY

Question. Dr. Beckner, I understand that NIF is still at least 6 years and over $1 billion away from completion of this project. It is accurate to say that NIF is both the largest laser, and the most expensive diagnostic tool in the NNSA stockpile. When we develop any technology, we need to ask ourselves—is the outcome worth the cost? If you don't achieve ignition, the American people have purchased a laser that is it 25 times more expensive than the Z machine at Sandia. I think we need to understand that the project is viable before we spend billions more over the life of this program. How much money are you willing to spend to achieve ignition and at what point would you say we have spent too much?

Answer. The NIF Project is on schedule for completion at the end of fiscal year 2008. Our plan, as outlined in the project data sheet, shows the funding required in fiscal years 2005–2008 to complete the project is approximately $867 million, a figure that has not changed since the present baseline was approved in September 2000.

NNSA is developing an integrated activation and early use plan for NIF that provides for first ignition experiments in 2010. This advance in the ignition date has been made possible by the strong technical advances in the Inertial Confinement Fusion program. Recent simulations have shown that it is possible to develop capsules that can be filled using a simple fill tube instead of a high pressure diffusion system. The fill tube system is simpler and less costly than the currently planned diffusion method, and can be developed sooner. Hence fusion ignition can be attempted earlier with this new fill tube approach. A 1995 review of the ignition program concluded the probability of ignition on NIF was 50 percent or greater. Our confidence in demonstrating ignition on NIF has increased since then. The NIF activation and early use plan will be reviewed by the Defense Sciences Board.

Completing the NIF Project is a key step in achieving ignition. In order to pursue the experimental campaign needed to support pursuit of our goal of obtaining ignition in fiscal year 2010, there are many program activities that must be conducted. Our total budget for Inertial Confinement Fusion (ICF) Program activities (not including the project), as outlined in the FYNSP, is approximately $2,046 million over the period fiscal year 2005 through fiscal year 2010. Of this amount, approximately half is directly related to national efforts aimed at our goal of achieving ignition utilizing the NIF. The balance supports operation of other facilities (such as Z) and our non-ignition stewardship activities.

We fully recognize the magnitude of the investment we are making in the ICF area, and are convinced that it is the appropriate course of action to achieve our ignition and stewardship missions.

We would be pleased to supply additional details on the break out of the inertial fusion budget elements for fiscal year 2005. Preliminary plans also exist for fiscal year 2006–2010.

Question. Would you be willing to focus on solving the most challenging technical problems such as the cryogenic targets and perform a thorough testing on a full cluster of 48 lasers before you go forward as currently planned?

Answer. In pursuing the goal of ignition in 2010, we must address many challenges. Among these are the design and manufacture of the ignition targets, development of cryogenic target handling capability, and completion of the NIF in fiscal year 2008. Our current plans provide the correct balance, within the FYNSP budget, for addressing each of these challenges. In addition, we are currently developing a NIF Activation and Early Use Plan that will define the specific path towards ignition in more detail. We anticipate having this plan reviewed by the Defense Science Board this summer, and will finalize the document after receiving their input.

The performance of the NIF laser system is being continuously evaluated. Data from the initial quad of four laser beams has already demonstrated that on a per-beam basis, the facility meets its design requirements. In addition, we have used the diagnostics and target systems that are being developed in parallel with the NIF laser project to successfully demonstrate the facility's capability of performing sophisticated experiments, and to make progress toward the Stockpile Stewardship Program's important high energy density physics and ignition goals. We intend to continually test facility's performance as additional beams are activated, and perform increasingly more difficult experiments with those laser beams.

While having a full cluster of 48 beams operating on NIF will be useful to high energy density physics, the placement of the beams will not allow many important ignition experiments to be conducted. All the beams from the same cluster enter the NIF target chamber from the same quarter of the chamber, essentially coming from the same direction. This is desirable for high energy density physics, and enables important experiments to be performed in this area. For example, planar hydrodynamics experiments will be performed in late 2004 to support validation of 3D ASC computer codes; equation of State experiments will be performed in late 2005; and radiation hydrodynamics experiments will be performed in late 2006. However, this configuration does not provide the symmetrical target illumination required to do the compression experiments required to investigate ignition. Consequently, we do not foresee any added value to placing a hold point at the completion of the first cluster of 48 beams. In fact, such a hold point would likely lead to schedule delays and cost increases while making the goal of ignition in 2010 impossible to achieve.

FIRST CLUSTER-LASER INTEGRATION

Question. The fiscal year 2005 budget specifies that NIF ignition has been delayed until 2014 gives me great concern regarding this project. Delaying the ignition start date is contrary to news that the project is ahead of schedule. I understand that laser installation is 18 months ahead of schedule and the Beam Light Infrastructure was achieved nearly 3 years ahead of schedule. As a result of these conflicting statements, I am very skeptical of actual status of NIF. To date, $2.5 billion has been spent and another $1 billion is required before we know whether or not this project will work. I don't share this all-or-nothing attitude, because the costs are too high. I believe we need a more measured approach to address the significant technical challenges that lie ahead. George Miller, the NIF Associate Director, has stated that the most significant technical challenge he has is the full integration of the lasers. I believe the first cluster, which is 48 lasers or one-quarter of the total, would certainly give a clear indication of whether full integration is feasible. Dr. Beckner I would like you to put together a budget and schedule that will accelerate the installation and testing of the first cluster in fiscal year 2005. Can you do that?

Answer. I am very much aware of the committee's determination that the program to achieve ignition remains on target. I've met with the staff of this committee as well as the other three committees to clarify our recent decisions to change course in order to pull back the ignition target to 2010, as opposed to 2014. We've done that because all of the committees have a very strong view that we must maintain that schedule. We had allowed the target date for ignition to move out because of funding priorities in other elements of the program not because of a reduced commitment to ignition.

Successful completion of the NIF project on its current baseline schedule is only one of the elements necessary to achieve our goal of ignition in 2010. The project has re-sequenced some of its work to both accomplish it more efficiently, and to allow early activation of a quad of four laser beams. This re-sequencing has resulted in several major project milestones being completed well ahead of schedule, while the performance of the first quad of beams has provided us with a demonstration that the fundamental design is sound, as well as providing a basis for fine tuning component designs prior to initiating large procurements. We continue to monitor the project closely, and are satisfied that it is on schedule for successful completion in accordance with its approved baseline.

I have discussed the feasibility of accelerating completion of the first cluster of 48 laser beams into fiscal year 2005 with Dr. Miller. At this stage in the project and within the current baseline and funding profile, procurement logistics, and lead times limit our ability to further re-sequence work and selectively accelerate milestones. Further we do not see any way to pull the first cluster milestone back as far as fiscal year 2005. However, if the committee would like to see an alternative schedule which accelerated installation and testing of the first cluster, which includes a modest suite of "proof of principles" experiments and which minimizes but

could not eliminate impact to the ignition campaign schedule, we will develop such a schedule for your consideration.

CRYOGENIC TARGETS

Question. The cryogenic target for the NIF system is a component the Department has deferred working on for several years. The University of Rochester has been working on the only cryogenic target in the world and it has been an enormous challenge. As I understand it, your office is currently considering two technology options. One is similar to the Omega Laser target developed at Rochester and a second is a theoretical option you believe will save NIF tens of millions of dollars and 4 years using a beryllium capsule. However, until this problem is solved, ignition will not become reality. Like laser integration, I believe you should focus your staff and budget on resolving the enormous challenges associated with the cryogenic targets. What is your plan and timetable to address the challenges associated with cryogenic targets?

Answer. A cryogenic ignition target consists of a capsule filled with fusion "fuel", and a surrounding cryogenic system which holds the capsule accurately at temperatures near absolute zero. Research on cryogenic ignition targets has been a major component of the ICF Program since its inception. We have developed a wide variety of ignition capsule designs, and numerous aspects of the performance of these capsules have been validated via experiments on the Nova and Omega lasers and elsewhere. We have made strong progress on cryogenic systems. We have demonstrated much of the required technology, and a complete, integrated cryogenic system is operational at Rochester. The Rochester system provides valuable insight for NIF. The Rochester cryogenic system uses a high-pressure chamber to diffuse gas into the capsule.

Our plan for NIF cryogenic ignition targets has three major components. First, we will continue our national cryogenic target technology development program. This program has demonstrated impressive results in the past several years, particularly in the areas of target fabrication and characterization. Secondly, we are planning a cryogenic system for NIF that uses a thin tube to fill the capsule with fusion fuel. This "fill-tube" cryogenic system will be completed in 2009 and used for ignition experiments in 2010. A simpler pre-ignition cryogenic system will be completed in fiscal year 2006. This fill-tube system will ultimately be modified to allow operation with all types of ignition targets, including the diffusion filled targets used at Rochester. Finally, we are planning experiments and calculations to refine the design for fill-tube ignition targets. Note the fill-tube effort is not based on theory alone; fill-tubes have been used extensively in other areas of the ICF Campaign and the stewardship program, and we will draw upon this experience in preparing the first ignition experiments.

Question. Are you planning to draw on the available expertise at the national labs to solve this problem and will you seek to have one of the labs validate the technology and design?

Answer. Yes, as part of the national planning process for the ICF Program, all ICF participants are committed to leading technical efforts within the context of participation in an integrated program. This will continue to be the case for the cryogenic ignition target program. Lawrence Livermore National Laboratory will lead the construction of the NIF cryogenic target system and play a major role in ignition capsule design. Los Alamos National Laboratory will do independent calculations of the fill-tube approach, and in addition the material science capabilities at Los Alamos will be brought to bear on key questions related to ignition target fabrication. The University of Rochester will provide valuable input to the NIF cryogenic system via cryogenic experiments at OMEGA, and with the Naval Research Laboratory will also examine fill-tube target designs applicable to "direct drive" inertial fusion. General Atomics is focused on specific aspects of target fabrication and has experience in cryogenic systems. This national approach has proven very effective in advancing the technological state-of-the-art and providing innovative solutions as well as effective peer review.

OMEGA

Question. Will you begin to test the beryllium target design on the OMEGA system as soon as possible to get initial data to know if you have a viable target?

Answer. Lawrence Livermore, Los Alamos, and Sandia have been conducting an extensive series of ignition-related experiments at OMEGA since the 1999 shutdown of Livermore's Nova laser. We expect that the OMEGA laser and the early experimental capability available at NIF will continue to be of great benefit as we move toward ignition. Experiments at OMEGA and NIF will be an integral part of our

risk mitigation strategy. Both beryllium and plastic targets will be examined. These experiments will be used to validate advanced simulation tools and thereby refine our target designs for the 2010 ignition campaign.

ESTABLISHING SCIENTIFIC MILESTONES

Question. Dr. Beckner, following the re-baselining of the NIF program in 2000, DOE agreed to specific milestones for the construction project. The Defense Authorization for 2002 requires that the Administrator of the NNSA notify Congress for every level 1 and level 2 milestones that are achieved and a full report if a milestone is missed. However, that reporting requirement is only for construction and assembly milestones and doesn't apply to any scientific or programmatic milestones. In fact, there aren't any programmatic milestones by which to base NIF's success or failure as a scientific tool. I believe it is important that NNSA develop specific milestones by which Congress can judge this project. This document should also be peer-reviewed complex-wide for input on the scientific and research goals. Can you develop these scientific R&D milestones and provide to Congress such goals by this June?

Answer. I fully agree a defined set of R&D milestones will provide insight into the success of NIF as a scientific tool. Experiments which could only be performed on the NIF have already been conducted and will continue to be performed during the commissioning of subsequent laser beams. In addition, we are currently developing a NIF Activation and Early Use Plan that will define the specific path towards ignition in more detail, including the scientific milestones we will achieve. We anticipate having this plan available in draft by the June time frame so that it can be reviewed by the Defense Science Board this summer. We will be pleased to provide you with the draft document, but request that you allow us to complete the external peer review process and incorporate the input from that review prior to finalizing the plan and beginning to report to you on our progress against it.

Z MACHINE

Question. Dr. Beckner, Sandia National Labs currently operates the most powerful energy source of X-rays in the world. I think that anyone familiar with this machine would agree that Z has been a very cost-effective workhorse of the stockpile stewardship program providing important data from high energy density experiments as well as possessing great potential for inertial confinement fusion research. We are turning away important research, because we haven't provided the financial support. I can certainly think of a project that could be used to provide the needed funding to expand the research operations and capabilities of this important scientific tool. Do you share my belief that the Z-machine is underutilized and that we are foregoing important research by not expanding to a second shift and increasing operational funding?

Answer. The Z pulsed-power facility has been very successful, and I agree with you that more shots on Z could be effectively used. The amount of shots requested annually on Z is more than twice the number available under single-shift, 5-day-per-week operations. NNSA has added significant additional funds to Z over the past few years via the Z-refurbishment Project. This approximately $60M activity will further expand Z's capabilities and ensure that it remains a vital part of the stewardship program.

While we have funded the refurbishment of Z, we unfortunately have not been able to implement additional operations due to funding limitations and competing program demands. In fact, many large Department of Energy and NNSA scientific facilities are oversubscribed; indeed, one of the hallmarks of a successful facility is strong demand from the scientific community. We have attempted to balance the experimental, computational and engineering demands of Stockpile Stewardship within the FYNSP. There are a number of critical experiments on Z required to support life-extension program and other critical activities which have the highest priority. We recognize that some important experiments will be delayed given the current single-shift operational status of Z.

Question. What is the justification for remaining with one shift, when so much more could be accomplished?

Answer. NNSA is committed to funding all stewardship activities within the existing FYNSP. Additional facility operations at Z would require the addition of funds to the Inertial Confinement Fusion (ICF) Campaign from other parts of the stockpile stewardship program or the shifting of funds within the ICF campaign; in my judgment neither has been the right course to pursue given other funding pressures in the ICF Campaign and the stewardship program.

The NIF Project is a major commitment by NNSA and DOE and a key element of the stewardship program, and hence we are committed to delivering it on schedule. Demonstration of ignition is the major purpose of NIF, and with respect to demonstrating fusion in the laboratory, it is our first priority. Success on NIF ignition is essential to the future of the ICF Program. The situation is similar in the NIF diagnostics, cryogenics, and supporting technologies area. As I noted earlier, we have decided to fund the refurbishment of the Z machine. We also have major commitments to additional operations and the Extended Performance project for the OMEGA laser at the Laboratory for Laser Energetics at the University of Rochester, which also has had recent outstanding results.

Question. Do you support expanding the opportunity to do more research in inertial confinement fusion at Z?

Answer. The technical progress on inertial fusion at Z has been impressive, and if it were possible to do more under the constraints we face I would support it. However, given the FYNSP, I do not support the diversion of resources from elsewhere within the ICF Campaign or other stewardship accounts to fund additional ICF research at Z. We do have several important challenging milestones in the Z research plan during fiscal year 2005 and fiscal year 2006 and success in achieving or exceeding these milestones could cause us to change some of our procurement priorities. As documented in National Academy of Sciences and other reviews, the demonstration of ignition is the essential next step forward for the ICF Program. Demonstration of ignition is the major purpose of NIF, and with respect to demonstrating inertial fusion in the laboratory, it is our first priority. Success on NIF ignition is essential to the future of the ICF Program. The NIF ignition program is tightly constrained and we must stay focused upon it to succeed.

Question. What can NNSA do to facilitate such research?

Answer. The primary way NNSA can facilitate this research is by adding additional operations to Z and successfully completing the Z refurbishment project.

NNSA is proceeding with the refurbishment of the Z machine. This refurbishment will replace original components that date back to the early 1980's. This refurbishment will: extend the lifetime of Z, increase its precision and reproducibility, reduce the maintenance required between experiments thereby facilitating double-shift operations should the additional funds become available, and significantly enhance its technical capabilities. For example, the refurbished Z facility will produce nearly double the X-ray energy for stockpile stewardship and ICF research. It will also greatly expand the utility of Z to address fundamental material properties by including the flexibility of pulse shaping in order to double the experimental pressures achieved.

NIF OTHER OPTIONS

Question. Dr. Beckner, if we pulled the plug on NIF today I estimate we could save between $3 and $5 billion over the life of this project. A lot of very promising work could be done with this money including a variety of experiments using pulse power and laser power to test our weapons systems. Also, the Japanese have had tremendous success with petawatt lasers at a fraction the cost of NIF. I know you are very much aware that the French are pursuing a similar laser system slightly larger than NIF that hopes to have ignition within a decade. Is there any reason why we shouldn't look at other options before we spend another $3 to $5 billion?

Answer. The NIF is a unique element of the Stockpile Stewardship Program (SSP), providing the capability to pursue the goal of ignition and create conditions of matter similar to those found in nuclear weapons. We believe NIF is the only facility in the world capable of getting ignition by 2010. At that time, it will have been nearly 20 years since the last U.S. nuclear test. NIF will enable the study of issues that affect an aging or refurbished stockpile. It will also advance critical elements of the underlying science of nuclear weapons that will play a major role in validation of ASC codes. NIF will be important in helping to attract and train the exceptional scientific and technical talent needed to sustain stockpile stewardship over the long term. While we are constantly evaluating all options to obtain the capabilities and information required to support the SSP, we have not identified any U.S. facilities that can support the vital needs of the Stewardship program as well as NIF.

We do not believe it prudent to rely on foreign nations to satisfy our requirements. While it is true that the French are pursuing a laser similar to NIF, their project has just broken ground, something we did for NIF in 1997. Thus, we believe the French are 6 to 7 years further from ignition than we are. In addition, the French project is dependant on optical components jointly developed with NIF for success. If NIF is cancelled, the French laser project will also be impacted. The Jap-

anese results, partially based on target designs and laser technology from Livermore, is scientifically exciting but in its infancy. Their next step, not anticipated for another 5 years, will use NIF laser technology, is only a proof of principle, and will not achieve ignition. In addition, current evaluations require a NIF-scale facility of petawatt and long pulse lasers for ignition success. We believe that the current FYNSP is the appropriate funding approach to our Stewardship mission.

MESA/CMR FACILITIES

Question. Your fiscal year 2005 budget provided only half of the funding necessary to complete the MESA project at Sandia National Lab by 2007. This delay will unnecessarily increase the overall cost and delay critical work on engineering solutions that will benefit the weapons stockpile. This budget, also fails to provide adequate funding to complete the Chemical and Metallurgy Research Facility (CMR) at Los Alamos. It is my understanding that the planned end-life of the existing 50-years-old facility will expire 4 years before a new CMR replacement will be ready for use. What is the justification for delaying the completion of these important facilities—especially when delays will drive up the overall cost?

Answer. The fiscal year 2005 request for MESA is consistent with the Performance Baseline approved by the Secretary of Energy on October 8, 2002, with a Total Project Cost of $518.5 million and a completion date of May 2011. The Performance Baseline reflects construction of the MESA facility in a sequenced approach that brings the MESA Complex on-line in phases to meet NNSA's priority mission requirements, while at the same time being affordable within the confines of the Future Years Nuclear Security Program (FYNSP). Critical microelectronic integrated circuits are already being produced in the retooled Microelectronics Development Laboratory portion of the MESA project and have met the initial needs of the life extension program.

As a result of the congressional appropriation increase provided for MESA in fiscal year 2003, the Performance Baseline was changed to reflect a revised completion date of May 2010. The appropriation increase in fiscal year 2004 will result in further acceleration of the project; the actual schedule impact is being evaluated as part of the fiscal year 2006 budget process. The fiscal year 2005 request was then adjusted due to overall priorities within the constraints of the FYNSP, and to reflect a favorable bidding environment that allowed for shifts in the project funding profile that had no impact on project completion.

The CMR Replacement Project continues to be a high priority for the Stockpile Stewardship Program. Based on the fiscal year 2004 appropriation reducing the CMR Replacement Project funding by approximately 50 percent (from $20.5 million to $9.9 million after the rescission), it was necessary to reassess the project's path forward within the confines of the Future Years Nuclear Security Program (FYNSP). We re-scoped the project realizing that it would not be sound management to move from a fiscal year 2004 appropriation of $9.9 million to our original plan of $75.0 million for fiscal year 2005.

MODERN PIT FACILITY

Question. Dr. Beckner, the President's budget provides a $19 million increase for conceptual design for the Modern Pit Facility. I assume, based on this funding request, that the Department is intent on moving forward with the construction of a $4 billion facility. What is the proposed timetable for the Secretary of Energy to make a final decision to site the Modern Pit Facility?

Answer. A secretarial decision to move forward with planning that includes a site selection for a Modern Pit Facility is currently pending. All documentation required by the National Environmental Policy Act (NEPA) to support a final Environmental Impact Statement (EIS) and associated siting decision is complete. NNSA Administrator Linton Brooks announced on January 28, 2004, "I intend to have further consultations with Congress before we proceed to a final EIS." Construction start for an MPF is currently scheduled for 2012 with full operations in 2021. The Congress will be consulted at major planning decision points prior to the start of construction.

Question. Is the Carlsbad region or elsewhere in New Mexico still a viable option for this facility?

Answer. Yes, the Carlsbad region, the Los Alamos site along with the three other sites evaluated in the draft environmental impact statement are still viable options to host the Modern Pit Facility.

Question. Has the Department undertaken a study to evaluate the condition of the existing plutonium pits to verify the need for this facility?

Answer. The Department has an extensive study to evaluate the condition of existing plutonium pits in the stockpile. NNSA is also conducting an extensive set of

aging studies to confirm the minimum pit lifetime. While some results from these studies are expected in 2006, the result of additional work to confirm current pit lifetime estimates will become available prior to 2012 when construction of a Modern Pit Facility (MPF) is scheduled to start. Because of the uncertainty in pit lifetimes and the long-lead time to design and construct an MPF, continued planning for an MPF is prudent risk management.

Question. Will the nuclear stockpile report that was requested by this committee impact the Secretary's decision to site a new pit facility?

Answer. As noted in the report ("An Enhanced Schedule for the Modern Pit Facility (MPF)") provided by the Secretary of Energy on March 1, 2004, continued planning for a new pit facility is appropriate for all future stockpiles under consideration. The NNSA has evaluated capacity requirements for an MPF based on the following parameters: (1) size of the future stockpile, (2) numbers and types of weapons in the stockpile, (3) pit lifetime, (4) start date for quantity production, and (5) length of time between shutdown of Rocky Flats and start of new production. We have concluded from these analyses that if the number of weapons in the U.S. stockpile is consistent with NPR/Moscow Treaty and if pit lifetimes are assumed to be about 60 years, the Nation will need a production capacity of some 125 pits per year beginning in about 2021.

SPACE REACTORS

Question. Admiral Bowman, I understand that Secretary Abraham has recently assigned the responsibility for the development of a civilian space nuclear reactor as part of project Prometheus. The mission NASA has identified for this project is the Jupiter Icy Moons Orbiter. Traditionally, this activity has been the responsibility for DOE's Office of Nuclear Energy. How is it that the Naval Reactor program has secured this responsibility?

Answer. The NASA Administrator asked the Secretary of Energy to assign my Program the responsibility to develop, design, deliver, and operationally support civilian space nuclear reactors. On March 8, 2004, the Secretary of Energy assigned Naval Reactors these responsibilities in support of Project Prometheus. The Secretary of the Navy concurred in this assignment.

In the NASA press release, NASA Administrator Sean O'Keefe is quoted as saying, "NASA sought this partnership because NR has an enduring commitment to safety and environmental stewardship that is a requirement for an undertaking of this magnitude. This partnership will help ensure the safe development and use of a space-fission reactor to enable unparalleled science and discovery as we explore the solar system and beyond. This work is an integral piece of the President's exploration agenda and without it the exploration agenda is compromised."

The DOE's Office of Nuclear Energy (NE) will retain responsibility for various space nuclear technology efforts, including long-term space reactor science and technology development not associated with work assigned to NR. NE will also continue its responsibility for all aspects of space radioisotope power systems.

STAFFING AND TECHNICAL CHALLENGES

Question. How do you plan to meet this challenge from a staffing and technical capability?

Answer. Because the Naval Nuclear Propulsion Program is a lean organization, accepting a role in Project Prometheus requires that I increase the size of my staff and my DOE laboratory staffs to prevent any noticeable impact on the core mission of supporting the nuclear fleet. Because we are still early in the planning phase, we have not yet determined how much of the Project Prometheus effort will be done in house and how much will be subcontracted. The analysis we've done so far indicates that this year I should increase my Headquarters staff by a few people and my two DOE laboratory staffs by about 60 people (combined increase). Because I intend to subcontract some of the Project Prometheus work, my staff will be reviewing the specialized expertise and facilities of industry, academia, and other DOE laboratories to inform my decision. All of my staff and DOE laboratory increases will be fully funded by NASA.

QUESTIONS SUBMITTED BY SENATOR LARRY CRAIG

TECHNICAL AREA 18 LOS ALAMOS NATIONAL LABORATORY

Question. Last June, the Department of Energy halted work on the project to relocate nuclear material and functions from the Los Alamos National Laboratory's Technical Area 18 to the Nevada Test Site because of an excessively high increase

in the cost to complete the relocation. At that time, it was reported that the cost estimate for the modifications to the facility at NTS had risen to more than $200 million over the original estimate of $100 million. The DOE had further indicated its intent to conduct an independent cost review.

What is the current cost of this project? What has been done to reduce the cost? Has project scope or facility functionality been reduced or changed and what effect has this had on cost?

Answer. NNSA is finalizing its review of the conceptual design for the NTS Device Assembly Facility (DAF) option. The initial conceptual design for DAF was submitted to NNSA Headquarters on January 20, 2004 with an estimated project range of $219 million to $255 million with a schedule for completing the project in 2011.

As part of this submission, the project schedule had special nuclear material (SNM) shipments from TA–18 to DAF in 2009. After reviewing this package and assessing options for accelerating activities, I announced on March 31, 2004 that NNSA would accelerate movement of TA–18 programmatic SNM to DAF. The initial goal is to move approximately 50 percent of the programmatic SNM from TA–18 to DAF by March 2006. At this time, NNSA anticipates it will need access to a subset of the TA–18 SNM to support ongoing mission commitments during transition in the areas of emergency response, nuclear nonproliferation, and criticality safety.

On April 9, 2004, Dr. Beckner, directed that the early move of SNM occur outside of the project. The original project submission identified approximately $22 million related to transportation costs of SNM, including the design, development, and testing of new SNM shipping containers. Accelerating transportation activities will allow for NNSA to use existing shipping containers, avoiding approximately $7–8 million for designing new containers. Current estimates related to SNM move are $1.22 million in fiscal year 2004 and $3 million in fiscal year 2005. On April 30, 2004, I directed my staff to prepare a closure plan for TA–18 that will identify the schedule and cost for moving the rest of the SNM to DAF.

Based on this direction and input provided by other NNSA program managers, the project team revised the CD–1 submission and provided information to NNSA Headquarters for review and approval on May 7, 2004. While the final range is under validation by NNSA, it is expected to be in the low- to mid-$100 millions with project schedule for completion in late 2009. In addition to removing transportation activities at $22 million, NNSA is removing the design and construction of a new low scatter building within the DAF PIDAS based on discussions with NNSA programs and security experts. Design and construction of the low scatter building was estimated at approximately $30 million. NNSA is now exploring options to conduct the activities proposed for this new facility. In addition, NNSA is deferring upgrades to the critical assemblies at a cost of approximately $10 million; only new control systems and instrumentation for the critical assemblies are contained within the project to support installation at DAF.

Question. Please provide an "apples to apples" comparison of cost among the options that the DOE considered and explain the rationale for concluding that the NTS option is the option with the lowest cost and highest probability of success.

Answer. During the CD–0 phase of the project, NNSA evaluated the proposed action of relocating TA–18 capabilities and materials associated with Security Category I/II materials to a new location. Location alternatives included sites: (1) a different site at LANL at Los Alamos, New Mexico; (2) Sandia National Laboratories (SNL) at Albuquerque, New Mexico; (3) NTS near Las Vegas, Nevada; and (4) Argonne National Laboratory—West (ANL–W), near Idaho Falls, Idaho. The No Action and Upgrade in Place Alternatives were also evaluated. These alternatives are discussed in detail in the Environmental Impact Statement (EIS) for the Proposed Relocation of Technical Area 18 Capabilities and Materials at the Los Alamos National Laboratory, DOE/EIS–0319, August 2002. The preferred alternative in the Final EIS was the DAF.

As a result of CD–0 Phase 1, each alternative developed a concept and rough order of magnitude cost estimate. These estimates were analyzed by NNSA and adjusted to provide equal comparison as shown in Table 1. It is important to note that the transportation cost estimates at this time were anticipated to exceed $50 million and there were concerns regarding the system's ability to support TA–18 SNM relocation in addition to other requirements.

TABLE 1.—CD–0 PHASE 1 ALTERNATIVE COST ASSESSMENT

[In millions of dollars]

	LANL	NTS	SNL	ANL–W
TEC	130.6	76.7	129.2	92.7
TPC	148.9	95.0	147.6	111.0
Transportation	4	52	50	53
TOTAL	152.9	147.0	197.6	164.0

Based on this cost information and program considerations, former NNSA Administrator John Gordon approved the original CD–0 Phase 2 for this project on July 27, 2001 to proceed with designing a new underground facility at LANL. While not completed, preliminary information from conceptual design activities for this underground facility in conjunction with the events of September 11, 2001, warranted a re-examination of the NTS option (DAF). The AE chartered a group to update the initial NTS concept on April 15, 2002 and to assess life cycle costs. The group completed a special study "TA–18 Mission Relocation Project Special Study: Revisit the DAF Concept" on June 25, 2002. The results showed that the DAF alternative was now a more cost effective option in terms of construction and SNM transportation (see Table 2). As a result of new information, the AE approved the revised CD–0 Phase 2 on August 8, 2002, for the DAF.

TABLE 2.—TA–18 MISSION RELOCATION PROJECT SPECIAL STUDY RESULTS

[In millions of dollars]

	LANL	NTS
Design, Construction and Start-up	162.0	96.7
PIDAS Requirements	16.0	([1])
Transportation	4.0	30
TOTAL	182.0	126.7

[1] N/A.

At NTS, only DAF was determined to be suitable and capable of adequately supporting the TA–18 missions. This decision was based on the fact that other NTS locations would require new construction at a substantially higher base cost than remodeling DAF. In addition, the DAF has long been recognized as under-utilized and it maintains substantial excess capacity. A decision was made based upon an option analysis to utilize existing office space at the NTS control point rather than build new offices near the DAF (with resulting cost avoidance).

QUESTIONS SUBMITTED BY SENATOR PATTY MURRAY

PACIFIC NORTHWEST NATIONAL LAB (PNNL)

Question. Ambassador Brooks, a draft plan for accelerated cleanup of the Hanford Site, and the 300 Area in particular, would force evacuation by 2007 of several buildings within the Pacific Northwest National Lab (PNNL)—buildings that currently host work for the National Nuclear Security Administration (NNSA) and the Department of Homeland Security. Adequate replacement facilities cannot be in place by the 2007 deadline, making this the first time in the history of the Environmental Management program that cleanup would require active facilities to be demolished, and capabilities discontinued and/or lost.

During a House Armed Services Committee hearing last week, you said the Office of Science, which serves as steward of PNNL, had not yet asked for NNSA help in addressing the potential loss of national security capability at the lab. Is that still true?

Answer. The Office of Science has asked NNSA to inventory its activities at Area 300. NNSA has conducted this assessment and submitted it to the Office of Science.

Question. Has the Department sought input from your office in finding a solution to the problems posed by the draft cleanup schedule for 300 Area?

Answer. The Department has raised the problems posed by the draft cleanup schedule for the 300 Area with NNSA but has not yet asked NNSA for solutions.

Question. If the Department or the Office of Science seeks help from the NNSA, is your office prepared to contribute to the cost of replacing the facilities lost to 300 Area cleanup?

Answer. We are currently assessing whether or not the NNSA activities that would be lost at Area 300 justify the considerable cost of replacing the 300 Area facilities.

Question. Are you confident that the Department is on track to find a solution that preserves the important capabilities at PNNL?

Answer. PNNL supports the national security of the United States in a variety of ways and should be commended for its efforts. However, given that PNNL's 300 Area capabilities only account for roughly 17 percent of NNSA's nonproliferation budget at PNNL, NNSA must evaluate all available options before it can support the construction of a new facility to replace PNNL's 300 Area facilities.

Senator DOMENICI. I want to share something with you just before we close this hearing. I do not know if I should be talking about this issue of America with you, but it is going to be science that is going to make the breakthrough, be it one or ten, that will once again start creating jobs in America, so that when productivity increases we will see jobs instead of what we are seeing now as productivity and no jobs. Most crazy arrangement of economics we have ever seen. It would seem to me the breakthrough with brand new technology and innovative things is going to do it. Where it will come from, I do not know. I have been pondering what we could do in the Federal Government as an incentive to have it happen quicker but that is too tough for me. But I have some people thinking about it. But frankly, I think you have more to do with it than people think, because you have the greatest array of scientists and engineers, when you add your three labs up, of anywhere in the world. And when you take the Mesa Facility and the CMR facilities, and those are needed for the stockpile, but everybody knows that nano-science and micro-engineering, somewhere from those is going to come that breakthrough. And the center for it was supposed to be Sandia National Laboratories in a facility we started because of some things that nano-science may do for the nuclear weapons. Now, we can let an institution see and live its day and not do what it is supposed to do because we do not fund it on time. Or we can think it is important enough and fund it. So I am complaining to you that your budget will cause a very big delay in providing the facilities that are not there, that you cannot expect great scientists to work in. If you ever saw what they are working in, they are not going to make the innovative breakthroughs that we are talking about there. And so I think the 50 percent reduction in the expected continuation of the building is not right. I urge that you be considerate of our efforts to move it back on a path, that it might get built sooner. Now, that is enough. If you want to comment, fine. If not.

Ambassador BROOKS. I think yes sir is the appropriate thing for me to say.

SUBCOMMITTEE RECESS

Senator DOMENICI. Okay. With that, we have a number of hearings for this subcommittee this year and they will be interesting, but we stand recessed.

[Whereupon, at 4:25 p.m., Wednesday, March 23, the subcommittee was recessed, to reconvene subject to the call of the Chair.]

ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 2005

WEDNESDAY, MARCH 31, 2004

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10 a.m., in room SD–138, Dirksen Senate Office Building, Hon. Pete V. Domenici (chairman) presiding.

Present: Senators Domenici, Craig, Reid, and Murray.

DEPARTMENT OF ENERGY

OFFICE OF ENVIRONMENTAL MANAGEMENT

STATEMENT OF JESSIE H. ROBERSON, ASSISTANT SECRETARY

OPENING STATEMENT OF SENATOR PETE V. DOMENICI

Senator DOMENICI. The meeting will come to order. I understand Senator Reid, Senator Craig will be along, but I want to explain to you what's going on here and I haven't decided yet what I'm going to do, but there's a briefing by Mr. Tenet, a closed briefing for Senators, and I haven't heard him yet and I may get started and just recess and you'll have to wait. Sorry for the audience. We'll wait and come back, but we'll get you finished before noon.

So good morning, and for all of you the hearing is going to come to order. The subcommittee is going to take testimony on the fiscal year 2005 budget request. We're going to take testimony from Jessie Roberson, Assistant Secretary, Office of Environmental Management; Beverly Cook, Assistant Secretary of the Office of Environmental Health and Safety; Dr. Margaret Chu, Director of Civilian Radioactive Waste Management. I appreciate your participation here today and I look forward to your testimony.

The President's request for the Office of Environmental Management provides $7.4 billion. This is the largest request ever made for environmental cleanup. I applaud the efforts of the Assistant Secretary Roberson and the efforts to reform the DOE cleanup program. I intend to carefully evaluate all the cleanup responsibilities.

The administration has succeeded in reducing the total cost estimates for 35 years by focusing on risk-based cleanup as a strategy and seeking accelerated cleanup agreements with the States. The DOE now believes that cleanup of the remaining 39 sites will finish by 2035 and will cost $142 billion down from $192 billion which we were looking at in 2001. While the achievement that we're going

to work towards is remarkable, I'm concerned by the Department's overriding determination to close out cleanup by 2035.

This budget proposes shifting a number of cleanup responsibilities to other offices and creating an entirely new office to manage future cleanup of any ongoing DOE activities that are not currently managed by EM.

It seems absurd to think that waste generated after a certain date shouldn't be handled in the same aggressive manner that EM has applied to existing cleanup. The budget process, creation of an office of future liability—and I'm not at all convinced that creating a new office and bureaucracy makes sense—EM has worked very hard to minimize waste cost and it would be a shame to lose the experience and knowledge created.

I intend to evaluate all the cleanup responsibilities EM has proposed shifting to other programs in this budget, including the proposal to saddle NNSA with the added cleanup burden. Since we don't ask EM to test our nuclear stockpile, it seemed inconsistent to expect NNSA to perform environmental cleanup. Now maybe I got it wrong, but I don't think so.

The President's budget requests $880 million for Yucca. The President proposes tapping the mandatory fees assessed to utility customers to pay for developing the waste repository. These fees amount to $749 million this year. The budget proposes that an annual receipt be reclassified as discretionary funds and appropriated. I'm not optimistic that this reclassification can be accomplished.

I know that the Senate budget resolution does assume $577 million as a minimum level of funding, the same level that was provided in 2004. I remain hopeful that more will be provided this year in order to keep Yucca on schedule to open by 2010. For the Office of Environmental Safety and Health, the President's budget provides $139 million. This office has the important responsibility of ensuring that DOE facilities across the complex maintain the highest levels of worker safety and abide by proper environmental standards.

I was disappointed to read in the Washington Post of a draft DOE inspector general report that indicates that there has been significant underreporting of worker inquiries by the Department of Energy's Office of Environmental Safety and Health.

According to the IG, the audit disclosed instances of inaccurate and incomplete data entry and the Department's safety performance was overstated. The audit found that the Department's reporting of restricted work, but that the contractor had actually reported 1,113 days of restricted work, a figure more than twice that which DOE has figured. If true, these accusations indicate that this Office has not addressed worker safety consistent with the mission and the responsibility. We'll be asking about that. You may have a different version. We want to hear that.

The Office also funds the Energy Employees Occupational Illness Compensation Program which has failed to expedite worker compensation claims. Now, I understand that that statute is not very easy to interpret and not very easy to implement. Nonetheless, we don't have any other statute and that means we've got to do better.

In my opinion, the claims that we failed in that regard need to be thoroughly discussed. Those who are waiting around for coverage are making a lot out of the fact that they are waiting and waiting, and that's difficult and it's very hard for us, too. I'm sure it's very hard for Senator Craig to gather enormous amounts of data to validate the worker claims that exist and I understand the Department has prepared new legislation as well as $33 million for reprogramming in 2004. That's going to be tough, but we ought to get started.

PREPARED STATEMENT

I will evaluate both requests to ensure that these proposals will help DOE improve its ability to process worker claims. Now, I was going to yield to Senator Reid who is tremendously interested in what's going on and I appreciate working with him. Senator Reid.

[The statement follows:]

PREPARED STATEMENT OF SENATOR PETE V. DOMENICI

Good morning—this hearing will come to order.

Today, the subcommittee will take testimony on the fiscal year 2005 budget request from Jessie Roberson, Assistant Secretary, Office of Environmental Management; Beverly Cook, Assistant Secretary, Office of Environment, Safety and Health; and Dr. Margaret Chu, Director, Office of Civilian Radioactive Waste Management.

I appreciate your participation here today and I look forward to your testimony.

The President's request for the Office of Environmental Management provides $7.4 billion. This is the largest request ever made for environmental cleanup. I must applaud the efforts of Assistant Secretary Roberson for her efforts and the efforts by the Department of Energy to reform the DoE cleanup program.

This administration has succeeded in reducing the total cost of EM cleanup by $50 billion and shortening the estimated timetable by 35 years. By focusing on risked-based cleanup strategies and seeking accelerated cleanup agreements with States, DoE now believes that clean up of the remaining 39 sites will finish by 2035 and will cost $142 billion. Down from $192 billion estimated in 2001.

While this achievement is remarkable, I am concerned by the Department's overriding determination to close-out cleanup by 2035. This budget proposes shifting a number of cleanup responsibilities to other Offices and creating an entirely new Office to manage the future cleanup of any on-going DOE activities that are not currently managed by EM. It seems absurd to think that waste generated after a certain date shouldn't be handled in the same aggressive manner EM has applied to existing cleanup.

This budget proposes the creation of the Office of Future Liability. I am not at all convinced that creating a new office and bureaucracy makes any sense. EM has worked very hard to minimize waste and cost and it would be a shame to lose the experience and knowledge created within EM.

I intend to carefully evaluate all the cleanup responsibilities EM has proposed shifting to other programs in this budget, including the proposal to saddle NNSA with the added burden of cleanup. Since we don't ask EM to test our nuclear stockpile, it seems inconsistent to expect NNSA to perform environmental cleanup.

The President's budget requests $880 million for Yucca Mountain. The President proposes tapping the mandatory fees assessed to utility customers to pay for developing the waste repository. These fees amount to $749 million this year. The budget proposes that the annual receipts be reclassified as discretionary funds and appropriated. I am not optimistic that this reclassification can be accomplished this year. However, the Senate Budget Resolution does assumes $577 million as a minimum level of funding—the same level that was provided in fiscal year 2004. I remain hopeful that more will be provided this year in order to keep the Yucca Mountain on schedule to open by 2010.

For the Office of Environment, Safety and Health, the President's budget provides $139 million. This Office has the important responsibility of ensuring that DoE facilities across the complex maintain the highest levels of worker safety and abide by proper environmental standards.

I was disappointed to read in the Washington Post of a "draft" DoE Inspector General Report that indicates that there has been significant under-reporting of

worker injuries by the Department of Energy's Office of Environmental, Safety and Health.

According to the IG "the audit disclosed instances of inaccurate and incomplete accident and injury data" and the "Department's safety performance statistics were overstated." The audit found that the Department's reporting at the Waste Treatment facility at Hanford reported 552 days of restricted work, but that the contractor had actually reported 1,113 days of restricted work—a figure more than twice has high as the DOE figure. If true, these accusations indicate that this office has failed to address worker safety consistent with its mission and responsibility.

This Office also funds the Employee Compensation program has failed to expedite worker compensation claims. The existing program has been plagued by challenges in putting together enormous amounts of data to validate workers claims. I understand the Department has prepared new legislation as well as a $33 million reprogramming in fiscal year 2004 to increase the effectiveness of the program.

I will carefully evaluate both requests to ensure that these proposals will help DoE improve its ability to process worker claims.

Now, I will yield to Senator Reid for any opening statement he would like to make.

STATEMENT OF SENATOR HARRY REID

Senator REID. Thank you very much, Mr. Chairman. I apologize for being a little bit late, but you always start promptly for which I am grateful. I am pleased to welcome the panelists here today. I think, Mr. Chairman, it's a mere coincidence that three of the witnesses here that are appearing today—anyway, I think it's good that you are appearing here today.

We generally mix these panels from year to year and I'm not sure that I am personally aware of your office having testified before, but if you have, I missed that. I'm glad that you're all here. I think this has been arranged well. I want to make a point about how history tends to repeat itself at the Department generally with results that I have to say haven't been good for the employees and the contractors.

Dr. Chu, as you know, this subcommittee held a hearing in Las Vegas earlier this month to address the issue of Yucca Mountain mining workers being exposed to silica dust and other problems, other compounds I guess would be the right word, during the boring of the experimental tunnel.

The experimental tunnel is 5 miles long. The Department didn't provide respiration equipment for ventilation—I'm sorry. I thought I turned it on. I must have turned it off.

Only after workers began getting sick recently has the Department begun to try to identify and find these workers, many of whom have no idea that the Department in essence has sent many of them to an early death. The Department knew of the presence, I should say, of silica in the rock being bored. The link to silicosis has been known for thousands of years and in that area it's been known for more than 100 years.

To make matters worse, the Department waited 10 years before lifting a finger to determine the extent of damage done to workers' health, only after workers began getting sick. Dr. Chu, you were gracious to send your Yucca Mountain site manager and your safety advisor to the field hearing and we appreciate that very much. You have been candid in my estimation.

I was, though, concerned with both of them. I thought they would say that we as an organization didn't do the right thing, didn't do a good job. We are going to do everything in our power to find the

people who are sick and take care of them, but we didn't get that. We got a lengthy discussion of how the Department now has policies and procedures in place to make sure something like this will never happen again. It shouldn't have happened in the first place, and we really have to do everything we can to find out the condition of the people that have been exposed there.

The present-day environmental management and environment safety and health programs—perhaps you will see that I am not comforted when I am told that DOE has policies and procedures in place. They do not have procedures in place to protect workers nationwide.

Ms. Roberson, you have the largest budget and one of the most important jobs in the entire department. For all intents and purposes, you are in charge of cleaning up the environmental catastrophe of winning the Cold War. This is a huge, technically difficult and extremely expensive job. I don't envy you this task. I think by and large, you've done a good job with your program of accelerated cleanups. Shaving decades and billions of dollars from these cleanup programs is a noble and important goal. Everyone involved wants these tasks completed, but we want them done right and the only way they can be done right is by keeping the workers who are doing it healthy and safe.

I am concerned when I read about what seems to be a very high injury and exposure rate among workers at cleanup sites. This was reported in the press over the weekend. I get more than upset when I read that DOE's own inspector general is reporting that the Department maintains "inaccurate and incomplete accident and injury data" even when its contractors have completely accurate data.

When the Department's database indicates that 166 days were lost to injury at the Idaho National Engineering Laboratory and the contractor, Bechtel, reports 463 days lost during the same reporting period, something's really wrong and this is particularly in light of the fact that Bechtel has received incentives and as contractors, discourages them from reporting too many injuries.

There are only two possible conclusions to draw from such a disparity: first, incompetence. Based on the Yucca Mountain Program experience and other monitoring of site workers that I have seen and heard over the years, this is plausible, unacceptable but plausible.

Second, the Department has been deliberately downplaying the risks associated with doing this cleanup, either to meet schedule or contain costs. Incompetence of keeping health records, particularly an organization that has roots dating back over 50 years, upsets me. However, if the final IG's report contains even a whiff of a notion that DOE has been systematically underreporting injury and exposure in order to meet deadlines and to contain costs, there are going to be some serious consequences.

None of us here are willing to trade lives and long-term life of our citizens in order to meet these milestones. Ms. Roberson, Ms. Cook, I desperately want to believe that there is a simple and plausible explanation for what the IG has found, and if you have one, I hope you'll share it with us. My long association with the Department through administrations, both Republican and Democratic, is that worker safety has never been the priority that it should be.

Frankly, the Department's first crack at an explanation gives me no faith that you're going to be able to convince me that everything is as it should be.

Whenever a department spokesman's first line of defense is that it's just a draft report and B, anyone who thinks we have a problem is just being political, as Joe Davis said this weekend, the Press Secretary for Secretary Abraham, my confidence level sinks. This is typical. Any professional doing his or her job who has the audacity to agree with their point of view is by nature a partisan or political hack. In my view, this is a flimsy defense when compelling answers and solutions are called for.

Dr. Chu, as you might imagine, I have some things I want to discuss. This is something that you may want to respond to in writing, but let me just say that you recently announced that you retained the Virginia-based law firm of Hunton & Williams at the sum of $45 million to defend your license application. That seems like a lot of money to me, in light that the firm and its employees have had no involvement to date in the drafting of the license application. Your staff should be competent enough to draft and assemble the application itself, and it would seem to me they're in a good position to answer the questions and defend its contents.

Given the incredibly technical nature of this application, how is it possible for a bunch of lawyers to add $45 million of value to this process? But I am hopeful that Hunton & Williams will not have any of the obvious conflicts of interests that the previous law firm did, Winston & Strawn. I'd be keeping a close eye on the staffing and billing of this legal team.

In the trade press, I've noted that you've settled the lawsuit filed by the loser in the original firm bidding process for almost $5 million. That's a lot of money for a law firm that didn't do one single minute of work for American taxpayers in this matter.

So I have a series of questions that I will submit with the chairman's permission. I would hope that you would answer them as quickly as you can. One more thing. You were unable to attend the field hearing in Las Vegas early this month and hear what some of those workers had to say. We have to really take a look at that, and I hope that you'll go back and look at how the workers have been treated and how sick they are until we get to the bottom of this.

As I indicated earlier, not only am I concerned about the silicosis, but we had expert testimony there that one of the formations that they went through is something called ironite which is worse than asbestos and causes mesothelioma. We had a doctor come and testify to that fact, so it's a serious situation.

PREPARED STATEMENT

I appreciate very much, Mr. Chairman, your patience in allowing me to make this statement. I am going to, as I indicated, with your permission, submit a number of questions and ask the witnesses to respond to those to the full committee at their earliest convenience.

[The statement follows:]

PREPARED STATEMENT OF SENATOR HARRY REID

Mr. Chairman, I appreciate you holding this hearing today to discuss the budget for the Environmental Management, the Yucca Mountain program, and the Office of Environment, Safety and Health.

Like you, I am pleased to welcome Ms. Jessie Roberson, the Assistant Secretary for the Office of Environmental Management; Dr. Margaret Chu, the Director of the Office of Civilian Radioactive Nuclear Waste; and Ms. Beverly Cook, the Director of the Office of Environment, Safety, and Health.

It is a mere coincidence that the three of you are appearing together here today. We generally mix these panels up a little bit from year to year. Additionally, I am not sure that we hear from your office each year, Ms. Cook.

However, I am glad that all three of you are here together, so I can make a point about how history tends to repeat itself at the Department of Energy, generally with bad results for the health of employees and contractors.

Dr. Chu, as you know, this subcommittee held a field hearing in Las Vegas earlier this month to address the issue of Yucca Mountain mining workers being exposed to silica dust during the boring of the Experimental Tunnel in the mid-1990's. The Experimental tunnel is 5 miles long. The Department did not require or provide adequate respiration equipment for ventilation during the drilling of the first 3 miles, a period of about 2 years.

As many as 1,500–2,000 Test Site Workers may now be facing silicosis, a deadly respiratory disease. The number may be higher or lower. The Department is not really sure yet and did not keep accurate records of who was on the work site at the time and have made no effort until recently to try to figure it out.

Only after workers began getting sick recently has the Department begun to try to identify and find these workers, many of whom have no idea that the Department's negligence has potentially sentenced them to an early death.

The Department knew of the presence of the silica in the rock being bored. The link to silicosis has been known for THOUSANDS of years, yet the Department knowingly allowed its employees and contractors to toil for 2 years in such an environment before fixing the problem.

Then, to make matters worse, they waited for 10 years before lifting a finger to determine the extent of the damage done to workers' health, and then only AFTER workers began getting sick.

Dr. Chu, you were nice enough to send your Yucca Mountain Site Manager and your Senior Safety Advisor to the field hearing. However, I got pretty upset with both of them because, frankly, I expected them to say clearly and without equivocation, "We, as an organization, screwed up, but we are going to do everything in our power to find these workers and TAKE CARE OF THEM."

Instead, I got a lengthy discussion of how the Department now has policies and procedures in place to make sure something like this will never happen again.

Wrong Answer. It never should have happened in the first place.

Unfortunately, it happens a lot at DOE.

Let's fast forward to the present day Environmental Management, and Environment, Safety and Health Programs and perhaps you will see why I am not comforted when I am told that the DOE has policies in procedures in place to protect workers nationwide.

Ms. Roberson, you have the largest budget and one of the most important jobs in the entire Department: For all intents and purposes you are charged with cleaning up the environmental catastrophe associated with winning the cold war.

This is a huge, technically difficult, and extremely expensive job. I do not envy you this task, Ms. Roberson. I think, by and large, you have done a good job with your program of accelerated clean-ups. Shaving decades and billions of dollars from these clean-up programs is a noble and important goal.

Everyone involved wants these tasks completed.

However, we want them done right. And the only way they can be done right is by keeping the workers healthy and safe.

I am certainly concerned when I read about what seems to be a very high injury and exposure rate among workers at clean-up sites as I read over the weekend. But I get downright angry when I read that the DOE's own Inspector General is reporting that the Department maintains "inaccurate and incomplete accident and injury data" even when its contractors have completely accurate data.

When the Department's database indicates that 166 days were lost due to injury at the Idaho National Engineering and Environmental Laboratory and the contractor, Bechtel, reports 463 days lost during the same reporting period, something is wrong, particularly in light of the fact that Bechtel has incentives in its contract to discourage them from reporting too many injuries.

In my view, there are only two possible conclusions to draw from such a disparity:

—First, utter incompetence on the part of the Department in maintaining records. Based on the Yucca Mountain Program experience and other monitoring of Test Site Workers that I have seen and heard about over the years, this is entirely plausible. Unacceptable, but plausible.

—Second, the Department has been deliberately downplaying the risks associated with doing this clean-up work, either to meet schedule or contain costs.

Incompetence at keeping health records, particularly in an organization that has its roots dating back over 50 years, makes me very angry.

However, if the final IG's report contains even a whiff of a notion that DOE has been systematically under-reporting injury and exposure rates in order to meet deadlines or contain costs, there is going to be hell to pay.

None of us up here are willing to trade lives and long-term health of our citizens in order to meet milestones.

Ms. Roberson and Ms. Cook, I desperately want to believe that there is a simple and plausible explanation for what the IG has found. If you have one, I hope you will share it with all of us.

However, my long association with the Department, through administrations both Republican and Democratic, is that worker safety has never been the priority it should be.

Frankly, the Department's first crack at an explanation gives me no great faith that you are going to be able to convince me that everything is as it should be: whenever a Departmental spokesman's first line of defense is that (A) It is just a draft report and (B) Anyone who thinks we have a problem is just being political, as Joe Davis, Secretary Abraham's press secretary did this weekend, my confidence level sinks quickly.

This is pretty typical for this administration, though. Any professional doing his or her job who has the audacity to disagree with their point of view is, by nature, a partisan political hack.

In my view, that is a pretty flimsy defense when compelling answers and solutions are called for.

Enough on all of that for the moment.

Dr. Chu, as you might imagine, I have a further thought or two for you: first, you recently announced that you had retained the Virginia-based law firm of Hunton and Williams, for the sum of $45 million, to defend your license application for Yucca Mountain before the Nuclear Regulatory Commission.

That seems like a huge sum for me, particularly in light of the fact that the firm and its employees have had no involvement to date in the drafting of the licence application. If your staff is competent enough to draft and assemble the application itself, are they not in a better position to answer questions about it and defend the its contents? Given the incredibly technical nature of the application, how is it possible for a bunch of attorneys, even ones with some knowledge of the regulatory process, to add $45 million in value to this process?

While I am hopeful that Hunton and Williams will not have any of the obvious conflicts of interests that your previous law firm did, I will be keeping a close eye on the staffing and billing of this legal team.

I further note that I saw in the trade press that you have settled the lawsuit filed by the loser in the original law firm bidding process for $4.5 million. That is a lot of money for a law firm that did not one single minute of work for the American taxpayers on this matter.

I have a series of questions for all of you that I will either ask at the appropriate time or will submit for the record. I hope all of you will respond in a timely fashion.

Thank you for allowing me to take up a little more time than usual, Mr. Chairman. You were unable to attend the field hearing in Las Vegas earlier this month and hear what some of these former workers had to say. I am still stunned and angry at the way the Department treated its workers back then and apparently still are. The Department is charged with doing important things for this country, many of them dangerous, and, unfortunately, I am no longer convinced that worker safety is a high enough priority. Perhaps we should consider slowing clean-ups down for a short period to allow the Department to take a comprehensive, across-the-board look at its safety policies and procedures.

Thank you, Mr. Chairman.

Senator DOMENICI. I would like to hear from Senator Craig. Senator Craig, before you do that, I want to share with you, in the event you haven't seen this, an announcement today by a consortium of American companies to start a process of seeing how the

new licensing procedures will help them in the event they want to build a nuclear power plant.

Now, they haven't said they're going to build one, but they've said they're going to join together and apply in an effort to determine whether it is true that this new process expedites licensing or not. I'm very thrilled. That's not the end of the road, but I would assume with your advocacy for nuclear power, that you would probably think this is a very important event.

Senator REID. Who's going to do that, Mr. Chairman?

Senator CRAIG. The companies are Exxon Energy, Nuclear Southern Company, Constellation Energy Baltimore, EDF International, which is a subsidiary of a large French firm.

Senator DOMENICI. Senator, I want to make sure that you understand that there is no site. This is just to see if it works.

Senator CRAIG. There's nothing wrong with that.

Senator DOMENICI. And I think we just need that. Senator Craig.

STATEMENT OF SENATOR LARRY CRAIG

Senator CRAIG. Well, thank you very much, Mr. Chairman, and thank you for mentioning that. I think what is important here is to, as the companies are attempting to do, demonstrate the U.S. Nuclear Regulatory Commission's new what they call the COL or COL process, which is a combination I think of construction and operating license end process. I think that might work well. Thank you all for being here today. We have a variety of important questions to ask of you and to look at the budget for the coming year. Let me say, and Senator Reid, let me echo your concern about worker safety.

There is a field report in each one of the field offices, and in the conversion of that report to a headquarters report, nothing should fall through the cracks, and I think that is what is being suggested that something might. To say that there is not full reporting, to go to the field offices and look, I think we see a different story, and it's important that there be full transparency here as it relates to reports and realities in worker safety. All of us are extremely concerned about that as we should be, as I know certainly all of you are.

Mr. Chairman, I've got a variety of issues that I will discuss and questions today, but let me say at the outset that I'm going to be very direct for a few moments on items associated with environmental management and that budget request. I'm going to be, I hope, very clear as to where I stand and what I'm going to ask of you, Mr. Chairman, and of the Ranking Member to support as we craft this budget bill.

For the second budget request in a row, DOE is asking that a number of responsibilities be transferred out of EM and into other programs. I guess I have to ask this, then. Is there a larger design here and is Congress only seeing it in a piecemeal fashion by a year-to-year budget proposal. It almost appears that DOE is reducing the scope of the EM program so that it can be finished and victory declared by a date possible and then, oh by the way, we aren't done with high-level waste and we transfer the spent fuel storage to another program and we haven't addressed buried waste and we've created a new office of future liabilities.

In other words, Mr. Chairman and to all of you assembled, environmental management is focused on completion as DOE's budget states, but only completion of all the things that aren't transferable somewhere else. So do I sound concerned? You bet I'm concerned. I'm very concerned about the position and the reorganization that DOE is proposing.

Here is what I have to ask the chairman and the ranking member to consider. I believe we should put these piecemeal transfers on hold in the fiscal year 2005 budget. I asked DOE to come back to the authorizing committees and to this committee with a comprehensive plan for all of these changes along with a mapping from the old budget to the new proposal and to submit all that within the 2006 budget request.

DOE is also asking to fence off $350 million related to cleanup of high-level waste in Idaho and Washington, South Carolina until Congress passes legislative language related to waste reclassification. Let me be clear. I do not support the language DOE submitted. It may be that given DOE's loss in the court in Idaho, we may need to clarify what we mean in terms of tank closure.

If DOE and the State of Idaho can come to an agreement on the shape of that, what shape that clarification should take in law, I will work with my colleagues here to support that effort and to support the Department's effort.

I will not allow DOE to hold this work hostage or to hold this budget hostage with these kinds of tactics. DOE's own budget makes reference to the sole-source aquifer in Idaho, that most of the waste sits over the top of, that provides Idaho's drinking and irrigation water. Now, I notice that DOE's fiscal year 2005 budget at Rocky Flats in Colorado is asking for the funding to remove every last bit of radioactive material or waste, low-level waste, from Rocky Flats for off-site disposal. I find it very difficult to reconcile that with DOE's continued innuendoes that the States like Idaho and Washington are insisting on "gold-plated cleanup" just because they want some say in how DOE defines how clean is clean.

DOE knows I have been open to proposals that are alternatives to current proposals if they make sense to all parties involved. At Rocky Flats, DOE spent over 5 years working with the State of Colorado and other stakeholders in developing how clean is clean. They call it their soil action levels. Well, they were taking 5 years to develop those standards, they kept clunking along on the cleanup.

So I find it completely unacceptable that DOE thinks it can, if you will, hold hostage $350 million and refuse to continue high-level waste cleanup while demanding that DOE have it their way in Idaho and Washington and South Carolina, or to spend money to remove all the radioactive waste at Rocky Flat but tell Idaho that DOE doesn't have to address any of our buried waste, some of which is transuranic, that stuff that is customarily, as we know, going to the facility in Carlsbad.

We know on this committee that resources are limited and that we don't have an open access to the U.S. Treasury, but we're going to be looking for some equitable treatment when it comes to risk. We're also going to be asking for what I would suggest needs to be

a clearly transparent approach to what the end game is and what the procedures are, and I don't feel at this time, frankly, we understand it nor are we gaining that kind of transparency. I hope that's about as clear as it can be said.

But Mr. Chairman, this is one Senator that is not at all happy with the current proposal and the current budget.

Senator DOMENICI. Thank you very much, Senator Craig. Let me say you have had to sit there and accept as we do in the Congress, the feelings of Senators. You have your opportunities to answer all this, but I'm going to do the following.

Senator Murray is willing to stay. I don't know if you want to go to Tenet? You don't. Well, Senator, you preside, and then Senator Murray has a series of questions, so if you would let her go, and I will try to get back. When I come back, I do want to ask if you have had a chance to explain the allegations, especially in the safety and health area, but four or five areas, because I am interested and I don't necessarily share the same opinion of the Senators who have spoken, but that's too bad. They may have more votes than I have.

But the important thing is to try to figure out how we can do it, and to do that, we've got to know facts, so with this, I'm going to yield to Senator Murray, and then Senator Craig is going to take over. I'm going to walk quickly to hear Mr. Tenet. I will stay until noon. If we are not finished, we'll just have another hearing because there are three or four issues that have to be answered or we're going nowhere.

You haven't talked much, Dr. Chu, and we want to hear from you also. Before I leave, I want to say that it is rare indeed to look at this problem of Yucca and the disposal of waste. We've been sitting around looking at a graph. At one point, we had 300, 400 billion on these graphs, and it's amazing that all the men that tried didn't make any headway. So now we've decided the women will take the lead, and I'm very pleased with you, Dr. Roberson, and with you, Dr. Chu. You came from one of our laboratories. It is absolutely amazing what you have done, regardless of the criticism. Your activities have been very, very interesting and I will leave now and try very much to come back. Okay.

STATEMENT OF SENATOR PATTY MURRAY

Senator MURRAY. Thank you very much. I assume that's an endorsement for women to take over the Senate as well.

Senator CRAIG [presiding]. I am now clearly in the minority in this room. Please proceed.

Senator MURRAY. Well, I do want to make an opening statement. I want to thank Senator Domenici. And other challenges are completed or well underway. The funding the administration has been requesting and this subcommittee has been providing is making a real difference. Unfortunately, that is not the full story at hand for today. It seems time and again, the Department makes decisions that raise questions about its commitment to full cleanup, partnership with Federal and State regulators, communication with the community, and concern about safety.

We can all agree with the Department's goal of accelerated cleanup, but as I said 2 years ago, this cannot occur at the expense of

worker safety or the environment. The recent events raised this very fear. First, the Department is seeking unilateral authority to reclassify high-level waste at Hanford, Idaho and South Carolina. Those three States plus New Mexico, New York and Oregon are opposing this effort in court.

Secondly, workers are being exposed to potentially dangerous tank vapors at Hanford.

Third, there are accusations that medical care is being manipulated to reduce the number of days not worked due to work-related injuries. These and other injuries raise real questions about the Department's commitment to full and faithful cleanup and worker safety.

PREPARED STATEMENT

I believe the Department can achieve full cleanup and cost and time savings while keeping faith with regulators, communities and workers. In fact, I believe the cleanup program can be a nearly unquestionable success if it addresses all those issues. We will not solve this today, but the Department needs to take some considerable steps to rebuild good faith with these partners in cleanup. Thank you, Mr. Chairman. I do have questions and I will wait until after the witness' testimony. Thank you.

[The statement follows:]

PREPARED STATEMENT OF SENATOR PATTY MURRAY

Mr. Chairman, I would like to make a brief opening statement.

First, I'd like to express my appreciation to you and Senator Reid for both of your steadfast support of the Environmental Management Program. This program is obviously vitally important to my State and I'm very appreciative of your help.

I'd like to say that I'm pleased with most of the recent cleanup activities at Hanford. Significant actions on spent fuel, the plutonium finishing plant, and other challenges are completed or well underway. The funding the administration has been requesting and this subcommittee has been providing is making a real difference.

Unfortunately this is not the full story at Hanford.

It seems time and again the Department makes decisions that raise questions about its commitment to full cleanup, partnership with Federal and State regulators, communication with the community, and concern about safety.

We can all agree with the Department's goal of accelerated cleanup, but as I said 2 years ago, this cannot occur at the expense of worker safety or the environment.

But recent events raise this very fear.

First, the Department is seeking unilateral authority to reclassify high-level waste at Hanford, Idaho, and South Carolina. Those three States, plus New Mexico, New York and Oregon are opposing this effort in court.

Second, workers are being exposed to potentially dangerous tank vapors at Hanford.

Third, there are accusations that medical care is being manipulated to reduce the number of days not worked due to work related injuries.

These and other issues raise real questions about the Department's commitment to full and faithful cleanup and worker safety.

I believe the Department can achieve full cleanup and cost and time savings, while keeping faith with regulators, communities and workers. In fact, I believe the cleanup program can be a nearly unquestionable success if it really addresses these issues.

We will not solve this today, but the Department needs to take some considerable steps to rebuild good-faith with these partners in cleanup. Thank you Mr. Chairman.

Senator CRAIG. Well, thank you very much, Senator. Now that we've had our say, it's more than appropriate for you all to have your say before we go to questions, and with that in mind, let me first turn to Jessie Roberson, Assistant Secretary for Environ-

mental Management. Jessie, again, as the chairman has said, welcome before the committee.

STATEMENT OF JESSIE H. ROBERSON

Ms. ROBERSON. Thank you, sir, and good morning, Senator Murray and Senator Craig and staff for the subcommittee. I'd like to begin by conveying the Department's appreciation to you for your investment in the accelerated cleanup program. Your support is allowing us to achieve the dramatic results we forecast before this subcommittee a short 2 years ago.

I'm here today to discuss President Bush's fiscal year 2005 budget request for the Environmental Management program and its goal of sustaining the momentum that our work force has labored so hard to achieve, a momentum that benefits the vibrancy of our communities, our environment and our economy. In the last 2 years, we've introduced dynamic reforms, delivered fundamental change and achieved significant improvements in health, safety and environmental protection.

With your support, these reforms have become ingrained in our operations and our business processes, and with your continued support and our continued keen focus on risk reduction and cleanup, the momentum can and will continue. I'd like to take a moment to underscore the impacts of refocusing the Environmental Management program.

We have improved safety performance. We are committed to instilling the appropriate philosophy in every worker's day-to-day decisions from start to finish of every project. To that end, we are demonstrating that we can accelerate work and improve safety performance at the same time. We are focused on continuous safety improvement. We have institutionalized the behaviors of a learning organization in our organization. We invest in system safety training and leadership training. We demand a healthy inquisitiveness. We stick to the basics, allowing a disciplined conduct of operations, and we are focusing our environmental and operational safety efforts on prevention first.

And I look forward to responding to the issues raised in the opening statements regarding challenges to our safety performance. We have not nor will we stop paying attention to safety. We will continue to "raise the bar" and hold ourselves accountable to the highest standards.

Second, we have demonstrated real cleanup results and risk reduction. Last year we set a new floor of performance not yet seen in the history of this program, and I say floor because we see this as a level of performance that we will continue to build upon. Over the last 2 years, for example, six of nine nuclear fuel basins completely deinventoried. None of those were in our plan before. Four thousand, one hundred of 5,900 containers of plutonium, approximately 80 percent, have been packaged, we're almost complete. Over 1,300 of 2,400 metric tons, more than half, of the spent nuclear fuel is repackaged. Our workforce has accelerated that work, too.

Our corporate performance measures, detailing our performance, which I have included in my written statement, further demonstrates our progress and in combination with our safety perform-

ance, we have accomplished consequential outcomes important to the public, the communities that host our sites, and for the generations that follow us.

Three years ago, the Environmental Management program was described as lacking a risk-based cleanup approach and the hazards at the DOE sites and the liability associated with them did not appear to dictate the need for urgency. Innovative actions in all elements of the cleanup program were needed to transform EM's processes and operations to reflect an accelerated risk-based cleanup paradigm.

We believe that by providing an atmosphere that encourages innovation, we can reduce risk to workers and the environment more effectively and save resources to be reinvested in furthering the cleanup priorities of each of the sites. Tying all these accomplishments together has been our driving force to improve performance in our acquisition strategy specifically.

Legal actions and court decisions may direct us to alter or modify our activities from the accelerated cleanup and closure path. We are committed to work diligently with all concerned parties to avoid interruptions in reducing risk where we can. This year has seen dramatic results demonstrating our steadfast belief that continuing on the accelerated path will resolve the problems that lie before us. We must not lose our momentum that has so earnestly been established by the work force.

As with all new enterprises, impediments will be many, but we are committed to employ our resources to continue to show meaningful results and we're taking a very critical view of those results. The job is not done until it's done. We can't be complacent. We must continue to do better. It's not done when we develop a plan. It's not done when we agree on a milestone. It's not done when we ask for funding. It's not done when we sign a contract. It's not done when we get money. It's not done until it's done and there is positive and measurable risk reduction for the investment made.

PREPARED STATEMENT

I ask for your support of our fiscal year 2005 budget request of $7.43 billion to continue this momentum. We are safer today than we were last year, and we must stay the course so that we are safer next year than today. We have accelerated cleanup by at least 35 years, saving over $50 billion. The potential is there to lose what we have gained should we fail to stay focused on our commitments. Thank you, sir.

[The statement follows:]

PREPARED STATEMENT OF JESSIE H. ROBERSON

Mr. Chairman and Members of the subcommittee, I am delighted to be here today to convey the Department's appreciation for your support of the Environmental Management (EM) program, without which the dramatic results in accelerating the cleanup of the legacy of the Cold War would not be possible. I welcome this opportunity to sit before you and report on our progress, the potential gains and risks that lie before us, and the importance of sustaining the momentum that our workforce has labored so hard to achieve—a momentum that benefits the vibrancy of our communities and the environment.

Two eventful years have passed since the release of the Top-to-Bottom Review of the EM program. In these last 2 years, we have taken decisive steps to transform a program focused on managing risk to a core mission-focused program that is accel-

erating risk reduction and cleanup. We have introduced dynamic reforms, delivering fundamental change and achieving significant improvements in health, safety, and environmental protection but more was needed to be done.

Last year when I spoke with you, I stated that I was not "satisfied" with our progress. We must continue to better our performance and to look beyond the status quo to achieve results that are truly groundbreaking for the benefit of the generations that follow us. I challenged our workforce, our partners, and myself and all those interested in joining us in our vision of accelerated cleanup to put their most innovative ideas and people forward. I am proud to announce that with our combined efforts, our objective of accelerating environmental cleanup and risk reduction by 35 years and reducing estimated program costs in excess of $50 billion has become a reality. As cited in the recently released U.S. Department of Treasury 2003 Financial Report to the United States Government, "the recognized cost of cleaning up environmental damage and contamination across Government programs was estimated to be $249.9 billion, a decrease of $23.1 billion or 8.5 percent from September 30, 2002. The most significant component of this reduction relates to the Department of Energy (Energy). Energy has reduced its environmental liability by $26.3 billion or 12.5 percent in fiscal year 2003; this is the second year in a row that Energy's environmental liability decreased". Along with the environmental liability reduction in fiscal year 2002 of $28.7 billion, the Department has reduced its environmental liability by $55 billion over the last 2 years. A reduction mostly due to employing a cleanup approach that focuses on accelerating risk reduction to public health. With your support and our continued keen focus on cleanup and closure, the momentum can continue.

For fiscal year 2005, the President's Budget includes a record $7.43 billion for the accelerated cleanup program, the peak year in our funding profile. As we identified last year, the administration believes that this investment is crucial to the success of accelerated risk reduction and cleanup completion. We anticipate funding will then decline significantly to about $5 billion in 2008.

The EM portion of the fiscal year 2005 Congressional budget is structured analogous to last year. The budget structure focuses on completion, accountability, and visibility; institutionalizes our values; and integrates performance and budget. Requested funding can clearly be associated with direct cleanup activities versus other indirect EM activities.

Within the Defense Site Acceleration Completion Appropriation, the budget reserves $350 million for a High-Level Waste Proposal. With the Idaho District Court decision on Waste Incidental to Reprocessing, the Department's ability to proceed prudently with accelerated risk reduction for some activities is drawn into question. The decision makes it difficult, if not impossible, for us to undertake planned actions at Idaho, Hanford and Savannah River Site to aggressively reduce risks posed by wastes stored in tanks at those sites—actions we had committed to take, in agreement with our host States, before the court decision. The decision now means we are likely to leave tank wastes in place longer while we try to resolve issues created by the decision—a course that has significant societal and monetary costs. This $350 million supports activities normally funded from the 2012 Accelerated Completions account and from the 2035 Accelerated Completions. These funds will be requested only if the legal uncertainties are satisfactorily resolved.

In alignment with ongoing Departmental missions, this budget reflects a transfer of multiple activities that are not core to the EM mission to other Departmental elements. These transfers provide the responsible and accountable mission programs with the resources and tools to achieve their objectives at the expected performance level. This accountability model is the key to moving each of the enterprises or missions of the Department forward in attaining the desired outcomes and results important to the administration and supporting our accelerated risk reduction and closure initiative. Transfers include:

—Transferring Federal staff at the Pacific Northwest National Laboratory to the Office of Science and Federal staff at Headquarters to the Office of the Chief Information Office.

—Transferring the EM portion of the Offsite Source Recovery Program to the National Nuclear Security Administration.

—Transferring spent fuel storage responsibilities at Idaho National Laboratory, the Foreign Research Reactor Spent Fuel Program, management of NRC-licensed spent fuel, and the National Nuclear Spent Fuel Program to the Office of Civilian Radioactive Waste Management.

—Transferring Formerly Utilized Sites Remedial Action Project records management, responsibility for cost liability and recovery reviews, and Environmental Justice and the Massie Chairs of Excellence Program to the Office of Legacy Management (LM).

We will also be transferring sites, as they are completed, either to the landlord or to LM. The latter will occur if the site has no further DOE mission. EM is working with LM to ensure smooth site closure and transition by:

—Ensuring that site baselines identify functions and elements beyond contract closure to meet all internal requirements;
—Conducting assessments of site readiness for transfer and closure in tandem with LM;
—Having joint teams at each site (Rocky Flats has 2 LM employees) and supported by HQ LM personnel who were once EM personnel and EM personnel at sites are transferring to LM positions;
—Holding quarterly meetings between EM and LM senior management to address key issues and make decisions;
—Developing a communication plan defining roles and responsibilities between EM and LM staff.

The administration considers this budget request a critical step on the accelerated risk reduction and cleanup path. Without these resources, we could face higher risk to the environment and the public and lose the momentum we have gained in changing the paradigm. With your support, we have the opportunity to succeed in producing historic results that will last for many years to come.

DEMONSTRATING RESULTS

With the October 2003 release of the Report to Congress on the Status of Implementation of the Top to Bottom Review, we have demonstrated that the direction we took 2 years ago is showing real results. I wish to take a moment and expound the impacts of the far-reaching accomplishments that are underpinning the developing momentum of the program.

Improved Safety Performance

We believe in order to accomplish our accelerated risk reduction and cleanup mission, we must continue to do work safely. We are committed to instilling this philosophy in every worker's day-to-day decisions from start to finish of every project. To that end, with top-quality safety standards, we are demonstrating that we can accelerate work and improve safety performance at the same time. For example in August 2001, EM's Total Reportable Cases (TRC) and Lost Workday Cases (LWC) were 1.9 and 0.8 respectively, per 100 workers (TRC and LWC are standard tools used to measure safety performance). In September 2003, we had reduced our TRC to 1.2 and LWC to 0.5. These rates are significantly better than private industry, which OSHA reported in 2002, had a TRC of 5.3 and LWC of 1.6. The construction industry alone had rates of 7.1 for TRC and 2.8 for LWC in 2002. We have not nor will we stop paying attention to safety. We will continue to "raise the bar" and hold ourselves accountable to the highest standards. Complacency is not acceptable in our advance to the safe conclusion of our cleanup objectives.

Cleanup Results and Risk Reduction

Prior to the Top to Bottom Review, EM had lost focus of the core mission, the mission that the program was established to solve—address the environmental legacy of the Nation's Cold War nuclear weapons research and production. With a program responsible for the management of millions of gallons of liquid radioactive waste and thousands of tons of spent nuclear fuel, the unhurried pace of cleanup and risk reduction was unacceptable. If immediate actions were not taken the risks associated with the EM program would continue to grow to unpardonable levels.

Last year set a new floor of performance not seen before in the history of the program. Our investment has born amazing results. For example: three spent nuclear fuel basins were de-inventoried at Idaho National Laboratory, along with two at the Savannah River Site and one at Hanford. And in regard to Hanford, we have removed 70 percent of the spent nuclear fuel from the K-Basins. These basins located less than a quarter of a mile from the Columbia River have the potential to leak and cause costly environmental harm both to the health of the river and the public—this is a significant gain in risk reduction. Another example is at Rocky Flats. This site, once responsible for nuclear triggers, has shipped all plutonium off site and closed the last remaining material access area. These visible, risk reducing results that have demonstrated our ability to accelerate schedule and reduce life cycle cost while showing to our public and surrounding communities the Department's commitment to improve worker safety, reduce health risks and eliminate environmental hazards.

So you may have a better comprehension of the magnitude of our cleanup results, I would like to insert for the record a copy of our recent corporate performance measures. EM's Performance Measures is a compilation of the program's 16 complex

wide performance measures. As you can see, we can deliver significant risk reduction and cleanup and, as I stated earlier, in combination with improved safety performance. Accelerating risk reduction and cleanup, in concert with exceptional safety performance, accomplishes consequential outcomes important to the public, our communities, and for the generations that follow us.

Innovations in Ideas, Processes, and Practices

Two years ago, the Top-to-Bottom Review described the EM program as lacking a project completion mindset, internal processes were inconsistent with a risk-based cleanup approach, and the hazards at the DOE sites and the liability associated with them did not appear to dictate the need for urgency in the cleanup decisions. The Top-to-Bottom Review team emphasized that the EM mission cannot be accomplished by continuing business as usual. Innovative actions in all elements of the EM program would need to be taken to transform DOE's processes and operations to reflect the new accelerated risk-based cleanup paradigm.

To foster innovation, we identified ideas and processes from successful projects that had delivered accelerated results and conveyed the information across the EM program. For example, at Rocky Flats, we drew from their experience in project planning and delivery along with technology advancements. Sharing the innovative practices allowed for similar outcomes at other sites. If I may take a moment to share a few ideas and practices:

(a) Establish a clear end-state vision and risk-based cleanup levels in conjunction with specific future land/site use and in consultation with regulators, stakeholders, and affected and interested governments.

(b) A "best-in-class" management team is recruited and sustained with the result of team focus and retention of key staff.

(c) Senior management emphasis is placed on key safety issues of keeping workers working, minimizing the risk of possible high-impact events, quick recovery after accidents, safety "pauses" as appropriate, and improved safety training.

(d) Projects are managed in an environment that provides significant incentives for real cost savings.

(e) New and innovative equipment and methods are being used for size reduction (e.g. plasma cutting torch, engineered enclosures, water-jet cutting of components), significantly improving safety and effectiveness.

(f) Improved decontamination techniques coupled with new radiation instrumentation.

We continue to encourage innovation in our processes and practices to further enhance safety performance, accelerate risk reduction, reduce health impacts, and save resources to be reinvested in furthering the priorities of each of the sites.

Acquisitions Driving Performance

Tying all these accomplishments together has been our continued drive to improve performance from our new acquisition strategy. These accomplishments serve as indicators of the level of performance we are expecting from our contractors now as well as into the future. When we reviewed our contracts over the past year—as you may remember I said we formed a Contract Management Advisory Board last year—we identified a short list of significant findings that did not prove advantageous to the overall success of the program. We concluded that DOE tends to manage the contractor not the contract, that project baselines needed improvement along with project management and the associated reporting, incentives for meaningful risk reduction were lacking, more emphasis was needed on cost-efficient performance, and there seemed to be insufficient competition and small business participation.

To address these weaknesses, we have instituted three business models that we believe will vastly improve our acquisition process and opportunities for success. Our reform strategy is to accelerate the reduction of risk from the legacy of the Cold War safely and efficiently and at a cost savings for the taxpayer. One model focuses on improving incumbent contractor's performance, while another aims to increase competition and small business participation. The third concentrates on the establishment of national Indefinite Delivery/Indefinite Quantity (IDIQ) contracts for remediation and decontamination and decommissioning. All three are on the fast track. In fact, in September, as a first step we announced the selection of five 8(a) businesses that will perform work at our small sites across the country. And in fiscal 2004, we have six new contracts—two at Paducah, two at Portsmouth, one at the Fast Flux Test Facility at Hanford, and one at the Idaho National Laboratory along with the IDIQ contracts that will be competed. We expect these new contracts will challenge the contractor community, a challenge that is healthy for all involved.

We Have Our Challenges Too

As we continue to challenge the status quo, we may be confronted with legal actions and court decisions that will direct us to alter or modify our activities from the accelerated cleanup and closure path. We will continue to work diligently with all concerned parties to avoid interruptions in reducing risk and advancing cleanup for the public.

We expect to be challenged on our delivery of Government Funded Services and Items, or GFSI. We are accountable on delivery of GFSI and we expect to be held to our commitments.

Also, we have challenged our managers at all levels to stay true to our commitment and employ our corporate performance measures as an accountability and success gauge assessing our progress as well as a tool that alerts us when management action or intervention is warranted.

THE FISCAL YEAR 2005 BUDGET REQUEST

The fiscal year 2004 budget was the first budget that fully reflected the initiatives undertaken by the administration to transform and revitalize the cleanup of the former weapons complex. The EM program has been refined and fortified with management reforms, which have led to accelerated risk reduction and a decrease in life-cycle costs surpassing previous expectations. The investment we have requested in our fiscal year 2005 budget will contribute to EM's continued success in achieving its mission of accelerated risk reduction and site closure.

The EM fiscal year 2005 budget request represents the peak year of our investment strategy to accelerate cleanup and reduce risk. This budget fully reflects each site's accelerated risk reduction and cleanup strategy. The fiscal year 2005 budget request is pivotal to keep the momentum going and to achieve even greater risk reduction and cost savings than ever before.

The 2005 budget request for EM activities totals $7.43 billion to accelerate risk reduction and closure. The request includes five appropriations, three of which fund on-the-ground, core mission work, and two of which serve as support. The five appropriations and associated requested funding are:

—Defense Site Acceleration Completion ($5.97 billion),
—Defense Environmental Services ($982 million),
—Non-Defense Site Acceleration ($152 million),
—Non-Defense Environmental Services ($291 million), and
—Uranium Enrichment Decontamination and Decommissioning Fund ($500 million).

Within the Defense Site Acceleration Completion Appropriation, $350 million is tied to the Idaho District Court decision on Waste Incidental to Reprocessing. These funds will only be requested upon satisfactory resolution of the recent court decision that affected the Department's plans for some waste streams.

In building the request, the Department applied the following principles and priorities:

Protect workers, public, and the environment.—The budget request continues to place the highest priority on protecting workers, the public, and the environment. The implementation of EM's cleanup strategies allows for an overall improvement in safety and reduction in risk because cleanup will be completed sooner, reducing the extent to which workers, the public, and the environment have the potential to be exposed. Over the past 2 years, dramatic improvements in safety performance have been demonstrated.

Ensure the appropriate levels of safeguards and security.—Due to heightened security levels throughout the Nation, it is crucial that we maintain vigilance in our domestic security to protect our citizens. The EM program is responsible for many tons of surplus nuclear material. This budget request reflects our increased safeguards and security needs, including the new Design Basis Threat requirements. Overall, the budget has decreased from fiscal year 2004 because we have been able to consolidate materials into fewer, more secure locations, and we have reduced the footprint of secure areas. The sites with the largest remaining funding needs are the Savannah River Site and Hanford. Savannah River Site's funding supports the security of nuclear materials, maintenance of uniformed protective force personnel, information security and operations security for the protection of classified and sensitive information, cyber security for the protection of classified and unclassified computer security, and personnel security. Hanford's funding supports security for shipment of special nuclear materials and elimination of one Material Access Area within the Plutonium Finishing Plant, enhancement of cyber security, Hanford site security clearances and other security activities.

Accelerate risk reduction.—Accelerated risk reduction requires a pragmatic approach to cleanup. Risk reduction occurs in various stages, which involve the elimination, prevention, or mitigation of risk. Because safe disposal of many materials will take a number of years to complete, our major focus of risk reduction is stabilization of high-risk materials.

The following categories of materials are considered to pose the highest risk:

—High-curie, long-lived isotope liquid waste,
—Special nuclear materials,
—Liquid transuranic waste in tanks,
—Sodium bearing liquid waste in tanks,
—Deteriorating spent nuclear fuel in leaky or poor integrity basins,
—Remote-handled transuranic waste and high transuranic content waste,
—Transuranic waste stored on the surface, and
—Decommissioning of highly-contaminated facilities.

Although all of these items are to be considered when setting priorities, their relative ranking may vary from site to site. Risk reduction is a major consideration in the development of the site baselines. Examples of planned activities/milestones for fiscal year 2005 that correspond to site-specific risk categories are:

Hanford

Complete cleanout of K East and K West basins (fuel, sludge, debris, and water).—The K basins are located less than 1,000 feet from the Columbia River. This project involves packaging and removing degrading spent nuclear fuel and radioactive sludge, debris, and water from wet storage in the K Basins to safe, dry interim storage away from the Columbia River. The K Basin facilities are well past their design lives and are a major threat to the environment due to the potential for basin leakage to the surrounding soil and the Columbia River. Their cleanout will prevent potential leakage of 55 million curies of radioactivity to the soil and the River and will decrease the risks posed by the basins to human health and the environment.

Complete transfer of nuclear material to the Savannah River Site or DOE approved interim storage facility, and complete legacy holdup removal and packaging/disposition of material/waste.—The Plutonium Finishing Plant (PFP) consists of several buildings that were used for defense production of plutonium nitrates, oxides and metal from 1950 through 1989. Completion of the transfer of the stabilized materials and legacy holdup material from PFP allows the cleanout and demolition of these facilities to slab on grade. It results in a reduced National security threat by consolidating nuclear materials into fewer locations.

Ship all above-ground transuranic waste to the Waste Isolation Pilot Plant.—Hanford has several thousand containers of previously generated transuranic waste in above-ground storage buildings. Characterization and shipment of this waste to the Waste Isolation Pilot Project for final disposal will reduce the risks to facility workers as well as reduce the safeguard and security vulnerability associated with this waste. This action represents final disposal of this waste in an environmentally protective repository.

Complete installation of In Situ Redox Manipulation Barrier in the 100–D Area.—Chromium-contaminated groundwater is reaching the Columbia River in the 100–D Area. The contamination levels are above 20 times the aquatic life water standard, and the area is adjacent to potential salmon spawning locations. To address this, a series of wells will be drilled and a chemical that detoxifies chromium will be deposited into the matrix in which the groundwater travels to the river. As a result, the groundwater reaching the Columbia River will once again meet the aquatic water standards, thereby protecting human health and the salmon population in the River.

Initiate waste retrieval from eleven single-shelled tanks.—Radioactive liquid waste stored in older single-shelled tanks has the potential of leaking and contaminating soil and groundwater that flows to the Columbia River, presenting a risk to human health and the environment. Waste will be retrieved from the single-shelled tanks and moved to safer double-shelled tanks.

Idaho

Disposition 34 containers of special nuclear material containing uranium, completing 75 percent of shipments offsite; initiate transfer of spent nuclear fuel from CPP–666 wet storage to the Irradiated Fuel Storage Facility; and maintain a running average of 2,000 cubic meters per year of TRU waste shipped out of Idaho.—Idaho sits over a major sole source aquifer, the Snake River Plain Aquifer, which is used to supply water to the people of southeastern Idaho as well as irrigation water for the significant agricultural activities. These actions will reduce the potential risk to human health by preventing the migration of contamination into the aq-

uifer. It also will reduce the national security threat by consolidating materials into fewer locations.

Paducah

Disposition 875 cubic meters of low-level/mixed low-level legacy waste, allowing for a 37 percent completion of work.—The packaging and disposal of low-level waste stored outdoors will reduce the waste inventory and eliminate the potential release into the environment that could result from deterioration of the storage drums. Outside storage of this material in some cases leads to additional surface water and soil contamination. Removal of these materials further reduces the continued exposure to workers performing surveillance and maintenance.

Disposition 12,400 tons of scrap metal.—Scrap metal is a suspected source of continued surface water and possible soil contamination. This action contributes to the continued source term removal of contaminants leaching into the environment. Reduction in the massive quantities of scrap metal continues to improve the potential safety concern to our workers.

Continue decontamination and decommissioning of C–410 complex.—The C–410 Complex is a large chemical complex in a shutdown condition. Removal of contaminated materials and equipment reduces potential risk to onsite workers and represents a key step in stabilizing the facility such that contaminants are prevented from release to the environment.

Portsmouth

Disposition 9,089 cubic meters of legacy waste.—The continued shipment and disposal of legacy waste will proportionally reduce the risk such wastes present to the health and safety of workers and reduce the on-going potential for release to the environment.

Process approximately 42 million gallons of water through Groundwater Pump and Treat facilities.—Plume control keeps contaminants from reaching surface streams and off-site drinking water supplies. Trichloroethylene (TCE), which was an industrial solvent, is the main groundwater contaminant at the site.

Pantex Plant

Complete Zone 11 soil vapor extraction for removal of contamination from the vadose zone and protection of the groundwater.—Removing the soil gas contamination will avoid potential migration to a fresh water supply, thereby reducing the risk posed to human health and the environment.

Complete Burning Grounds landfills interim corrective measure (engineered covers) to secure wastes and protect groundwater.—The covers will mitigate the vertical transport of contaminants, which will reduce the potential impact to the fresh water supply.

Complete demolition of Zone 10 Ruins.—The Zone 10 ruins have suspected high explosives contaminants in the numerous disintegrating structures. Removal of high explosive will avoid further contamination of soils, and demolition of the ruins will reduce safety risks to persons in the area.

Complete decontamination and decommissioning of Building 12–24 Complex.—There is evidence that this complex contributed to the high explosives plume that migrated to the southeast and off-site. Decontamination of the 12–24 Complex will mitigate the migration of this plume.

Oak Ridge

Complete East Chestnut Ridge Waste Pile Closure.—Risks associated with industrial safety will be reduced by eliminating the need to excavate and transport the material to treatment subsequent to disposal.

Complete disposition of legacy low-level waste.—Approximately 40 percent of the low-level waste was stored outdoors in deteriorating containers. Disposition of this waste will decrease the risks associated with their potential environmental release.

Complete processing and stabilization of transuranic waste tanks.—This action will eliminate the potential for the waste's migration to groundwater.

Initiate contact-handled transuranic waste processing at the Waste Processing Facility.—This waste is stored in above grade-storage trenches and in earthen trenches. Processing the waste prevents the risk of release to the environment and a continued cost of waste storage and monitoring.

Complete treatment of liquid low-level waste supernate at the Waste Processing Facility and disposal of the dried supernate product at the Nevada Test Site.—Treatment and disposal of the supernate decreases the risks posed by these highly radioactive fission products.

Complete Atomic City Auto Parts.—This action will reduce the risks posed to workers and the surrounding community from uranium and polychlorinated biphenyls contamination in the soil.

Savannah River Site

Begin processing neptunium solutions.—SRS has approximately 6,000 liters of Neptunium-237 nitrate solution in H-Canyon. Through processing, the neptunium solutions are converted into a more stable form, and the risks they pose to human health and the environment are reduced.

Complete bulk waste removal in Tank 5.—Tank 5 is 1 of 49 underground tanks currently used to store radioactive liquid waste at the Savannah River Site. This waste represents one of the highest risk to human health and the environment. Current plans call for the removal of the waste from Tank 5 for treatment, stabilization and disposal. A new approach, the Waste-On-Wheels (WOW) system, will be utilized to remove the waste from Tank 5 and other tanks. The Waste-On-Wheels is a portable method of performing bulk sludge waste removal from the tanks. The WOW system will reduce the project schedule for waste removal and therefore reduce the risk to human health and the environment imposed by the highly radioactive waste.

Complete decommissioning of seven industrial and radioactive facilities.—Decommissioning excess radioactive facilities will reduce the footprint of the site, and therefore collectively reduces risk to the worker by eliminating the need to enter the facilities to perform required, routine surveillance and maintenance activities. Risk of worker exposures while performing these activities is eliminated. Decommissioning excess radioactive facilities also eliminates the potential environmental and human health risk of accidental releases from these facilities. Decommissioning industrial facilities eliminates the risk to workers associated with having to maintain old facilities which are no longer needed but which require regular inspections or maintenance activities, such as roof work.

Lawrence Livermore National Laboratory—Livermore Site

Construct, install, and operate a portable treatment unit at Treatment Facility D Hotspot, Treatment Facility E Hotspot, the northern portion of the East Traffic Circle Source Area, and the Treatment Facility 406 Hotspot area.—These actions will further prevent the release of trichloroethylene (TCE), thereby reducing risks to the public from exposure to contaminated groundwater.

Remove contaminated surface soil and contaminated sandpile at Building 850.—These actions will mitigate risk to onsite workers, and will prevent further impacts to groundwater above health-based standards.

Construct, install, and operate groundwater extraction and treatment facility.—Remediation of the high-explosive process area is a high priority due to the offsite migration of contaminant plumes, current impacts to onsite water-supply wells, and the inhalation risk to onsite workers. These actions will impede the migration of plumes, protecting offsite water-supply wells from contamination.

Maintain closure schedules.—Three major sites, Rocky Flats, Fernald, and Mound, have accelerated closure schedules. In addition, two smaller sites, Ashtabula and Battelle-Columbus are scheduled to close in 2006. Funding in the fiscal year 2005 budget will allow these sites to remain on track toward project completion and site closure.

At Rocky Flats, fiscal year 2005 funding provides for:

—*Completing site deinventory of legacy low-level/mixed low-level and transuranic waste to off-site disposal; completing remediation of 30 release sites*.—During fiscal year 2005, Rocky Flats will be approaching completion of their commitment to closure and conversion of the Rocky Flats site for future beneficial use. The buildings where plutonium and other hazardous materials were used in support of the nuclear weapons deterrent will be under various stages of demolition, the final quantities of radioactive wastes will be removed from the site, and the grounds will be receiving the necessary remediation action. These actions, when complete, will allow the Department of Energy to release the site to the U.S. Fish and Wildlife Service to become the Rocky Flats Wildlife Refuge with little or no further risk to human health or the environment.

At Fernald, fiscal year 2005 funding provides for:

—*Completing decontamination and dismantlement of the Waste Pits Complex and the East Warehouse Complex, and completion of waste pits remedial action operations*.—Completing the Waste Pit Remediation Project will result in over 1 million tons of waste pit material having been transported off-site via rail for safe, compliant disposal and the D&D of the treatment facility and other waste pit infrastructures. Completing these activities represents a substantial risk reduction to human health and the environment for the entire Fernald Closure

Project site. This remediation activity is being conducted in an extremely safe manner considering the industrial hazards involved.

—*Completing Silos 1 and 2 operations, including removal of waste material, and beginning disposition of the waste for off-site disposal*.—Silos 1 and 2 Extraction and Treatment Operations represent the greatest risk to human health and the environment at the Fernald Closure Project. Silos 1 and 2 contain the highest levels of radiological activity residing in any waste stream at the site. The Silos 1 and 2 project constitute the Site Closure Critical Path. Their successful completion is a prerequisite for a timely and safe closure.

—*Completing construction of the On-Site Disposal Facility Cell 3 and Cell 4 caps*.—Capping Cells of the On-Site Disposal Facility (OSDF) will insure the reduction in risk to human health and the environment during post closure. Overall, the OSDF will be composed of 8 cells, containing 2.5 million cubic yards of waste soil and debris. The OSDF has been designed and engineered to possess a 5-foot thick liner and a 9-foot thick cap. The OSDF has a design life of 1,000 years.

At Mound, fiscal year 2005 funding provides for:

—*Completing remediation of 37 potential release sites (65 percent of remaining), including the restoration of potential release site (PRS) 66*.—Completing the PRS's in fiscal year 2005 decreases risk by preventing any further radioactive contamination from migrating into clean soil areas and ground water, by reducing potential exposure to site workers and other personnel located on site, and by precluding any potential environmental impacts to off site areas.

At Ashtabula, fiscal year 2005 funding provides for:

—*Completing remediation of the Waste Management Unit*.—Remediating the Waste Management Unit significantly reduces the remaining risks of organic and inorganic chemical exposure to both soil and groundwater at the RMI site.

At Battelle-Columbus, fiscal year 2005 funding provides for:

—*Completing decontamination/stabilization of the fuel storage pool and transfer canal and the high-bay area surfaces in JN–1*.—Removing this source term will reduce the risk of contamination, both internal and external, to the workers during building de-construction. Removal of the source term would also reduce risk to off-site areas and members of the general public.

Integrate technology development and deployment.—An integrated technology development and deployment program is an essential element for successful completion of the EM cleanup effort and for fulfilling post-closure requirements. The EM Technology Development and Deployment (TDD) program provides technical solutions and alternative technologies to assist with accelerated cleanup of the DOE complex.

EM technology development and deployment investments are focused on high-payoff site closure and remediation problems through a two pronged approach: Closure Projects and Alternative Projects.

Closure Projects.—Principal near term closure sites (such as Rocky Flats, Fernald and Mound) will be provided with technical support and quick response, highly focused technology development and deployment projects. The goal is to ensure that accelerated site closure schedules are achieved.

—At Rocky Flats closure site, technical assistance teams will assess critical technical issues and provide technology alternatives including the treatment and disposition of orphaned waste streams and improved methods of beryllium decontamination.

—At Mound, innovative technologies will be developed to determine and enable treatment of radioactive contaminated soil beneath buildings.

—At Fernald, the vacuum thermal desorption demonstration will be completed to provide a technical solution for an orphaned waste stream, and technical support to the Silos No. 1, 2, and 3 waste removal and disposition will be successfully completed.

—At Oak Ridge, delineation of contamination and definition of treatment feasibility for subsurface contamination will be completed.

Alternative Projects.—Alternative approaches and step improvements to current high-risk/high cost baseline remediation projects are our second focus. The goal is to enable cleanup to be accomplished safely, at less cost, and on an accelerated schedule. EM is focusing funds for fiscal year 2005 on:

—Alternatives For Tank Waste Pretreatment and Immobilization (Hanford Site, Office of River Protection);

—Alternatives for Carbon Tetrachloride Source Term Location (Hanford Site, Richland);

—Alternatives for Disposition of High-Level Salt Waste (Savannah River Site);

—Alternatives for Remediation of Chlorinated Ethenes using Monitored Natural Attenuation (Savannah River Site);
—Alternatives for Deposit Characterization and Removal at Gaseous Diffusion Plants (Portsmouth);
—Alternatives for In situ Transuranic Waste Delineation and Removal (Hanford Site, Richland); and
—Alternatives for Non-Destructive Assay and Examination of Large Transuranic Waste Containers (Savannah River Site/Carlsbad).

CONCLUSION

This year has seen dramatic results demonstrating our steadfast belief that continuing on the accelerated path will provide the direction and framework to resolve the problems that lie before us. As with all new enterprises that seek to challenge the status quo, impediments will be encountered. We must not lose our momentum that has so earnestly been established through collaboration and a singular focus of delivering meaningful results for the American public.

We are committed to employ our resources to show meaningful results and we are taking a very staunch view of results. The job is not done until it is done. We cannot be complacent, we must continue to do better. It is not done when we develop a plan—it is not done when we agree to a milestone—it is not done when we ask for funding—it is not done when we sign a contract—it is not done when we get money. It is not done until it's done and there is positive and measurable risk reduction for the investment.

The only measure of success will be positive, measurable accomplishments of public safety and environmental protection. The longer we wait, the greater the potential risk. We must not lessen our commitment to the American people to do the "right thing". I ask for your support to continue this important work. We must avoid losing the opportunity to rid this legacy from our children's inheritance. We are safer today than we were last year and we must stay the course so we are safer next year than today. We have accelerated cleanup by at least 35 years reducing lifecycle cost over $50 billion. The potential is there to lose what we have gained should we fail to stay true to our commitments.

I look forward to working with Congress and others to achieve this worthy goal. I will be happy to answer questions.

EM'S COMPLEX WIDE PERFORMANCE MEASURES [1]

Performance Measure	Unit	Fiscal Year 2003 Target	Fiscal Year 2003 Actual	Fiscal Year 2004 Target	Fiscal Year 2005 Target	Actual Lifecycle Through Fiscal Year 2003	Lifecycle Scope
Pu packaged for long-term disposition	No. Cont.	2,836	3,065	1,323	165	4,549	5,850
eU packaged for disposition	No. Cont.	277	201	925	669	2,054	9,101
Pu/U residues packaged for disposition	kg Bulk	934	1,140	254	76	107,659	107,782
DU&U packaged for disposition	MT	1,815	4,551	.....	.....	7,651	742,149
Liquid Waste eliminated	gallons (1000s)	700	.....	1,300	1,900	.....	88,000
Liquid Waste Tanks closed	No. Tanks	1	.....	9	9	2	241
HLW packaged for disposition	No. Cont.	130	115	250	250	1,727	18,735
SNF packaged for disposition	MTHM	857	807	633	1	1,446	2,420
TRU disposed	m3	4,522	6,372	12,952	13,678	14,092	141,314
LL/LLMW disposed	m3	75,030	118,362	89,815	107,067	402,568	1,155,360
MAAs eliminated	No. MAA's	.....	1	1	1	6	14
Nuclear Facility Completions	No. Facs.	2	4	5	14	21	523
Radioactive Facility Completions	No. Facs.	7	24	45	67	148	804
Industrial Facility Completions	No. Facs.	49	107	110	187	617	2,423
Geographic Sites Eliminated	Sites	2	1	.....	2	76	114
Remediation Complete	No. Rel. Sites	214	260	200	283	5,186	10,374

[1] Each of EM's 16 corporate performance measures is quantitative and focuses on those materials, wastes, environmental media, and facilities that comprise the majority of the risk to environment, public health, and safety. When these measures are completed, the EM program has accomplished its mission. Each measure is tracked in the context of the total life-cycle on 2035 accelerated schedule. The corporate performance measures are under strict configuration control, thereby establishing performance expectations and accountability. Through strict configuration control, EM is able to make crucial corporate decisions that will keep the program on track, monitor and control costs, and manage site closure expectations.

Senator CRAIG. Secretary Roberson, thank you very much. Now let me turn to Beverly Cook, Assistant Secretary, Environmental Safety and Health. Bev, it's great to see you in this capacity. I saw you more often in Idaho. I think that I saw you here, but at any rate, welcome to the committee. Please proceed.

OFFICE OF ENVIRONMENT, SAFETY AND HEALTH

STATEMENT OF BEVERLY COOK, ASSISTANT SECRETARY

ACCOMPANIED BY BOB CAREY, SENIOR POLICY ADVISOR, OFFICE OF THE SECRETARY, DEPARTMENT OF ENERGY

Ms. COOK. Thank you, Senator Craig. It's good to see you again, too, and thank you, also, Senator Murray, for having me here. I appreciate this opportunity to discuss the fiscal year 2005 budget request for the Office of Environment, Safety and Health. It's sometimes not very clear exactly what the EH organization does, so I wanted to discuss it in a little bit of detail.

The mission of the Office of Environment Safety and Health is to ensure that the Department of Energy performs work in a safe, environmentally compliant manner. We fulfill that role by assuring that considerations of safety and health and the environment are integrated into all parts of the work that is done, in all the planning and all the execution of all the Department's work.

Our budget request in fiscal year 2005 is $135 million. It's approximately level with that in fiscal year 2004 appropriations. In fiscal year 2005, we will partner with the line management, and we will establish programs that promote safe and environmentally compliant conduct, work and determine the effectiveness of those programs, and provide improvements and regulations where possible and where necessary to make sure that those improvements happen.

The EH budget programs are split between both Energy Supply and Other Defense Activities accounts, which is a little bit confusing at times within the energy and water development appropriations. However, the scope of the work in both of those accounts are applicable across the Department, across what we say and across everything that we do.

Our activities are split in areas of program and policies and standards and guidance and also corporate safety programs, health studies, and employee compensation. In addition, we have a program direction account in both of those accounts that cover our Federal staff, and that also sometimes gets to be a bit difficult. Under Energy Supply account activities, we issue policies, standards, and guidance to assure that the people, property and the environment are adequately protected.

For most DOE facilities, the DOE assumes the regulatory authority for safety and health as provided in the Atomic Energy Act. These requirements must take into account the unique nuclear, chemical and industrial hazards posed by the DOE operations, must be current with worldwide technologies, knowledge and experience, which is a large part of what we do, making sure that we stay current. We use the best available information.

In 2005, our nuclear safety policies and standards will be enhanced to reflect updated commercial codes and standards, the

changing DOE missions and work environments and emerging safety issues that are always encountered when we are working with hazardous materials in aging facilities. We will continue our interface with other agencies and organizations to ensure that these policies and standards are consistent with other Federal agencies and with the industrial regulations. We will use the results of the many health studies that have taken place over several decades to make sure that we have modified our policies as appropriate to protect our workers.

Our environmental protection policies will also be enhanced to reflect new and emerging environmental issues and regulations and allow for compliance with external environmental protection requirements in a cost-effective manner. We review and provide comments on regulations developed by other agencies to assure that DOE's unique operations are fully considered and comply with those regulations, and we also provide them the required documentation of the Department's compliance with environmental standards and progress toward meeting those environmental goals and radiation protection and pollution prevention goals.

In our DOE-wide environmental safety and health programs, we design programs to encourage and improve worker and nuclear facility safety and protect the public and environment, and that goes everywhere from things like the Department of Energy laboratory accreditation program which provides assurance that workers' records, exposure radiation records, are accurately measured and documented, and also things like the VPP program, the Voluntary Protection Program, which is highly recognized, DOE's work in that, to make sure that workers are involved in providing protection for themselves in their work place.

In fiscal year 2005, EH will develop the new DOE pollution prevention goals for the next 5 years, and we will make sure that we meet DOE's responsibilities under executive orders related to pollution prevention and implementing of environmental management systems within all of our work.

Environmental management systems are required of all Federal agencies and must be in place by 2005. Those require that you consider all environmental issues when you plan the work, so that you make sure they are effectively implemented. We will also provide cost-effective centralized environment, safety and health information to the DOE complex through online access to Environment Safety and Health industry standards, programs, policies and activities. We want to make sure that there is access to everyone to commercial standards and access to historical Environmental Safety and Health information to all people at all sites.

One of the things that we do now, one of the things that I looked at this morning, is a "rollup" or summary of all the occurrences that happen within the complex every 24 hours. The rollup is communicated electronically throughout the complex, and is available to everyone. The rollup is done weekly to inform the Headquarters senior managers and the senior managers throughout the complex about what's going on, what kind of trends, what people are running into, and to make sure that they learn from the lessons of others.

Under our Other Defense Activities account in the corporate safety programs, we spend much of our time looking at the synthesis of operational information, and through that, setting ESH expectations, through our contracts, through performance measures, and implementing of these "lessons learned" programs. Consolidating existing databases is a big part of what we're doing right now and will continue to do through 2005. I will talk more later about the draft IG report.

The Computerized Accident/Incident Reporting System (CAIRS) was a way of summarizing the OSHA-type statistics although it is not our only way of collecting information. In the past, information was shared by circulating paper reports. We recognized that over a year ago that was not effective and that there was a great time delay between the occurrences and entering the paper information into the electronic system. We've made a concerted effort over the last year to make sure that we move to a fully electronic system with daily input and weekly checks to make sure that the information is accurate. We're working with the IG so that they fully understand the changes that have happened to those systems and to make sure that we no longer have a time delay in sharing information.

We have consolidated the quality assurance responsibilities of the Department within the Office of Environment Safety and Health and are making sure that we strengthen our quality assurance methodologies. The RESL Program at Idaho, the Radiological Environmental Science Laboratories, is now under the purview of the Office of Environment Safety and Health.

In that laboratory we do analytical chemistry and radiation exposure assessments, environmental sampling and certification, and quality assurance. We also ensure that the data are accurate as well as technically and legally defensible. We continue to provide immediate environment safety and health support, everything from accident investigations to authorizations on a facility authorization basis. We investigate safety allegations, perform special reviews on nuclear hazards, fire protection, and a wide range of operations.

EH also carries out the statutory mandate for the Price-Anderson Amendments Act, where we enforce compliance of the Code of Federal Regulations' nuclear safety requirements. In fiscal year 2005, we will begin enforcement of worker occupational safety and health requirements.

Our health responsibilities, which are under the Other Defense Activities account, cover a wide range of issues. They include occupational health, public health and epidemiological studies and international health studies; international studies make up the largest part of the EH budget. Under occupational health, we will provide the medical screening that we provide to our former workers at the Defense nuclear complex. We will also try to upgrade our occupational medical services by integrating it throughout the complex by including it in our contracts, to make sure that we've got consistent and reliable occupational medicine services across the complex.

We also will continue to support the Radiation Emergency Assistance Center training site at Oak Ridge, the REAC/TS, which provides rapid response for medical expertise and training to address

radiological accidents. Supporting REAC/TS is critically important, especially when we move into concerns about terrorist events.

Under public health, we will continue to fund the independent program of energy-related epidemiological studies that are done by HHS for us at DOE facilities. Many of those studies, however, are coming to an end. In fiscal year 2005 some of those studies will require fewer dollars as they come to the end. We document and publish the studies that have been done. This concerns not only the communities surrounding our sites but also our current and our former workers included in those studies.

Finally, EH supports several international health programs. Those include studies in Russia and in Japan of radiation-exposed populations. The Russian studies are very relevant and very interesting because they concern the kinds of exposures that we've seen in some of our more exposed populations within the DOE complex in the past. We also provide the support for medical surveillance and environmental monitoring in Spain and the Marshall Islands.

The Energy Employees Occupational Illness Compensation Program is funded within the EH budget, and as you have seen in our fiscal year 2005 budget submittal, there is a significant increase. This is because we have recognized that the number of applications greatly exceeded our original expectations, and the Department is actively and aggressively pursuing a 3-year program to completely eliminate the backlog of applications by the end of fiscal year 2006. It will require significant funding to do that. We have also implemented some reforms to effect those improvements to get to that point.

Finally, let me just say a few words about our program direction funding. As I said, it's in two different accounts. We perform critical functions with Federal staff to directly support the missions of the Department. It requires expertise in developing overall environmental safety and health policies for the DOE sites and the facility operations. We've taken many, many steps over the last year and a half to streamline our operations.

We've developed efficient processes such as reducing travel or other fixed costs through use of video conference capabilities to provide the training and information that's necessary in the complex in everything from consolidating office space to anything else we could think about. The number of Federal employees in EH has decreased by almost half over the last 5 years; that's a huge decrease.

Large funding reductions in fiscal year 2004 put at risk EH's ability to meet the demands of the DOE complex. We have to prioritize what we do and where we assist the program offices.

The requested funding level in fiscal year 2005 will restore the level of resources commensurate with the responsibilities of the office, and I think that is critical to do.

PREPARED STATEMENT

So thank you for this opportunity. I believe our administration's 2005 budget request for the Office of Environment Safety and Health reflects the level of funding that is needed to protect the workers and the public in our DOE sites in a cost-effective manner. I'd be happy to answer any questions that you have.

[The statement follows:]

PREPARED STATEMENT OF BEVERLY COOK

Mr. Chairman, Members of the subcommittee, I appreciate the opportunity to testify on the fiscal year 2005 President's Budget request for the Office of Environment, Safety and Health (EH).

The mission of the Office of Environment, Safety and Health is to ensure that the Department of Energy (DOE) performs work in a safe and environmentally compliant manner. EH fulfills that role by assuring that consideration for the safety and health of the DOE workforce and members of the public and protection of the environment are integrated into the planning and execution of all Departmental activities.

The Office of Environment, Safety and Health fiscal year 2005 budget request is $135 million, approximately level with the fiscal year 2004 appropriation. This level of funding allows EH to leverage its resources and personnel to provide DOE's line management programs with essential environment, safety and health performance expectations; management tools to promote the safe conduct of work; environment, safety and health performance measures and analysis; and guidance for the protection of the environment in and around DOE sites. Integral to the Department's success is EH's skill in fostering increased awareness and providing support to line management throughout the Department using open and easily accessible communications tools. Our goal is to provide the safety infrastructure that allows for and promotes the safe and environmentally responsible conduct of work.

EH has traditionally filled the role of setting regulations and standards, and then providing independent oversight and enforcement to ensure the Department's compliance with those standards. The independent oversight functions were moved from EH in 2002, allowing EH to provide corporate environment, safety and health services. EH now serves as a partner with DOE Line Managers to establish programs that promote the safe and environmentally compliant conduct of work, to determine the effectiveness of those programs and to improve the programs and regulations when necessary.

In support of the President's Management Agenda, EH underwent a dramatic restructuring in 2003 to better perform its new role within the DOE. The restructuring allowed for cutting management layers, placing greater emphasis on corporate performance and quality assurance, and focusing more on e-government initiatives by consolidating databases and other electronic information management functions. The implementation of the new organization is continuing through 2004. The major challenge in 2005 will be succession planning. It is the responsibility of EH to assure appropriate technical expertise is available to support environment, safety and health concerns. As more of the DOE complex reaches retirement age, we are concerned that the necessary technical expertise may be lost, both in the headquarters and field operations, and in EH, where corporate expertise to support the program activities is required.

The scope of work performed by EH staff is multifaceted. I will now provide you with a description of the specific activities identified in the President's request for the Office of Environment, Safety and Health.

ENVIRONMENT, SAFETY AND HEALTH FISCAL YEAR 2005 BUDGET REQUEST

The Environment, Safety and Health programs are split between the Energy Supply and Other Defense Activities accounts within the Energy and Water Development appropriation. However, the scope of work often cuts across these funding lines because of the generic nature and cross cutting applicability of the work performed by EH. It is important that a framework is in place that is clear and easily understood by the DOE Federal and Contractor workforce, and the overall safety and environment goals of the Department are consistent throughout the DOE complex.

ENERGY SUPPLY

Fiscal Year 2004 Comparable Appropriation—$22,564,000: Fiscal Year 2005 Request—$30,474,000.

EH activities funded within the Energy Supply appropriation are concentrated into two programmatic areas: Policy, Standards and Guidance and DOE-Wide Environment, Safety and Health Programs. In general, work funded under this account is applicable to all of the DOE operations. In addition, a Program Direction decision unit includes funding for a portion of EH Federal staff and all of the EH Working Capital Fund.

Policy, Standards and Guidance

Fiscal Year 2004 Comparable Appropriation—$1,799,000; Fiscal Year 2005 Request—$4,205,000.

Policy, standards and guidance are issued to assure that people, property and the environment are adequately protected from the hazards of DOE activities. For most DOE facilities, DOE assumes direct regulatory authority for safety and health as provided by the Atomic Energy Act of 1954, as amended. Safety and quality assurance policy, standards and guidance must therefore take into account the unique nuclear, chemical and industrial hazards posed by DOE operations and must be current with worldwide technologies, knowledge and experience. EH must establish nuclear and facility safety requirements and expectations for working with workplace hazards and safety issues unique to our operations.

In fiscal year 2005, DOE nuclear and facility safety policies and standards will be enhanced to reflect updated commercial codes and standards, changing DOE missions and work environments, and emerging safety issues that are encountered continuously when working with hazardous materials and in aging facilities. We will continue our interface with the Occupational Safety and Health Administration, the U.S. Nuclear Regulatory Commission, the National Aeronautics and Space Administration, and Federal Departments of Transportation, Health and Human Services, Homeland Security, and the Defense Nuclear Facilities Safety Board to ensure DOE policies and standards are consistent with other Federal and industry regulations and are based on best available information. EH will also maintain close ties with national and international standards and regulatory bodies and various industry groups, such as the Institute of Nuclear Power Operations and the Energy Facilities Contractors Group. In fiscal year 2005, EH will continue to utilize the results of epidemiologic studies performed under other parts of the EH programs and modify worker safety and health policies as appropriate to improve protection of the workers. EH will also strengthen the Federal Employee Occupational Safety and Health program, which provides for protection of our Federal workforce.

Environmental protection policies will also be enhanced to reflect new and emerging environmental issues and regulations. EH will assist Programs to comply with external environmental protection requirements in a cost-effective manner and continue to develop timely guidance to assure understanding of newly promulgated environmental requirements. We will review and provide agency comments on regulations under development by other agencies, to assure that DOE's unique operations are fully considered. EH will also provide the required documentation of the Department's compliance with environmental standards and progress towards meeting performance goals for radiation protection and pollution prevention.

The increase in this account is due to moving the technical standards activities from DOE-Wide programs to Policy standards and guidance. This puts all of the policy and standards setting activities into one account. Increased membership fees for participation in the industry nuclear power group are also included.

DOE-Wide Environment, Safety and Health Programs

Fiscal Year 2004 Comparable Appropriation—$5,068,000: Fiscal Year 2005 Request—$5,795,000.

EH's DOE-Wide Environment, Safety, and Health (ES&H) Programs are designed to encourage and improve worker and nuclear facilities safety and protect the public and the environment. EH has developed state-of-the-art analysis tools and approaches, due to the unique nature and mix of radioactive, hazardous, and toxic materials at DOE facilities.

EH has responsibility for the Department of Energy Laboratory Accreditation Program (DOELAP). DOELAP is an accreditation (certification) program that provides assurance that worker radiation exposures are being accurately measured. DOE's nationally recognized Voluntary Protection Program (VPP), managed by EH, has resulted in enhanced worker safety protection. In fiscal year 2005, DOE will continue to re-certify DOE contractor VPP status and evaluate new applications for VPP status.

In fiscal year 2005, EH will develop new DOE pollution prevention goals for recycling and reduced toxic chemical use. Consistent with the new, Department-wide pollution prevention program plan to be developed during fiscal year 2004, EH will provide a roadmap for continuous improvement in DOE's pollution prevention efforts. We will also provide instruction and guidance to meet DOE's responsibilities under Executive Orders related to pollution prevention and implementation of environment management systems. EH will continue to guide all DOE programs in their planning and execution of complete National Environmental Policy Act (NEPA) analyses and conduct independent compliance assurance reviews for more than 15 major Environmental Impact Statements and related documents.

EH provides cost-effective management of centralized environmental, safety, and health information to the DOE complex. We will provide on-line access to environment, safety and health related industry standards, programs, policies and activities; access to a commercial standards subscription service; and access to historical environmental safety and health information for all DOE operations and sites.

The slight increase in this account is the net result of a large increase in the resources required to implement the new Worker Safety and Health rule, coupled with a decrease from moving the technical standards work to the Policy, Standards and Guidance account.

Program Direction

Fiscal Year 2004 Appropriation—$15,697,000; Fiscal Year 2005 Request—$20,474,000.

Program Direction in this account provides overall support for EH staff responsible for Energy Supply programs, includes salaries, performance awards and other benefits; all costs of transportation and expenses for Federal employees in accordance with Federal Travel Regulations; the EH Working Capital Fund for all EH staff, including those with salaries paid under Other Defense; and training for Federal staff. The Working Capital Fund provides for non-discretionary prorated costs for items such as space utilization, computer and telephone usage, mail service, and supplies. Also included is funding for competitive sourcing studies.

EH performs critical functions which directly support the mission of the Department. The EH mission requires experts to develop overall environment, safety, and health policy for DOE sites and facility operations and to provide a central and coordinated source of technical expertise to all field elements. EH provides a central clearing house for information, and analysis and feedback regarding new efforts, present activities, and unforeseen occurrences taking place at the multitude of diverse facilities within the DOE complex.

EH has taken many steps to streamline and develop more efficient internal processes in order to reduce costs. For example, EH has reduced travel and other fixed costs through the use of video conference capabilities and other innovative techniques. Furthermore, the number of Federal employees in EH has decreased by almost half in the last 10 years. However, the large funding reductions in fiscal year 2004 put at risk EH's ability to meet the demands of the DOE complex. Therefore, the increase in fiscal year 2005 will restore the level of resources commensurate with the roles and responsibilities of the office.

OTHER DEFENSE PROGRAMS

Fiscal Year 2004 Comparable Appropriation—$119,366,000; Fiscal Year 2005 Request—$104,519,000.

The EH Other Defense Activities are concentrated into three accounts: Corporate Safety Programs, Health Studies and Employee Compensation. These activities address the needs and issues related to a variety of Defense related program activities being conducted by the Department. In addition, a Program Direction decision unit includes funding for the salaries and benefits of a portion of the EH Federal staff and their travel and training.

The fiscal year 2005 budget request also includes funding for two Other Defense Activities programs that were transferred to EH from the Office of Environmental Management (EM) in fiscal year 2004. These are: (1) the Radiological and Environmental Sciences Laboratory (RESL) at Idaho, and (2) the Analytical Services Program. These programs help to ensure that analytical laboratory data and worker radiation exposure and environmental samples are of high quality and reliability. These programs support the quality of data used throughout the Department and are more closely aligned with EH's quality assurance function than EM's mission of accelerated risk reduction and site closure.

Corporate Safety and Health Program

Fiscal Year 2004 Comparable Appropriations—$9,032,000; Fiscal Year 2005 Request—$10,883,000.

The Corporate Safety Program serve a crosscutting safety function for the Department and its stakeholders in assessing, achieving and assuring excellence and continuous improvement in safety management and performance in the conduct of its missions and activities. Several tasks are included in Corporate Safety Program.

In fiscal year 2005, EH will provide analysis and certification of DOE's performance in protecting the public, workers, and the environment by synthesizing operational information. This supports decision-making and continuous ES&H improvement across the DOE complex. We will support the setting of ES&H performance expectations through contracts and performance measurements and implement a

lessons learned program. Our ES&H web sites and web-based database systems will be re-engineered in fiscal year 2005 to consolidate existing databases and utilize the most recent technology to distribute information in an efficient and effective manner. Because EH now has overall responsibility for DOE Quality Assurance, we will provide quality assurance information, corporate policy and guidance, and certification for activities such as Contractor Self-Assessment Programs. We will conduct performance evaluation and accreditation, technical support and measurements, and quality assurance methodologies through RESL. EH will also provide a process to ensure DOE environmental data is of high quality and reliability as well as technically and legally defensible. The increase in this account reflects the implementation of EH's new responsibilities related to Department-wide quality assurance.

To address immediate environment, safety and health issues, EH will perform accident investigations, facility authorization basis reviews, and safety allegation investigations. We will also conduct special safety reviews of nuclear hazards, criticality safety, seismic analysis, fire protection, emergency operations, facility design, and the startup and restart of facilities upon request of the Program offices. EH will continue to carry out the statutory mandate of the Price-Anderson Amendments Act of 1988 to enforce compliance with Code of Federal Regulations nuclear safety requirements at DOE sites and begin enforcement of the Worker Occupational Safety and Health Rule.

Health

Fiscal Year 2004 Comparable Budget—$67,335,000; Fiscal Year 2005 Request—$45,222,000.

The EH Health responsibilities are to establish and enhance the scientific bases for standards that provide levels of protection appropriate to the risk of the hazards present at DOE sites. This responsibility is included in four general areas: Occupational Health (corporate occupational medicine policy); Public Health (community bases health studies); Epidemiologic Studies (analysis and communication of worker injury and illness information); and International Health Studies.

There are several activities related to occupational health. Targeted medical screening will be provided to former workers of DOE's defense nuclear complex. Standards, policies, and corporate resources will be provided to efficiently delivery quality occupational medical services in an integrated manner to the current DOE workforce. In fiscal year 2005, EH will work to implement occupational medicine model contract language to ensure adequate and integrated occupation health programs at all DOE sites. EH will continue to support the Radiation Emergency Accident Center/Training Site (REAC/TS), which provides rapid response medical expertise and training to address radiological accidents.

Public health will be addressed through independent energy-related epidemiologic studies relevant to DOE workers and neighboring communities by the National Institute for Occupational Safety and Health, the National Center for Environmental Health, and the Agency for Toxic Substances and Disease Registry. These studies will inform the DOE and stakeholders of any adverse health impacts that DOE operations may have had on DOE workers and the public. In addition, DOE epidemiologic studies will be conducted that collect and analyze both medical and exposure data information for both current DOE workers and the public.

EH will support several international health program studies in order to upgrade and validate our knowledge of radiation health effects among workers and populations exposed to ionizing radiation or environmental contamination. DOE and the National Cancer Institute will jointly sponsor international studies to determine if there are any adverse health effects from exposure to radiological contamination from Chernobyl on the populations of Belarus, Ukraine, and Chernobyl cleanup workers, and epidemiologic studies of Russian workers at the Mayak Production Facility and other facilities in Russia. These studies will identify the level of radiation exposure where adverse health effects can be demonstrated for a large worker population exposed to low and moderate levels of radiation over a working lifetime and support the establishment of international and national radiation protection standards and policy. The DOE and Spain jointly sponsored Project Indalo will provide support for medical surveillance and environmental monitoring of the spread of plutonium contamination on a few hundred acres of land in southern Spain. In addition, EH will provide special medical care for a specific group of radiation-exposed individuals in the Marshall Islands and support the Radiation Effects Research Facility (RERF) in Japan, which conducts epidemiologic studies and medical surveillance for the Hiroshima and Nagasaki exposed population.

A decrease in this account reflects the absence of some programs that were congressionally directed in fiscal year 2004 and an assumption of reduced funding for certain international studies as they approach their conclusion.

ENERGY EMPLOYEES OCCUPATIONAL ILLNESS COMPENSATION PROGRAM

Fiscal Year 2004 Comparable Appropriation—$25,646,000; Fiscal Year 2005 Request—$43,000,000.

The Energy Employees Occupational Illness Compensation Program Act of 2000 (EEOICPA) authorized DOE to establish a process to assist employees of DOE contractors and their survivors with their applications for State workers compensation benefits. Around the time that EEOICPA was passed in 2000, and given the complexity of the process mandated in the authorizing legislation and the expected complexity of the physician panel reviews to be conducted, DOE had planned that it would take 10 years to completely review all applications. However, as the number of applications greatly exceeded original expectations, and the applicants' immediate need for this data to effectively pursue State workers compensation claims became clear, the Department has pursued a 3-year program to completely eliminate the backlog of applications by the end of fiscal year 2006.

The fiscal year 2005 budget includes $43 million to maintain the accelerated schedule for EEOICPA activities. Together with additional funds reprogrammed from fiscal year 2003 and additional funds that have been requested to be reprogrammed in fiscal year 2004, this funding should enable DOE to significantly expedite the process through fiscal year 2004, complete the processing of all applications currently on file with DOE in fiscal year 2005, and completely process all of these applications through the Physicians Panels in fiscal year 2006. The Department has also implemented reforms that have already improved performance. In August 2003 the program processed 30 cases per week. But with process improvements and the final approval in fiscal year 2003 of $9.7 million in transferred funds in September 2003, the rate has more than tripled to over 100 per week, and continues to rise. The Department also recently made changes to its regulations to expedite the processing of applications and currently is discussion with other Federal agencies and stakeholders possible legislative changes to address impediments to effective program implementation.

The significant increase in this account for fiscal year 2005 supports expedited processing of applications.

Program Direction

Fiscal Year 2004 Comparable Appropriation—$17,853,000; Fiscal Year 2005 Request—$20,414,000.

Program Direction in this account provides for the salaries and benefits of a portion of the EH Federal staff, their travel and training. The Working Capital Fund, the non-discretionary prorated costs for items such as space utilization, computer and telephone usage, mail service, and supplies for all EH staff, is budgeted under the Energy Supply account. In this account, Program Direction also includes funding to support the Federal RESL and the Analytical Services Program staff. As with the Energy Supply account, the large funding reductions in fiscal year 2004 put at risk EH's ability to meet the demands of the DOE complex. Therefore, the increase in fiscal year 2005 will restore resources commensurate with the roles and responsibilities of the office.

CONCLUSION

Mr. Chairman, we believe the administration's fiscal year 2005 budget request for the Office of Environment, Safety and Health reflects a level of funding to ensure protection of the workers and public near DOE sites and allows for the accomplishment of the critical work performed by DOE in a cost effective manner. It is critical that the Federal Government maintain the expertise to evaluate and direct operations to maintain a level of safety and environmental compliance the public and the Congress expects.

This completes my prepared statement, and I am happy to answer any questions the subcommittee may have.

Senator CRAIG. Secretary Cook, thank you very much for being before the committee this morning. Now let us turn to Dr. Margaret Chu, Director, Civilian Radioactive Waste Management. Doctor, welcome again before the committee.

OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT

STATEMENT OF MARGARET CHU, DIRECTOR

Dr. CHU. Thank you, Senator Craig and Senator Murray. I very much appreciate the opportunity to present our fiscal year 2005 budget request from the Office of Civilian Radioactive Waste Management. Our key objective is to begin receiving waste at Yucca Mountain in 2010. The schedule is tight and the consequences of delay are enormous. Fiscal year 2005 is a critical year in which important activities must be initiated and start to converge. Our total budget request is $880 million. While this is an increase over historical funding levels, it is one that has been understood and carefully planned for many years.

We are positioned to commit funds responsibly and effectively. Out of the total budget request of $880 million, the amount requested for the Repository Project is $559 million. Our foremost funding priority is to meet our longstanding goal of submitting a high quality license application to the NRC in December of 2004. We are on track.

Quality and completeness are paramount. The application we submit will meet NRC's regulatory requirements and be docketable by the NRC. After the license application is delivered, we must be prepared to respond to queries and requests that NRC will make during the review. We expect that NRC's review would be very thorough and very rigorous, and our objective is to provide information in a timely and effective manner to support completion of NRC's review within the statutorily established time period.

There will also be continuing technical work, including ongoing testing programs as part of the performance confirmation. In parallel with the licensing process, we must focus on detailed repository design and ensure that the site is ready to support construction as soon as it is authorized by the NRC. We will be initiating activities related to long lead time procurements, prototyping and testing of engineered components and equipment, and we are also requesting funds to address safety-related needs at the site.

In the area of transportation, our request is $186 million. One of the key activities will be the first phase of acquisition of long lead-time transportation casks and equipment which must begin now to provide the capability for waste acceptance in 2010. We are working with industry to procure an efficient cask fleet with the minimum number of separate designs. We will support expanded institutional interactions as we begin to establish preliminary routes, operating protocols and safeguard and security activities. We will continue to work on policy for emergency response training and technical assistance as required by the Nuclear Waste Policy Act.

State and tribal officials and other stakeholders will play an integral part in our transportation planning. In the area of Nevada transportation, we recently announced a preferred rail corridor and the proposed work in fiscal year 2005 includes completion of conceptual design and the beginning of preliminary design activities and issuance of the draft environmental impact statement for the rail alignment.

Some of this is contingent on the Department's issuing a record of decision selecting a mode of transportation and a rail corridor as appropriate. We expect to issue the decision very shortly.

Finally, many of us, including the Congress, have been aware for many years that funding requirements for Yucca Mountain would increase substantially as we approach construction and transportation system development. Historical appropriation levels will not be sufficient to meet these needs. Since 1995, the cumulative shortfall of funds between requested and appropriated amount exceeded $700 million. A mechanism must be put in place now to allow the program to have ready access to the Nuclear Waste Fund without being constrained by funding pressures from other programs.

In accordance with the funding approach established in the Nuclear Waste Policy Act, the Department collects fees from nuclear utilities for the disposal of their spent nuclear fuel. In fiscal year 2005, an estimated $749 million will be collected. The resources are there and we should not delay in making them available for their intended purpose.

Secretary Abraham has recently sent proposed legislation to the Congress that would reclassify the annual receipts that are deposited into the Nuclear Waste Fund as discretionary and credit them as offsetting collections. Under this proposal, the proposal will continue to be subject to an annual appropriation process and continue to be under Congress' oversight, however, without having to compete with other programs for funds.

If sufficient appropriations are not available, the Nation will not have an operating repository in 2010. Delays will mean an additional cost of nearly a billion dollars per year for waste sites to continue to provide temporary storage. The country would be forced to spend billions of dollars in this scenario without solving the problem.

PREPARED STATEMENT

In conclusion, we are ready to submit a high-quality license application to the NRC in December of 2004 and we are committed to begin operations at a licensed repository in 2010. We have reached a point where investment must be made in transportation, repository and waste acceptance readiness. I urge your support for our budget request to accomplish this vital national mission. Thank you very much.

[The statement follows:]

PREPARED STATEMENT OF MARGARET CHU

Mr. Chairman and members of the Committee, I am Margaret Chu, Director of the Department of Energy's (DOE) Office of Civilian Radioactive Waste Management (OCRWM). I appreciate the opportunity to present our fiscal year 2005 budget request and discuss our plans to license, build, and operate a geologic repository at Yucca Mountain in Nevada, and our efforts to develop the transportation system needed to deliver spent nuclear fuel and high-level radioactive waste to the repository.

OCRWM implements our Nation's radioactive waste management policy, as established by the Nuclear Waste Policy Act of 1982, as amended. This policy requires safe, permanent geologic disposal of spent nuclear fuel and high-level radioactive waste resulting from the Nation's atomic energy defense activities. The disposal of this material in a geologic repository is required to maintain our energy options and national security, to allow the cleanup of former weapons production sites, to continue operation of our nuclear-powered vessels, and to advance our international

nonproliferation goals. The Department's consolidation of spent nuclear fuel and high-level waste from 127 sites at a single secure, remote location is vital to our national interest. The Federal Government is contractually required to implement a permanent solution for management of commercial spent nuclear fuel, in return for which utilities and ratepayers have paid fees to cover the costs of disposal.

THE 2010 OBJECTIVE

The Program's key objective remains to begin receiving waste at the Nuclear Regulatory Commission (NRC) licensed Yucca Mountain repository in 2010. To achieve that objective, the Program must, in less than 7 years, seek and secure authorization to construct the repository from the NRC, begin constructing the repository, and receive a license amendment allowing receipt of waste and operation of the repository. We must also develop a transportation system to transport waste from civilian and defense storage sites to the repository. That is a tight schedule, and the consequences of delay are significant.

For every year of delay beyond 2010, the cost of storing and handling Departmental defense waste alone is estimated to increase by $500 million. Regarding the nuclear utilities, the government's liability for damages for not beginning to take commercial spent fuel in 1998 already has been established by court decisions. While an accurate calculation of damages must await determinations by the courts, it is reasonable to assume that the amount of damages will be substantial and will increase with each year of delay.

Meeting the 2010 objective will require much greater resources than the Program has thus far received. We estimate, for example, that from 2005 to 2010 it will cost about $8 billion—more than 80 percent of the budget required to meet the 2010 objective—to construct the repository and develop the transportation system. That would average more than $1 billion a year, which is much higher than our previous annual appropriations.

THE FISCAL YEAR 2005 BUDGET REQUEST

Fiscal year 2005 is a critical year in which important activities must converge if we are to meet the 2010 objective. In fiscal year 2005, we will be fully engaged in the licensing process. At the same time, we must initiate certain activities in the near term to permit timely construction and ensure readiness for operations. These activities, in the areas of repository readiness and detailed design, transportation system development, and waste acceptance readiness—along with licensing activities—lead to our total budget request for fiscal year 2005 of $880 million. While this is a significant increase over historical funding levels, it is an increase that has been carefully planned and understood for many years. We are confident that we are positioned to commit funds responsibly and effectively to defend the license application; to accelerate repository surface, subsurface, and waste package design work needed for construction authorization; and to conduct conceptual and preliminary design activities for Nevada transportation. Moreover, a major portion of the increase represents procurements, including transportation cask acquisition and important repository site safety infrastructure upgrades.

To set the stage for our fiscal year 2005 budget request, I would like to briefly describe OCRWM's fiscal year 2003 accomplishments, our ongoing activities based on our fiscal year 2004 appropriation, and our goals for fiscal year 2005.

FISCAL YEAR 2003 ACCOMPLISHMENTS

Having achieved Congressional and Presidential approval of the Yucca Mountain site in 2002, we successfully transitioned from a scientific study program to one focused on the regulatory requirements for obtaining a license from the NRC. We targeted five areas critical to licensing success in a broad Management Improvement Initiative: roles, responsibilities, authority and accountability; Quality Assurance; procedural compliance; the Corrective Action Program; and Safety Conscious Work Environment. We implemented a Program-wide functional realignment to create an organization focused on licensing, and we strengthened our Federal management team by bringing on board several senior managers with extensive experience in managing major Federal projects. These actions have positioned us to be a successful NRC licensee and to meet requirements for operating a repository safely, and will continue into fiscal year 2005.

Fiscal year 2003 brought significant challenges to our Program. The limited funding provided during the continuing resolution and the final fiscal year 2003 appropriation of $457 million, which was $134 million below our request, required us to institute contingency plans, reduce near-term work scope, and further delay transportation activities that are directly tied to our ability to meet the 2010 objective.

Rather than stretch our resources and risk the safety of our workers, we elected to partially close the Yucca Mountain site and to defer some work there. The focus of our efforts under these constraints was to maintain our goal of submitting a high-quality license application to the NRC in December 2004.

The Program prepared a conceptual design and a detailed plan for repository licensing, construction, and operation, and focused on completing the license application to the NRC for authority to construct the repository. By the end of fiscal year 2003, the Yucca Mountain Project had accomplished the following:

—Completed the conceptual design of the repository surface and underground facilities and waste package elements sufficient for development of the preliminary design for the license application.
—Completed materials testing and analyses required to support the license application design for the waste package and surface and subsurface facilities.
—Completed testing data input for the Total System Performance Assessment Post-closure Report, to be included in the license application.
—Initiated the development of the license application document.
—Identified Project records and technical documents that will be included in the licensing support network.

In addition, during fiscal year 2003, the OCRWM National Transportation Project drafted the "Strategic Plan for the Safe Transportation of Spent Nuclear Fuel and High-Level Radioactive Waste to Yucca Mountain", which was issued in November 2003.

Throughout the Program, we implemented management improvements identified in the President's Management Agenda. In fiscal year 2003, DOE was ranked number one among all Federal agencies in implementation of the President's Management Agenda.

During fiscal year 2003, the Program launched its new and more rigorous Corrective Action Program (CAP) software system. The new CAP combined condition, nonconformance, and technical error reports, and the condition/issue identification and reporting/resolution system into a single entry point process.

FISCAL YEAR 2004 ONGOING ACTIVITIES

Yucca Mountain Project

Consistent with Departmental and Program objectives, the Yucca Mountain Project's main focus in fiscal year 2004 is on completing the license application. The required elements of preliminary design, performance assessment, safety analyses, and technical data in the license application must be sufficient for the NRC to conduct an independent review and reach a decision to issue a construction authorization. The application must demonstrate that the repository can be constructed and operated with reasonable expectation that the health and safety of the public will be protected.

By the end of fiscal year 2004, with the funds appropriated, we will:

—Address all "key technical issue" agreements that the Department and NRC agree the Program needs to address prior to license application submittal.
—Complete required elements of the preliminary design for the waste package, surface facilities, and subsurface facilities in support of the license application.
—Complete the safety analyses for Department-owned spent nuclear fuel and high-level radioactive waste, and Naval spent fuel for the license application.
—Complete the total system performance assessment postclosure report in support of the license application. This report will reflect increased understanding of how emplaced nuclear waste will interact with the natural and engineered barriers after the repository is closed.
—Prepare tens of millions of pages of relevant documentation for inclusion in the electronic Licensing Support Network (LSN) and completed certification consistent with the requirements of 10 CFR Part 2, Subpart J.
—Complete a draft of the license application.

Even though site characterization is complete, in fiscal year 2004 we are continuing to collect valuable scientific information for the Performance Confirmation baseline. The NRC requires Performance Confirmation to continue until the repository is permanently closed.

National and Nevada Transportation Projects

As noted previously, we issued the "Strategic Plan for the Safe Transportation of Spent Nuclear Fuel and High-Level Radioactive Waste to Yucca Mountain" in November, which described the Department's process for working cooperatively with States, tribes, and other interested parties as the transportation system is developed. In early fiscal year 2004, the transportation program focused on selecting the

transportation mode and corridor that would establish the transportation system's infrastructure requirements. In December 2003, we announced a preferred corridor for development of a branch rail line in Nevada to connect from an existing rail line to the Yucca Mountain site. The program is now defining infrastructure development projects to provide the capability for transporting spent nuclear fuel and high-level waste to the repository. Funding in fiscal year 2004 represents initial investments in major transportation infrastructure needs, including transportation casks, rolling stock, the transportation system in Nevada, a fleet maintenance facility, and the business systems needed to manage multiple procurements and construction projects.

Program Management and Integration

A key component of the Program Management and Integration budget element is Quality Assurance (QA). In the last year, we have made significant progress in the implementation of our QA program requirements. We have had several independent assessments that have determined that the QA program is being effectively implemented. We have also completed the actions and closed several of the significant QA issues that have been open for extended periods of time. Finally, we are preparing a major revision to our QA program document in support of the license application.

During this fiscal year, we have taken several steps to ensure we are prepared to manage major capital projects efficiently and cost-effectively. We submitted a detailed Capital Asset Management Plan for the Program to the Office of Management and Budget in November 2003, and are now working to complete a comprehensive program acquisition strategy that will be incorporated in the next update of the Plan next fall. We have strengthened our performance measurement and project management capabilities and systems, and are using them to monitor and manage all the activities that support license application completion.

FISCAL YEAR 2005 KEY ACTIVITIES

Yucca Mountain Project

The amount requested for the repository project in fiscal year 2005 is $558.9 million, an increase of $155 million over our fiscal year 2004 enacted level. The primary drivers for this increase are repository facility design, prototype development and testing, procurement in preparation for underground excavation, design of offsite utilities and infrastructure, and support for responding to technical questions on the license application.

Our initial focus will be on submitting the license application by December 2004. The license application, expected to be approximately 10,000 pages, will include a description of site characteristics; waste package, repository surface and subsurface designs; the basis for development of operations and maintenance plans for surface and subsurface facilities; safety analysis results for the period prior to permanent closure; total system performance assessment results for the post-closure period; and a discussion of how the proposed waste package and repository will comply with applicable regulatory requirements. It also will address safeguards, physical security plans, the quality assurance program, and performance confirmation. We are closely managing the schedule for the remaining work. Quality and completeness are paramount: the application we submit will meet the NRC's regulatory requirements and be docketable by the NRC.

After the license application is delivered, we must be prepared to respond to queries and requests that NRC will make during its technical review. We expect NRC's review to be thorough and rigorous, and our objective is to provide all required information in a timely and effective manner to support completion of the NRC's review within the statutorily established time period.

In parallel with the licensing process, we must focus on design of the repository and ensure that the site is ready to support construction as soon as it is authorized by the NRC.

By the end of fiscal year 2005, we will have:

—Completed and submitted a license application for repository construction authorization to the NRC.
—Updated the LSN certification concurrent with license application submittal.
—Completed the preliminary design for the waste package, surface facilities, and subsurface facilities, which requires continuing performance assessment analysis.
—Continued to refine the safety analysis as needed, in response to NRC review and in accordance with NRC licensing regulations.

—Completed the detailed work plan, cost estimate, and schedule, and established a performance measurement baseline for the final repository design and construction.
—Initiated procurement activities for construction of the surface and underground facilities.
—Developed designs for offsite facilities and utilities needed to support the start of construction.
—Addressed safety-related needs at the site.

We are requesting funding for payments-equal-to-taxes to the State of Nevada and to Nye County, Nevada; Yucca Mountain is located in Nye County. Our fiscal year 2005 request also includes funding for Affected Units of Local Government, as well as funding to the University System of Nevada and to Nye County and Inyo County, California for independent scientific studies.

National and Nevada Transportation Projects

The amount requested in fiscal year 2005 for National and Nevada Transportation activities increases from the fiscal year 2004 enacted level of $63.5 million to $186 million, $163 million of which will be for the National Transportation Project. The significant increase in funding will support the initial procurement of transportation casks and auxiliary equipment and will accelerate operational capability.

The initial procurement of truck and rail casks is needed to provide the capability for waste acceptance in 2010, given the lead time required for solicitation, evaluation of proposals, NRC package certification (for new designs), and fabrication of transportation casks. We are working with the cask vendor industry to procure an efficient cask fleet that maximizes the government's ability to support the full range of contents that need to be shipped with the minimum number of separate designs. These procurements will proceed towards cask fabrication in a step-wise manner to maintain flexibility on final procurements as long as possible. We will also continue to address a new railcar standard implemented by the American Association of Railroads for shipments of spent nuclear fuel and high-level waste. In addition, we have requested funds for equipment procurement and infrastructure preparation needed for full-scale cask testing by the NRC to enhance public confidence in the NRC's cask certification process.

The National Transportation Project will support expanded institutional interactions with regard to establishing preliminary transportation routes, operating protocols, and safeguards and security activities. We will also continue support of State regional groups to facilitate development of the policy for funding State and tribal emergency response training and technical assistance as required by Section 180(c) of the NWPA. We will continue and expand our ongoing dialogue with State and tribal officials and other stakeholders who will play an integral role in our transportation planning.

We have requested $23 million for Nevada transportation work, including completion of conceptual design and the beginning of preliminary design activities, issuance of the draft Environmental Impact Statement for the rail alignment, associated public hearings, and continued development of the land acquisition case file required by the Bureau of Land Management. Some of this is contingent upon the Department issuing a Record of Decision under the National Environmental Policy Act selecting a mode of transportation in Nevada and a rail alignment, as appropriate. We expect to issue the decision shortly.

Program Management and Integration

Our fiscal year 2005 request includes $47.5 million for program management and integration activities, an increase of $17.8 million over the fiscal year 2004 enacted level. The request reflects the need to have the strongest possible nuclear Quality Assurance program as we move into the licensing phase. Quality Assurance is the cornerstone of assuring the NRC that the Program has implemented activities related to radiological safety and health and waste isolation that are required by NRC regulations. We will complete the institutionalization of improvements that were introduced through the Management Improvement Initiative to meet the NRC's expectations of its licensees.

The fiscal year 2005 request also contains funding for system engineering and analysis activities to enable us to better evaluate and optimize the Program's component elements as they begin to converge into a single waste management system. In addition to the repository and transportation readiness, the third key piece that must be put in place is waste acceptance readiness—i.e., establishing the "pipeline" of wastes destined for Yucca Mountain. (In prior years, waste acceptance was part of the Transportation budget request, but is now included in Program Management and Integration.) By addressing waste acceptance issues now, we can ensure that

repository facilities and transportation infrastructure will be compatible with the commercial spent nuclear fuel and DOE-managed wastes that are planned for receipt in 2010 and beyond. OCRWM will work closely with the Office of Environmental Management on DOE spent nuclear fuel and high-level waste acceptance criteria to ensure that we have an integrated, timely, and cost-effective approach.

Program Direction

The Program Direction budget request of $87.5 million supports Federal salaries, expenses associated with building maintenance and rent, training, and management and technical support services, which include independent Nuclear Waste Fund audit services and independent technical and cost analyses. These resources fund a small increase in support services related to Quality Assurance, and national transportation technical support activities. The request also reflects a small increase in Federal staff expenses to manage additional repository design/licensing activities and National and Nevada transportation work.

Assumption of DOE Spent Nuclear Fuel Management Functions

OCRWM will be the organization ultimately responsible for disposing of spent nuclear fuel owned by the Department. Therefore, our fiscal year 2005 budget reflects OCRWM's assumption of responsibilities for the National Spent Nuclear Fuel Program, management within the United States of returned foreign research reactor spent nuclear fuel, domestic research reactor spent fuel management, and the management of Chemical Processing Plant-666 from the Office of Environmental Management. To fund these programs, we expect the Office of Environmental Management to transfer $22.3 million from its fiscal year 2005 appropriation, funded from the Other Defense Activities account. Similarly, the Department's plans call for the Office of Environmental Management to transfer to OCRWM $5.2 million from the Energy Supply Research and Development account to support spent fuel management work at the Fort St. Vrain, Colorado, Independent Spent Fuel Storage Installation, and the Three Mile Island-2 Independent Spent Fuel Storage Installation at the Idaho Nuclear Technology Engineering Center, which will be transferred from the Office of Environmental Management, as well as domestic and university research reactor spent fuel management functions transferred from the Office of Nuclear Energy, Science and Technology.

An Office of DOE Spent Fuel Management, reporting to the OCRWM Director, will be established to integrate and manage DOE spent nuclear fuel activities without interfering with the ongoing mission we perform under the Nuclear Waste Policy Act. The transfer of these functions will enable OCRWM to consolidate DOE spent nuclear fuel expertise and oversight effectively and efficiently.

ENSURING ADEQUATE RESOURCES TO COMPLETE THE MISSION

The Department of Energy and the Congress have been aware for many years that funding requirements for the repository program would increase substantially as we approach construction and transportation system development. In fiscal year 2005 and beyond, the Program will need significantly increased funding to pay for the design, construction, and operation of the repository, and for acquisition and development of the transportation infrastructure. Much greater certainty of funding is needed for such a massive capital project to ensure proper and cost-effective planning and acquisition of capital assets. Delays simply increase costs, without fulfilling the Federal responsibility for safe, secure disposal of the waste.

In accordance with the funding approach established in the Nuclear Waste Policy Act, the Department collects annual fees from nuclear utilities for the disposal of their spent nuclear fuel. The fees are reflected in the utility bills that their customers receive. In fiscal year 2005, an estimated $749 million will be collected. The resources will be there and we should not delay in making them available for their intended purpose.

The proposed appropriations language in the President's Budget is contingent upon enactment of legislation reclassifying the annual receipts that are deposited into the Nuclear Waste Fund as discretionary and crediting them as offsetting collections to annual appropriations. On February 27, 2004, Secretary Abraham sent proposed legislation to Congress that would accomplish this reclassification. By allowing the mandatory collections to be credited as discretionary, the net discretionary appropriation would be $0. The proposed legislation would be effective until construction is complete for surface facilities for the fully operating repository. Under this proposal, the Program would continue to be subject to the annual appropriations process and Congressional oversight. This proposal would simply allow the Appropriations Committees to provide funding sufficient for the Program's needs without interfering with other DOE programs.

COST REDUCTION INITIATIVES

While access to the funds paid by ratepayers for nuclear waste disposal is nonetheless critical, we believe we can improve the funding outlook by reducing the total system life cycle cost of the repository system. With this goal in mind, we are looking at enhancements that can be achieved through phased development, technical alternatives, and acceleration of operations post-2010.

Under a phased development approach to repository construction, we have divided the surface and underground facilities into several phases so that the repository can be constructed and operated in stages. The license application will address all facilities necessary to emplace 70,000 metric tons of spent nuclear fuel and high-level radioactive waste, and will describe the incremental process for building those surface and underground facilities in modules and panels. In addition to controlling short-term cost spikes, this strategy will increase confidence in our ability to begin operations in 2010, allow experience from initial operations to guide later activities, and retain flexibility for future technology improvements to be incorporated.

Present-day technology and technical information are adequate to support a robust license application, the transportation of waste to the site, and repository operations. However, within the decades-long time span during which the Yucca Mountain repository would be operated, advances in technology can lead to life-cycle cost savings, schedule efficiencies, and improved understanding of the safety and security of the repository system. To date, we have identified potential cost savings opportunities totaling several billion dollars over the long lifetime of repository operations in areas such as welding, advanced materials, techniques for excavating the underground tunnels, and low-maintenance ground support. Activities to reduce life-cycle costs and allow for enhancements in the waste management system are integrated throughout the Program, and as such will be funded from all budget areas.

Finally, OCRWM is developing plans for accelerating operations after 2010 to achieve steady-state waste receipt rates without diminishing safety or quality. As we gain experience, faster handling and underground emplacement will become possible, and as additional phased construction modules are completed, operational capacity will increase. In addition to lowering costs, accelerated waste receipt would enhance security by isolating spent nuclear fuel and high-level waste faster, and could have the added effect of allowing waste storage sites to be decommissioned sooner than currently planned.

CONCLUDING REMARKS

We are committed to the goal of beginning to receive and transport spent nuclear fuel and high-level waste to an NRC-licensed repository in 2010. Toward that end, we intend to submit a high-quality license application to the NRC in December of this year.

We are requesting a major increase in funding in fiscal year 2005, but a necessary one both to achieve the Program's goals and to begin to meet the Federal Government's responsibility for safe, secure disposal of spent nuclear fuel and high-level radioactive waste. After more than 20 years of scientific study; a site approval process involving the Department, the State of Nevada, Congress, and the President; and purposeful efforts toward securing a license, we have reached the point where investments must be made in transportation, repository, and waste acceptance readiness, if we are to maintain the objective of commencing operations in 2010. We urge your support for our budget request, and we are pleased to be able to work with you on this important national issue.

Senator CRAIG. Thank you very much, Dr. Chu, for that provocative testimony. Let me start the questioning process. I'll do five and turn to Senator Murray and we'll go back and forth in that time frame and the chairman will be back in a few moments, I trust, to join in with us so we all have a variety of questions to be asked of the three of you.

RISK-BASED END STATES INITIATIVE

Let me turn to you, Jessie, and talk about the document published by your program for each large cleanup site called the Risk-Based End States, which is referred to as a vision document, I believe. The question from that would be what is the purpose of this document at a site which is a Superfund site and is controlled by

CERCLA, the Superfund law and has NEPA records of decision of most cleanup actions?

Ms. ROBERSON. Senator Craig, the Risk-Based End State initiative really is an effort to do exactly what you stated in your opening comments. It is an integration of some of the elements which are independent documents today—land use plans, our cleanup agreement, other documents that define our activities. It is an initiative to integrate those.

It is exactly one of the steps that we went through that allowed us to make informed decisions about soil cleanup levels at Rocky Flats. We will have to go through the same process at the other sites. This is a process that mimics the same process we used there that allowed a clear understanding of the basis for decision-making regardless to what the actual regulatory process was. It does not change the regulatory processes, but it does provide information for those decisions and it also makes transparent the basis for those decisions.

Many regulatory decisions are made relative to specific geographic areas without taking into consideration the context of our cleanup. We think it's a critical step. It does indeed mimic the same process that got us to cleanup levels at Rocky Flats, and we expect that it will be useful as a tool in our cleanup at Idaho.

Senator CRAIG. Okay. I've seen a draft of Idaho's End State document dated January 2004, but it has draft written on every page. What is the path forward for this document?

Ms. ROBERSON. Well, they will remain drafts for quite a while until we believe that we have adequately and openly addressed any issues or concerns with the public and with the regulators, so they may well be drafts for 6 months. We actually met with our field managers on Monday and Tuesday and went through site by site, and I think we still have not done an adequate job in that arena and we will be taking more time to do that.

At some point, we would expect to conclude that discussion and then we will look at those documents. This doesn't overtake the regulatory process. What it does is provides a visible basis for us and for the public to understand why we may propose what we propose in the regulatory process.

BNFL CONTRACT COSTS OVERRUNS

Senator CRAIG. Okay. Another question of you, earlier this week, trade publications reported that DOE has agreed to pay British-owned BNFL for cost overruns related to cleanups in Tennessee and Idaho. What can you tell us about the status of these negotiations between the U.S. and British officials and if there is any truth to the fact that DOE would provide $500 million to compensate BNFL for what appears to be a bad investment?

Ms. ROBERSON. What I can say with total confidence is that the Department has a contract with BNFL and we are living up to that contract and we expect them to live up to that contract as well. We continue to look at all of our work at Idaho and any of our other sites specifically when we're in a procurement mode. We are looking at that work and how it fits into the overall procurement. I read the same article. I was intrigued, but I can't offer you more than that.

LABORATORY DIRECT RESEARCH FUNDING AT IDAHO

Senator CRAIG. Okay. I'm intrigued, too. My last question of you and then I'll turn to Senator Murray. Jessie, you know that I'm very concerned about the potential loss of LDRD funding, and of course we all know that's Laboratory Direct Research at the new Idaho national lab, and I've told the Secretary very directly that I believe LDRD is vital to that lab and its future missions. Isn't EM funding tapped for LDRD at both Oak Ridge and Savannah River?

LDRD FUNDING AT OAK RIDGE AND SAVANNAH RIVER

Ms. ROBERSON. I will tell you honestly, Senator, I do not believe so, but I would like to validate that for the record if I might. As a result of your raising this concern, we are certainly looking very closely at the issue. To my understanding, EM is not contributing, but I would like to validate that.

[The information follows:]

LDRD FUNDING AT OAK RIDGE AND SAVANNAH RIVER

At the Oak Ridge National Laboratory (ORNL), EM funds the laboratory for work in Technology Deployment and infrastructure activities like bioassays and utilities. Of the overhead rate paid by EM, ORNL uses of a portion of the funding to support its LDRD activities. EM does not directly fund any LDRD activities at ORNL. Since the Savannah River Site has not established an LDRD program, no EM funds are used for LDRD at that facility.

Senator CRAIG. Please do. Thank you. Let me turn to Senator Murray.

HANFORD 300-AREA CLOSURE

Senator MURRAY. Thank you, Mr. Chairman. Ms. Roberson, the Pacific Northwest lab is a very valuable asset to the Federal Government, the State of Washington and to the tri-cities and in particular, as Hanford cleanup moves forward. As you know, there is a lot of concern over the schedule for cleaning up the 300-Area and replacing the laboratory's ongoing research capabilities that exist in that area.

I addressed those concerns when Dr. Orbach from the Office of Science testified on March 3, again in writing when Ambassador Brooks from NNSA testified March 23, and to date, no strategy has emerged from the Department of Energy.

An accelerated cleanup plan in theory is a good idea, but it has to be implemented thoughtfully, and that seems to be the problem. For the first time in the history of the DOE cleanup program, facilities that have ongoing missions are being affected. I believe the Department doesn't help itself when it pursues a track of accelerated cleanup while at the same time ignoring the responsibility of replacing facilities that house critical programs for the Department and for other agencies. A good objective to not have a bad outcome.

Today you reiterated the goal of dealing with high-risk materials first. No one would classify the 300-Area as high-risk and frankly, it leaves the community really questioning DOE's choices. Ms. Roberson, can you tell the committee what is the current status of the river corridor contract proposal and efforts to address its current impact on the lab and what are the options for using antici-

pated savings from accelerated cleanup at Hanford to support replacement of facilities for the laboratory?

Ms. ROBERSON. Senator Murray, I probably can't address all of those, but let me please take a shot at as many as I can. The facilities in question were transferred to the Environmental Management portfolio in 2001–2002. By definition, that meant they were excess to mission need. During the next couple of years as we readied ourselves through the procurement process to do the river corridor cleanup, there was indeed a growth in mission, both in NNSA as well as Homeland Security, and so the Department has taken a step back on the cleanup procurement to try to make sure there's no impact to those missions as well as to stay focused on the river corridor cleanup, because those are all important priorities.

I would say, as I sit here today, we are engaged with our Deputy Secretary. We've looked at a number of alternatives. We do not have one that I can share with you, but I think we're very close. That procurement is awaiting action as a result of those discussions.

Senator MURRAY. Okay. Do you have a time line on that?

Ms. ROBERSON. No, I honestly do not have a time line as I sit here today. Since it's a multi-program initiative, my time line is as soon as we have a decision, to move forward, but I can't tell you when the Department will.

Senator MURRAY. Is part of that what the options are for using the savings from the accelerated cleanup?

Ms. ROBERSON. That's actually one. Unfortunately we don't achieve the savings until we achieve the cleanup, so I can't say that savings today are available for that purpose, but I also again can't tell you all of the options that the Department is looking at because we are simply one participant in that decision-making process.

Senator MURRAY. Can you tell me, are we talking a couple weeks or a couple months or 6 months before we have an idea?

Ms. ROBERSON. Actually, as I sit here today, I cannot tell you. We are inputing into the process. I'd be glad to get back to you as soon as we leave here today.

Senator MURRAY. I would really like to know. Obviously the community is waiting. We all want to know where this is going and your response, timely response would be really appreciated.

Ms. ROBERSON. Thank you.

WASTE INCIDENTAL TO REPROCESSING

Senator MURRAY. Let me move on then to another question. The Department is still seeking unilateral authority to reclassify the high-level waste at Hanford, Idaho and Savannah River. Frankly that appears to a lot of us to just be another example of the Department not working with its Federal and State regulators. The Department lost the lawsuit in Federal court and it's now appealing and the President's budget proposes to hold $350 million from cleanup of those sites aside until this issue is resolved to the agency's satisfaction. You know, frankly, this proposal is being labeled as blackmail to some people.

The proposal certainly seems similar to the Department's former accelerated cleanup account proposal that this subcommittee re-

jected last year and I hope it will reject again this year. The fact is that before the Department lost in court and after, it did have an opportunity to work with the litigants and States to resolve this issue.

Can you tell me, Ms. Roberson, why the Department rejected offers of mediation by the NRDC and the States prior to trial and even more surprisingly rejected the court's request that all parties agree to mediation after the Department lost?

Ms. ROBERSON. Actually, I would have to defer to our Chief Counsel on the specifics of the litigation. What I can say is that there was conversation among the parties to the lawsuit. I won't try to describe when or how that happened, because that process actually would have been managed by our General Counsel rather than by the Office of Environmental Management, but I would like to say a few things.

I have heard the term being used that this looks like blackmail, but Senator Murray, I have to say to you, we haven't considered changing nary a cleanup agreement at any site. We are simply trying to implement what we've already agreed to in those cleanup agreements at every one of those sites.

Senator MURRAY. But you lost the battle in court.

Ms. ROBERSON. We are appealing the decision in court, but even before we lost the lawsuit in the Ninth District, we were implementing those agreements we have with our regulators in each State, and we are trying to continue to implement those agreements. We have not proposed a single change to a cleanup agreement in any of those States.

Senator MURRAY. Well, it does appear to a lot of people that DOE's the only one who thinks legislation is necessary to resolve this issue. It seems even when our States attempt to reach common ground, they are just met with steadfast resistance to maintaining regulatory oversight on this matter, and it just is disheartening to all of us.

Ms. ROBERSON. Well, we continue to have a dialogue and I think a fairly successful dialogue with the States even today.

Senator MURRAY. They don't feel that way.

Ms. ROBERSON. Well, that's unfortunate. I appreciate that insight. That's surprising to me.

Senator MURRAY. Well, I think everyone I've talked to wants to resolve this issue, but they feel like the Department is just resisting any attempts to speak with the States, to work with them to find common ground. You're simply giving us legislation to override an issue and thus it is not acceptable.

Ms. ROBERSON. We are working even today with the States on a path forward, we absolutely are. It's unfortunate if we have a State that doesn't believe that that's our goal.

Senator MURRAY. Let me just give you a personal appeal. Can you make a concerted effort to sit down with them to really listen to their concerns and to find common ground on this issue?

Ms. ROBERSON. Absolutely.

Senator MURRAY. Okay. I take you at your word on that and I will wait to hear from our States that they feel that they are actually working with you.

Ms. ROBERSON. Okay.

HANFORD EMPLOYEES EXPOSURE TO TANK FARM VAPORS

Senator MURRAY. Let me raise another issue and this is really a critical one for our State. Ms. Roberson, as you know, there has been a serious issue at Hanford related to continued exposures of workers to vapors escaping from the tank farms. It's causing workers to seek medical attention on-site and often being taken to local hospital emergency rooms.

Related to that vapor issue but not confined to these medical problems is the Hanford Environmental Health Foundation which is under a DOE contract to provide medical care at the site who's now facing allegations of supervisor misconduct, fraud and medical record tampering. The fear is that this Hanford Environment Health Foundation has done these things due to financial considerations and/or perhaps pressure from contractors to limit the number of work days lost which can affect the contractor's own financial incentives.

In fact, in last Sunday's Washington Post, it's reported that the DOE's own inspector general, as you know, found that, and I want to read from it, "For 9 out of 10 private contractors that perform environmental cleanup at old bomb-making sites from Washington State to South Carolina, the audit found that the Department of Energy maintained inaccurate and incomplete accident and injury data."

Frankly, given the significant coverage on these issues that we've received in the national and Washington State press, I was surprised you didn't address them in your own written statement, but I'm even more surprised that your written statement makes claims on improved worker safety by citing the lost work day cases when your own inspector general says the Department underreports such events. There are many investigations going on right now at Hanford related to the tank vapors and HEHF, and I hope we're going to get some answers from those investigations, but I really fear that the Environmental Management Program has lost considerable credibility with workers and their families on these issues.

Cleanup of nuclear waste is a very difficult task. You and I both know that it involves many known and unknown dangers. We ask a lot of our workers who are on-site and it seems clear to me that we need to provide assurance that we know what we are doing, that we are taking real precautions and that we have reliable investigations when necessary.

The National Institute of Occupational Safety and Health, NIOSH, has been on-site, but DOE limited its review authority to the vapor issue. I don't believe that DOE has requested OSHA or the NRC to play any role. It seems reasonable to consider if it would make sense to have OSHA and the NRC regulate health and safety.

Do you believe that DOE is responsibly on top of these vapor and medical issues?

Ms. ROBERSON. Senator Murray, actually, I do believe. Specifically on the tank farm vapors, I think our field operations has been fairly aggressive. They've had three external independent reviews from organizations that have expertise in the occupational medicine area and they've offered advice on improvements and we've

moved forward with those improvements, and where we can get good advice to improve, we're going to continue to do that. That's our commitment.

I won't speak on HEHF since that is an ongoing investigation. I don't think that I can speak on that, but what I can say is if there is a determination of any misconduct, the Department will react swiftly and strongly. There is no doubt in my mind that we will.

IG REPORT ON SAFETY PERFORMANCE

I'd like to, if I could, respond to—and even though the system that is in question belongs to the Assistant Secretary for Environment, Safety and Health, I'd actually like to respond because the IG draft report was fairly specific to the Environmental Management program. I mean, I have to say unequivocally I disagree with some of the information presented as fact as well as the conclusions reached in that draft report.

Senator MURRAY. You disagree with the IG?

Ms. ROBERSON. Yes, and I have responded. There are two specific points I'd like to make. There are many others, but I would like to address two specific points. One assumption was that this database provided data that was used by Environmental Management to determine the status of its safety performance. That is incorrect.

In 2002, OSHA changed the criteria for reporting in the system and to smooth the path for transitioning to the new criteria directed that nobody should spend time trying to catch up with the old system. DOE did the same. DOE took the same action.

As the Assistant Secretary for Environment, Safety and Health said in her opening comment, this is a paper-intensive system and it's prone to quality assurance problems and lag time. In 2002, we identified this as an issue in our program and discontinued using it for that purpose. The very law that the IG cited in its draft report as being the basis for identifying what data was not being transferred, is the law that we also look at in our operations to make determinations as well, too.

So the law that provided the basis of their assumption that there was underreporting, is the mandated law for the contractors to keep and in fact, based upon the IG's draft report, they are obviously keeping it up to date. That is the law that our facility representatives and our managers look at in the field and we also look at as well.

The Department has undergone in the last year an initiative to simplify the translation of that data from the OSHA logs to its headquarters system, but that hasn't alleviated the requirement for us to look at their logs in the meantime which is what we have done.

Senator MURRAY. I appreciate that. I would like to see your response back to the IG, but I also think that there's—don't you think there's something more we can do to make sure the workers and families feel that their——

Ms. ROBERSON. Absolutely.

Senator MURRAY [continuing]. Health and welfare is the Federal Government's first priority because that certainly doesn't feel like it today.

Ms. ROBERSON. Absolutely, and I think you probably know in the tank farm even as late as last week, we talked with our site operations and our contractor and we've taken additional actions there. We are absolutely committed to doing this work and doing it safely, and we are interested in the expertise and advice of any that can help us to continue to improve it because that's what we have to do. So that is our commitment, and we will continue to be focused on that and look for improvement wherever.

Senator MURRAY. Will we be seeing recommendations from your agency on what we can do perhaps to have OSHA and NRC regulate health and safety? Will you be making any recommendations like that?

Ms. ROBERSON. I'm not personally familiar with whether the Department will make those recommendations, but I know the Secretary is looking forward to the results of the reviews and investigations he's initiated, and I think those will inform any decisions going forward from there.

Senator MURRAY. Mr. Chairman, I see you've returned. I have one more question. I'm happy to wait until you——

Senator DOMENICI [presiding]. Give it. Let's go.

ENERGY EMPLOYEES OCCUPATIONAL ILLNESS COMPENSATION PROGRAM

Senator MURRAY. Ms. Cook, your office has authority over the Energy Employees Occupational Illness Compensation Program Act. In fact, the Department makes a big deal about its efforts to implement the program and is currently opposed to efforts to move implementation from DOE to the Department of Labor which many of us would believe would be much more effectively operating the program and serving as the willing partner.

Specifically related to Hanford, it's my understanding that you intend to end the medical screening program for former workers at Hanford at the end of this current fiscal year. It is estimated that there are 2,700 former workers with past exposures who have actively indicated an interest in an examination from the site and there are 600 who are awaiting appointments that won't be available due to budget cuts.

Can you tell me why your budget proposes to end the Hanford former worker screening and how you justify such an action in light of such an incredibly big need?

Ms. COOK. Yes. First off, the budget does not define that we are going to end the former worker program at all. What we are going to do, though, is make it more effective and efficient for exactly the reasons you just pointed out. The former worker program was started several years ago. At the current time, we have 14 different pilot projects out at different sites all around the complex. Many sites are waiting to participate in the former worker screening program.

What we intend to do through this year and into 2005 is to move forward with a nationwide former worker screening program that provides more timely and more service without paying overhead for 14 projects throughout the complex, so at all of the sites, all of the former workers will have access to a screening program locally. And if local expertise isn't available, then we will connect them

with someone nearby, but we do not intend to end any former worker program at any site.

Senator MURRAY. So the screenings still go on at the Hanford site?

Ms. COOK. Yes.

Senator MURRAY. At the site?

Ms. COOK. Yes, absolutely, but it will be part of the national program and not individual programs at each site, so it will be managed nationally.

Senator MURRAY. And the 600 that are awaiting appointments will get appointments?

Ms. COOK. Absolutely.

Senator MURRAY. As well as the 2,700?

Ms. COOK. Absolutely.

Senator MURRAY. Thank you, Mr. Chairman.

Senator DOMENICI. Thank you very much, Senator. First let me say, and you've had a pretty good grilling today. I'm glad you got to offer your views, and let me say I wish we could be here predicting that your recommendations would be followed, but it seems to me that in some areas it will be very difficult.

I have questions in each area, but if I don't get them done today, I'll get them to you and I would appreciate your answering them at your earliest convenience.

PLUTONIUM TRACES AT WASTE ISOLATION PILOT PLANT

I noted in a recent press article about the detection of microscopic traces of plutonium in the sampling at WIPP. I understand that the quantity is far below the regulatory concern, but I'm curious whether that detection could be indicative of more serious issues. My question is, please describe your understanding of this situation and address my concern about these samples that could indicate a more serious problem.

Ms. ROBERSON. Senator Domenici, we have multiple independent monitoring sources and for the second quarter in 2003, in some cases it's monthly; in some cases it's quarterly. This was monthly sampling, I think, for June of 2003. That sampling or that analysis was conducted using the most capable and sensitive equipment available to us.

NEW MEXICO CLEANUP AGREEMENT

Senator DOMENICI. Thank you very much. Ms. Roberson, let me thank you for your willingness to return to the negotiation table to work out an acceptable cleanup agreement between DOE and New Mexico. As a result of these negotiations, $43 million in additional money can be applied toward meaningful cleanup. You can be sure that I will continue to watch the matter and I hope you will too, to ensure that cleanup stays on track.

Does this agreement have enforceable deadlines and standards to ensure that cleanup is accomplished and we won't find DOE and the State fighting over the same old issues and compromising the cleanup?

Ms. ROBERSON. Senator, it does indeed include enforceable milestones where Federal or State standards exist, and it would include those where they do not exist. It would include a process by which

we would go through and work with our regulators to establish them.

I'm sure this is not the end of the challenges that the parties will have to work together on, but it certainly establishes a process through which we can resolve those issues as we go forward and achieve the cleanup as we've laid out.

WORKER SAFETY SITE PROFILES

Senator DOMENICI. Let me say, Ms. Cook, last year the DOE testified that it was in the process of developing site profiles and to pull together the necessary site data in order to speed up the case approval process for workers that were made sick while working for the Department. DOE's testimony stated that by developing a complete understanding of the occupational hazards at each of the DOE sites, it will help the doctors in developing the claims as to exposure hazards a worker may have been exposed to.

The question to you is, where do we stand on the development of site profiles and how much is being spent in 2004 and how much will you do in 2005?

Ms. COOK. Yes, to answer that I need to introduce to Bob Carey that he really wanted to be closely involved, as did the Undersecretary in this program. And so what they did is bring in Mr. Carey to bring in the program as a whole with only that responsibility and directly reporting to the Undersecretary and to the Secretary, and Bob will tell you about where we are on the site.

Senator DOMENICI. What is your name and what do you do?

Mr. CAREY. Sir, my name is Bob Carey. I'm a Senior Policy Advisor in the Office of the Secretary and this elevation of the Office of Worker Advocacy to a direct report to the Under Secretary Card happened to coexist, happened at the same time as my return to active duty, so I was assigned to this program.

I think there may be some misunderstanding as to the relationship between the site profiles that NIOSH does as part of the dose reconstruction process and the site profiles that some people have been advocating for this program.

For the site profiles that NIOSH does for the Part D Program for the dose reconstructions, it's regarding radiation, a relatively well understood, quantifiable and discrete program where the causal relationships are pretty well understood. For the other toxic substances that Part D also covers, the Department of Energy Program, those causal relationships are not nearly as well understood. A lot of these substances hadn't even become known to be toxic except in the last couple decades. Prior to that we didn't even have a lot of records on these issues.

Because of that, the cost benefit analysis that we've done to date has not indicated that such large scale discrete site profiles would be beneficial. We believe they cost several million dollars and they take a year or 2 to complete and that they don't necessarily provide any additional data that would be that useful to the Physicians' Panels.

And the fact of the matter is we believe we already have sufficient information for these Physician Panels. The statute requires that we provide all available information. It does not state that we are required to provide additional analysis like the statute requires

NIOSH to do for dose reconstructions. With that available information we currently provide, we believe we provide more information than other compensation programs do, and we provide a large volume of information already to these physicians.

The fact of the matter also is we have to look at this cost benefit analysis in terms of what we provide to the applicant with our positive determination. The Department of Labor's Part B Program has a 50 percent or greater standard of causation for the radiation-induced cancer, whereas ours is not as likely to be a significant factor in the causation, aggravation or contribution to an illness.

So we've had positive determinations where we've had a 2½ percent probability of causation. Given all those issues and the fact that we don't make a disability determination and we don't make a compensation recommendation in our physician panel process to the State worker's compensation boards, we do not believe that these large-scale site profiles that some people have been talking about would be beneficial in the net.

Senator DOMENICI. Well, let me tell you, all that statement notwithstanding, we are in a mess because the claimants clearly don't believe us anymore, and things are going too slow and we're not getting anybody compensated. And I suggest while the bill is a little drawn, it doesn't provide that much per individual that we shouldn't get on with it. I think it's got a cap of $15,000, doesn't it?

Mr. CAREY. No, sir, our program does not have any cap. In fact, under the Part D Program, the one that the Department of Energy runs, we provide no direct Federal benefit. We provide a positive physician panel determination which we can then use to issue to a contractor——

Senator DOMENICI. Who pays the money?

Mr. CAREY. The contractor or the insurance company that the contractor may have hired is the one that ultimately pays the money. If we have a current contract with that contractor, we can then reimburse them under those contracts, but the States are the ones that direct the money, the payment of the money, sir, under the Part D Program.

Senator DOMENICI. Well, straighten me out. What are they complaining about?

Mr. CAREY. Sir, we initially vastly underestimated the scope of this program and because of that underestimation, we underestimated how long it was going to take to set up the program and how much we were going to have to invest in order to establish this program.

We now believe that we have established this program, and since we received that $9.7 million reprogramming for fiscal year 2003, we received that in October of 2003, we've tripled our case processing up to the physician panels; we've increased our physician panel determinations approximately six-fold; we've also been able to put together a strategic plan based upon a top to bottom review to be able to eliminate the entire backlog of current and future backlog applications by the end of calendar year 2006.

If we thought we could hire enough physicians in order to be able to panel these panels faster and in greater quantities than we currently believe, we'd want to do that faster.

Senator DOMENICI. Who's in charge of the program now, the Secretary?

Mr. CAREY. Under Secretary Card is who I directly report to, sir.

Senator DOMENICI. Well, I'll tell you, this isn't in the scheme of things, may not be for the Department a very big program or very significant.

Mr. CAREY. It's my life, sir.

Senator DOMENICI. What?

Mr. CAREY. It's my life.

Senator DOMENICI. Well, I'm glad it's somebody important's life because there's an awful lot of folks that don't think we know what we're doing.

Mr. CAREY. Sir, my father—I'm sorry, sir, go ahead.

Senator DOMENICI. And we didn't know what we were doing. It was wrong for a long time. Now you tell me it's going to get right and I don't question you except you've got to understand, we know about the doctor issue, but you've got to understand that you've got to get going.

Mr. CAREY. Yes, sir.

YUCCA MOUNTAIN FISCAL YEAR 2005 BUDGET REQUEST

Senator DOMENICI. Okay, now let me talk a little with Dr. Chu. Let me first thank you and congratulate you. I wish we could tell you that we could move forward with dispatch, but you understand the problem and the President's budget requests $880 million for Yucca. A significant portion of this funding is to be paid from fees assessed which you're aware of. The fund will collect $749 million this year, the budget process that the annual receipts be reclassified as discretionary funds and then appropriated.

As a former budget committee chairman, I know that you can't wave a magic wand to reclassify these fees. It requires legislation and some degree of cooperation.

I'm not optimistic that we are going to accomplish that this year. However, if we fail to get the agreement and reclassify the fees, the Senate Budget Resolution assumes a level that you are not satisfied with of $577 million. Now, that's not the end because we've got to go to conference with the House. You're aware of that. If Congress only provides $577 million, what activities will the Department be forced to defer and will this significantly delay the opening?

Dr. CHU. Senator, thank you very much for your support all these years. We have looked at this budget situation very carefully, and the reason we ask for $880 million is we need the funding to open a repository in 2010. If we get a level of funding of $577 million in 2005, we will be able to deliver the application because that's our highest priority. That's our first milestone. But we will not be able to achieve our goal of 2010 without getting the full funding.

Senator DOMENICI. But when you get the first step that you just described, the licensing?

Dr. CHU. Yes.

Senator DOMENICI. You think you can do that?

Dr. CHU. Yes. We will be able to do a license application because we are in the process of completing that in 2005. Since our sched-

ule is December 2004, it's really the first quarter of 2005 we intend to deliver the license application.

Senator DOMENICI. I hope you can. Isn't that being contested also?

Dr. CHU. That remains to be seen.

Senator DOMENICI. That licensing is being contested also just like everything else?

Dr. CHU. Not yet.

TRANSPORTATION MODE AND ROUTES FOR YUCCA MOUNTAIN

Senator DOMENICI. Okay. It's my understanding that the Department has not made a final decision as to whether it will use rail or truck as the transportation mode of waste to Yucca or decided on a specific route. When will the Department make this decision and begin the environmental impact study?

Dr. CHU. In our final environmental impact statement, we have indicated that mostly rail is our preferred transportation mode, but we have yet to issue a formal record of decision on that. In my testimony, I say we expect to do that very shortly.

And as to specific routing, this is part of a whole planning process with the stakeholders and the State and the local governments. And we are just starting that process right now and we do not anticipate to identify a suite of routes until probably fiscal year 2006. That's the preliminary plan, but we'll deal cooperatively with all the stakeholders.

Senator DOMENICI. Well, I'm amazed, I mean if you think you're over the hurdles, you know, transportation is a big issue, too, among people. Routes will be a big issue. I want to suggest to you that I have found one of the most intriguing responses to be a detailed history of the U.S. Navy and its ships and where they are on a given day and how many nuclear reactors are floating around the oceans and seas of the world. There are lots of them. You know, some of them have two on board. They are now permitted to land, to dock at every dock in the world except New Zealand, and that's an old thing.

Now, when we worry about safety, isn't it amazing that there's probably about 150 nuclear reactors traveling the waters of the ocean and from time to time docked in docks that are full of ships that are adjacent to them, to development, and nobody complains. I just tell you that it's pretty interesting.

When we sit around and worry so much, the peoples of the world let these dock with, you know, a battleship has two of them.

Dr. CHU. Senator, I totally agree with you. You know, worldwide, there's excellent safety records in transportation of nuclear materials.

WASTE INCIDENTAL TO REPROCESSING

Senator DOMENICI. Let me talk a minute to you, Ms. Roberson. The budget provides $350 million that can be used to address the cleanup of waste incidental to reprocessing, WIR, located in Washington, Idaho and South Carolina. I understand that the Department is allowed to reprocess some of the WIR waste in Washington and Idaho. It would generate transuranic waste streams that DOE intends to send to WIPP. Thus far I'm correct, am I not?

Ms. ROBERSON. The one adjustment I would make in Washington, it's not even waste from reprocessing. The source, the actual source is transuranic waste.

Senator DOMENICI. Well, to date, the Department has discussed a strategy with Washington, Idaho and South Carolina, but the State of New Mexico was yet to be included in these discussions. Will you commit here to including New Mexico in these negotiations and work with the State in developing a solution?

Ms. ROBERSON. Absolutely, Mr. Domenici, and we actually did start that a couple weeks ago with the workshop hosted by EEG and I think it was a very successful workshop in providing information to all the parties that allowed a platform for future conversations, so you do have my commitment.

TRANSURANIC WASTE

Senator DOMENICI. Okay, what is the basis for determining what transuranic waste is and what is the process by which you believe you can remove the fission products? That would mean we're going to meet the criteria for permanent disposal at WIPP.

Ms. ROBERSON. The basis for determining—TRU waste is actually defined by the permit for disposal at WIPP and we must satisfy the permit requirement before any such material can go there.

Senator DOMENICI. Okay. We have about 20 other questions and I have about 20 other people lined up, so I'm just going to give you those.

Ms. ROBERSON. Thank you, sir.

ADDITIONAL COMMITTEE QUESTIONS

Senator DOMENICI. I'd like to thank the witnesses. I'm sorry that we talked more than you, but that's the Senate. I think some chairmen do a better job than I and just say that only two people will talk. The rest of you can wait for your questions, but that's not so easy.

I'd like to remind members that the subcommittee will keep the record open for 2 weeks for additional questions. And to our witnesses, you have 2 weeks upon receipt of the questions to provide answers. If there are too many and are too bulky, just tell us you need another week on some of them. Just don't let us think you're not cooperating.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED TO THE DEPARTMENT OF ENERGY

QUESTIONS SUBMITTED BY SENATOR ROBERT F. BENNETT

REMOVAL OF MOAB URANIUM MILL TAILINGS PILE

Question. The State of Utah has raised significant concerns regarding the instability of the Moab Atlas tailings pile over time and the need to remove the tailings from their current location on the banks of the Colorado River. Where is the Department with regard to its determination about whether to remove the tailings pile from the banks of the Colorado River?

Answer. The Department is now preparing the draft environmental impact statement (EIS) for remediation of the tailings in cooperation with other Federal agencies, as well as State, Tribal, and local governments. The Department plans to issue

the draft EIS for public comment in the fall and to identify a range of remedial alternatives including no action, stabilization in place, and disposal of the tailings at one of three potential off-site locations. The National Environmental Policy Act regulations require that the no action alternative be evaluated as well as all reasonable alternatives. We will allow adequate time for public review of the document; a minimum of 45 days is required by regulation, and more time can be granted if needed. The Department has not selected a preferred alternative at this time and would like to obtain public input on the draft as an aid in making our selection. We will identify a preferred alternative in the final EIS and will brief interested members of Congress at the earliest opportunity when we have made a selection. The Department's current schedule anticipates issuance of a Record of Decision for the selected remedial action in 2005.

SALT CAVERN DISPOSAL REMEDIATION ALTERNATIVE

Question. I understand that there is some interest in a new remediation alternative called salt cavern disposal because of the hope that it may be both protective of the environment and economically competitive with the other remediation alternatives already listed in the Draft EIS. Has DOE investigated this option and if so, what conclusions have been reached with regard to this alternative?

Answer. The Department is considering an alternative to dispose of the uranium mill tailings in mined salt caverns. Conceptually, such disposal caverns would be created by solutions mining in the salt beds of the Paradox Formation beneath the Moab site or other possible locations, such as the commercial potash mine site approximately 6 miles downstream from Moab. This alternative would involve withdrawal of significant quantities of Colorado River water (on the order of 2,000 gallons per minute for 20 years). The water would be used as part of the solution mining process and would become saturated with salt, generating brine that would have to be disposed of by deep injection well, or solar evaporation pond, or other alternative methods for disposal of brine. Disposal for uranium mill tailings in mined salt caverns would be a unique, first of a kind methodology and is an unproven approach to uranium mill tailings disposal that could take at least 20 years to complete and for which there are several areas of technical, geological, and operational vulnerabilities and uncertainty. The National Academy of Sciences recommended that DOE "take advantage of the experience gained from previous DOE projects and the UMTRA project." The Department has not yet reached a final conclusion regarding this alternative.

Resolving these uncertainties sufficiently so the Department could be sure that this alternative is technically feasible would require significant investment in additional studies, including injection well testing, subsurface characterization, geological and salt cavern performance modeling, and an overall system performance assessment. Such studies would require a multi-million dollar investment and several years to complete, with no guarantee that the investment would demonstrate that this alternative is viable. The Department has not yet reached a final conclusion regarding this alternative.

QUESTIONS SUBMITTED TO THE OFFICE OF ENVIRONMENTAL MANAGEMENT

QUESTIONS SUBMITTED BY SENATOR PETE V. DOMENICI

WIPP DETECTION OF PLUTONIUM

Question. I noted in a recent press article about the detection of microscopic traces of plutonium in the air sampling system at WIPP. I understand the quantity of plutonium is far below regulatory concern, but I am curious whether such detection of plutonium could be indicative of a more serious issue. Please describe your understanding of the situation and address my concern that these samples could indicate a more serious issue in the future.

Answer. The detection of a few microscopic particles of plutonium during the spring of 2003 is not indicative of a more serious issue; rather, it indicates the sensitivity of one of the methods DOE uses to ensure serious issues do not arise. With DOE's support, the Carlsbad Environmental Monitoring and Research Center (CEMRC), the Environmental Evaluation Group (EEG), and Washington TRU Solutions (WTS) have developed sensitive radiochemistry capabilities that allow them to detect traces of plutonium in composite samples of air filters collected over weeks and months. The amounts detected were barely above the detection limits of these laboratories' analytical capabilities, and several of the samples analyzed from this period did not detect any traces of plutonium. The laboratories have analyzed sam-

ples taken subsequently during the summer of 2003 and have not detected any plutonium in them; they are continuing to analyze similar samples taken since the ones in which plutonium was detected. In light of the laboratories' extremely sensitive analytical methods, the environmental conditions around the site, and the Waste Isolation Pilot Plant's (WIPP) 5 years of operations, DOE anticipated that these types of particles would eventually be detected.

Although these particles may be the result of WIPP's operation, their source is uncertain at this time. CEMRC, EEG and WTS are working to identify the source. The continuous air monitoring devices used to protect workers, the public and the environment did not detect anything of significance during this period. In addition, CEMRC's analysis of ambient air samples taken within 100 meters of the exhaust shaft and elsewhere did not detect any levels of plutonium during this period above those resulting from fallout from past nuclear weapons testing.

LOS ALAMOS CLEANUP

Question. Ms. Roberson, thank you for your willingness to return to the negotiating table to workout an acceptable cleanup agreement between DOE and the New Mexico Environment Department for Los Alamos National Lab. As a result of these negotiations, $43 million in additional funding can be applied toward meaningful cleanup this year. You can be sure I will continue to watch this matter very closely to ensure that cleanup stays on track. Does this agreement have enforceable deadlines and standards to ensure that the cleanup is accomplished and we won't find DOE and the State of New Mexico fighting over the same old issues and compromising cleanup?

Answer. The consent order as agreed upon by the Department and the State of New Mexico does indeed have specified enforceable deadlines and cleanup standards. Where standards do not exist, the consent order sets forth a process to establish appropriate risk-based standards.

OFFICE OF FUTURE LIABILITY

Question. The budget provides $8 million to establish the new Office of Future Liability that will take over environmental cleanup not already assigned to the Office of Environmental Management. The budget indicates that this will include 2,000 contaminated sites that must begin cleanup by 2025. I believe that in DOE's zeal to close the EM program by 2035, it is ignoring significant waste streams that must be addressed. I am skeptical that creating an entirely new bureaucracy to address the future cleanup is the most cost effective means of achieving cleanup. How much does the Department expect the Office of Future Liability will spend for cleanup over the next 20 years and how many people will the new office need to manage this massive cleanup effort?

Answer. The Office of Future Liabilities (FL) was established as a planning office to develop comprehensive estimates of the Department's future environmental liabilities, including decommissioning and decontamination of excess facilities and disposition of excess nuclear materials in order to assist DOE in developing the best organizational structure for managing that cleanup. FL will work with the line DOE science, energy, and defense organizations to develop the scope, cost and schedule for all the requirements and identify organizational options for managing these requirements. For the near-term budget window, four full-time equivalents are requested to support the planning responsibilities of the office. DOE has not decided what line office will be charged with managing future liability.

Question. Has the Department determined whether or not creating this new office and bureaucracy will lower the cost of cleanup, and is there any data to validate this decision; and will there be a transition plan for experiences staff from one office to another?

Answer. The Department's Top-to-Bottom Review of the Environmental Management program recommended the accelerated cleanup of the legacy of the Cold War, the mission the Office of Environmental Management was designed to carry out. Defined, finite work scope has been key to focusing the active cleanup mission on accelerated completion with the benefits of reducing risk and life-cycle cost while accelerating schedule and cleanup. However, long-term waste treatment and disposal will continue beyond the completion of the current EM baseline (scope) program. So that we do not diminish the momentum we have gained with accelerated EM cleanup, the Department has proposed the new planning office to look at options for managing the long-term liabilities and in so allowing the accelerated pace in achieving near-term cleanup results to continue unabated. We believe these are prudent steps to effectively manage our near-term cleanup responsibilities while establishing a visible process to address future liabilities.

We do not foresee a need for a transition plan at this planning stage as longer-term liabilities may involve different issues and different skill mixes compared to the near-term cleanup activities.

MANAGING FUTURE WASTE COSTS

Question. EM is negotiating with other DOE offices to require that they take over all environmental responsibilities for waste they generate in the future. I have many concerns with this approach, because EM is the only office qualified to deal with the waste cleanup. On the other hand, I recognize that every Office in the Department must be more sensitive to the costs of managing waste streams they create. It seems to me there could be better ways to force each office to make a serious effort to reduce these costs. One option might be to require that an office which generates wastes set aside sufficient funds that would be used by EM to manage the cleanup. Has the department considered this option and would it make program managers more considerate of waste management costs?

Answer. The Department has considered the option of a waste generator charge-back program. Our assessment has indicated that implementation of a charge-back program is difficult to manage and has the potential to increase costs because of the additional accounting burden. In addition, the Department has the risk of augmenting an appropriation if the charge-back program does not collect the exact funding necessary for operations. Should the generating program exceed the level of appropriated funds, EM will be required to supplement the remaining cost of newly generated waste operations. Compounding this approach, a charge-back system would not enable EM to focus its efforts strictly on its core mission of accelerated risk reduction and site closure for legacy activities.

WASTE DEPOSITS AT WIPP

Question. The budget provides $350 million that can be used to address the cleanup of Waste Incidental to Reprocessing (WIR) located in Washington, Idaho, and South Carolina. I understand that if the Department is allowed to reprocess some of the WIR waste in Washington and Idaho it would generate transuranic waste streams that DOE intends to send to WIPP. To date, the Department has discussed this strategy with Washington, Idaho, and South Carolina; but the State of New Mexico has yet to be included in these discussions. Will you commit to including New Mexico in the negotiations and work with the State on developing a solution?

Answer. The State of New Mexico was represented in some of the discussions the Department has had with affected States on waste incidental to reprocessing. Pursuant to my commitment to you, since the hearing, we have stepped up our efforts to discuss this matter with the State, including productive conversation between Governor Richardson and the Deputy Secretary. We are committed to working with the State and the State's elected representatives to resolve issues relating to transuranic waste.

Question. What is the basis for determining what transuranic waste is and what is the process by which you believe you can remove the fission products that would meet the criteria for permanent disposal at WIPP?

Answer. Transuranic (TRU) waste is defined by the Waste Isolation Pilot Plant (WIPP) Land Withdrawal Act as "waste containing more than 100 nanocuries of alpha-emitting transuranic isotopes per gram of waste with half-lives greater than 20 years, except for (A) high-level radioactive waste, (B) waste that the Secretary of Energy has determined, with concurrence of the Administrator [of the Environmental Protection Agency, EPA], does not need the degree of isolation required by the disposal regulations, or (C) waste that the Nuclear Regulatory Commission has approved for disposal on a case-by-case basis in accordance with part 61 of title 10 Code of Federal Regulations (CFR)." "High-level radioactive waste" is defined in the Nuclear Waste Policy Act (NWPA) as "(a) the highly radioactive material resulting from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocess and any solid material derived from such liquid waste that contains fission products in sufficient concentrations; and (b) other highly radioactive material that the [Nuclear Regulatory] Commission, consistent with existing law, determines by rule requires permanent isolation."

DOE believes that certain tank waste in Idaho and Washington is not high-level waste but rather is TRU waste. This is largely for two reasons.

First, DOE believes that this waste is not "highly radioactive material resulting from the reprocessing of spent nuclear fuel." Rather, in the case of Idaho, the waste, known as "sodium-bearing waste," is waste primarily from decontamination activities and wastewater resulting from operations at the Idaho Nuclear Technology and Engineering Center (INTEC). This waste also contains trace amounts of radioac-

tivity from first-cycle reprocessing wastes resulting from heels from these wastes left in the tanks after the first-cycle reprocessing wastes were removed and calcined in anticipation of their disposal in the spent fuel repository, along with some second- and third-cycle reprocessing wastes that remained in the tanks after most of that waste was also calcined in anticipation of disposal in the spent fuel repository. These wastes, approximately 1 million gallons, are currently being stored in the same tanks that were used to store waste from reprocessing. The total curies that have been removed and calcined represent on the order of 98 percent of the total INTEC curie inventory generated through spent fuel reprocessing. In the case of Washington, there is waste in approximately 20 tanks at Hanford that DOE believes resulted from decladding of fuel prior to reprocessing and from the cleanup of plutonium that occurred after the reprocessing of spent fuel. In DOE's view, this waste does not result "from reprocessing," whose purpose is to recover uranium and plutonium, but rather from activities necessary to prepare the fuel for reprocessing and to remove impurities from the recovered metals to meet weapons production purity standards. To put the point a little differently, this waste is very different from waste from the "first solvent extraction or similar process by means of which uranium and plutonium are recovered from irradiated reactor fuel." That was the definition of "high level waste" used by the Consultation and Cooperation Agreement between the State of New Mexico and DOE which contained the original prohibition on disposal of high-level waste at WIPP and that we believe was at the heart of what Congress had in mind when it defined "high-level waste" in the NWPA. The WIPP Land Withdrawal Act specified that this Agreement was unaffected by the WIPP Land Withdrawal Act. The radionuclide concentrations in these wastes are substantially lower than those contained in wastes from the first cycle of spent nuclear fuel reprocessing.

Second, DOE believes that this waste meets the definition of "transuranic waste" and has other radiological characteristics that make it similar to other defense TRU waste in the complex that is being disposed of at WIPP, i.e., alpha-emitting radionuclide concentrations that are greater than 100 nanocuries per gram.

With regard to the removal of fission products, with respect to the Idaho waste, as explained above, the current tank inventory in Idaho represents about 2 percent of the radioactivity from the initial spent fuel waste inventory, because 98 percent of that radioactivity has been calcined. This has also resulted in removal of on the order of 98 percent of the cesium, strontium, technetium and actinides from reprocessing that the waste originally contained. As for the Washington waste, it never contained fission products from reprocessing operations to begin with (except for possible limited cross-contamination in three tanks due to the tanks' having been used for multiple purposes during their operating life times), and it is expected to contain less than 1 percent of the radioactivity from the Washington tanks.

WIPP does not have specific radionuclide or fission product limitations for acceptable waste. In fact, it is specifically statutorily authorized to receive remote-handled transuranic waste (RH TRU), which generally contains significant amounts of fission products. Instead, the relevant limitations in WIPP's waste acceptance criteria are fourfold. First, there is a statutory cap on the volume of RH TRU that WIPP may accept. While much of the treated TRU from Idaho and Washington is expected to be contact-handled, some is expected to be remote-handled, and disposal of that waste at WIPP will have to comply with the statutory volume limits. Second, WIPP has received approval from EPA to accept remote-handled waste, but it is still awaiting action from New Mexico on DOE's request for modification of its Resource Conservation and Recovery Act (RCRA) permit, so again, no remote-handled TRU from either site would be able to go to WIPP until that approval has been received. Third, WIPP has a performance assessment demonstrating that disposal of a total assumed volume of contact-handled and remote-handled transuranic waste with certain characteristics satisfies EPA's standards for disposal of transuranic waste. The tank waste from Idaho and Washington under consideration for WIPP disposal has characteristics consistent with the assumptions in that performance assessment and therefore can safely be disposed of there. Finally, DOE has submitted to the State of New Mexico a request for a modification of its RCRA permit that would require it to submit a further Class III RCRA permit modification for tank waste it is seeking to dispose of at WIPP. If that modification is approved, DOE would have to comply with its conditions as well.

$500 MILLION SETTLEMENT FOR BNFL

Question. Earlier this week, trade publications reported that DOE had agreed to pay British-owned BNFL for cost overruns related to cleanups in Tennessee and Idaho. What can you tell me about the status of these negotiations between the U.S.

and British officials and if there is any truth to the fact that DOE would provide $500 million to compensate BNFL for what appears to be a bad investment?

Answer. DOE is working to resolve several outstanding contract issues under the BNFL contracts in Tennessee and Idaho. There is no final agreement at this time, but any resolution we reach with BNFL will only be reached if we believe it is in the interest of the taxpayers consistent with the programmatic interests of the Department and will allow us to meet our cleanup commitments.

WASTE INCIDENTAL TO REPROCESSING (WIR)

Question. This budget provides $350 million to be spent to fund cleanup of nuclear material designated as Waste Incidental to Reprocessing (WIR). The budget states that enormous savings can be achieved if DOE is able to reclassify nuclear waste streams and follow through with cleanup remedies that have been negotiated with each State. However, a recent Idaho court decision is blocking final disposition of the material. Until this court ruling is resolved or legislation is passed, a final remedy cannot be prescribed. Can you please provide what you believe to be the total cost estimates to clean up the material in Washington, Idaho and South Carolina if you must treat all of this material as high level waste, verses the potential cost savings that would be realized if some of this material can be treated as waste incidental to reprocessing?

Answer. The Department's baseline life-cycle cost for implementing its accelerated cleanup plans at Washington, Idaho and South Carolina is $52 billion, if some of the waste can be treated as waste incidental to reprocessing. If the Department must treat all of the material as high-level waste, the life-cycle cost increases to more than $138 billion. Under this worst-case scenario:

—Retrieval of all tank reprocessing wastes and treatment for disposal in a geologic repository could require as much as $69 billion over the current Environmental Management program life-cycle cost baseline.

—As much as an additional $17 billion—and possibly more—would be required to exhume and dispose of tanks and associated components in a geologic repository.

—It is difficult to estimate the additional costs the Department would incur in terms of Federal repository fees. Under existing cleanup baselines, the Department expects to produce approximately 20,000 canisters of high-level waste for disposal in a geologic repository; the fee associated with these canisters is estimated to be $10 billion. Under a scenario in which all tank reprocessing wastes currently anticipated to be removed and disposed of as low-level waste are instead prepared for disposal in a repository, the new baseline could approach 200,000 canisters. Thus, the fees could be significantly greater. This canister estimate does not include exhuming the tanks themselves nor associated piping, equipment, and concrete. At this time, the Department does not have accurate estimates of the volumes for these additional materials that also might need to be placed in the repository. (Calculating the additional fee is complicated by the Department's statutory and contractual obligation to dispose of commercial spent fuel and by the statutory and physical constraints on the capacity of a repository at Yucca Mountain, Nevada. While the statutory 70,000 metric ton limit on waste at Yucca Mountain is already exceeded by the current inventory of waste, Yucca Mountain's physical capacity could well also be exceeded if the volumes of waste the worst-case scenario contemplates are added to current estimates.)

Question. Can you please explain why you don't believe this material in question at each site qualifies as the high-level waste and the processes that will ensure that high-level radioactive waste remains separate?

Answer. The U.S. Department of Energy (DOE), the U.S. Nuclear Regulatory Commission (NRC), and the Atomic Energy Commission (AEC) (the predecessor of both DOE and the NRC) have long been of the view that while most of the radioactive waste from reprocessing is "high-level waste," some of the material is not high-level waste, and is instead "waste incidental to reprocessing." Reprocessing waste is currently stored in tanks at DOE sites in Idaho, Savannah River, and Hanford.

DOE plans to solidify, treat and dispose as high-level waste the portion of tank waste that contains by far the vast bulk of the radioactivity. At Idaho, DOE already has finished calcining these wastes; at Savannah River, DOE currently is vitrifying them through the Defense Waste Processing Facility; and at Hanford, DOE will vitrify them in the new Waste Treatment Plant currently under construction.

But DOE, the NRC, and the AEC have also long been of the view that some of the tank waste can instead be properly classified as "waste incidental to reprocess-

ing" that may be managed and disposed of as low-level waste. These wastes do not pose the same risk to human health and the environment and can safely and lawfully be disposed of as low-level waste because they do not need the degree of isolation that the more highly radioactive wastes require.

To determine which tank waste may be managed in this fashion, DOE has used criteria developed originally through an iterative process of consultation with the NRC regarding particular tanks waste, and subsequently codified in the "Waste Incidental to Reprocessing" portions of Order 435.1, DOE's Order governing classification of nuclear waste. These criteria specify that to classify waste as low-level WIR, DOE must remove as much radioactivity as possible, and that what remains must be solidified and put in a form that will meet performance objectives for disposal of low-level waste as set out in 10 C.F.R. part 61—primarily, that it will not result in an annual dose to a member of the public of more than 25 millirems and that inadvertent intruders will also be protected.

DOE believes that this approach is protective of public health and safety and consistent with the Nuclear Waste Policy Act's (NWPA) definition of "high level waste." The NWPA defines "high-level radioactive waste" as: (A) the *highly radioactive material* resulting from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid material derived from such liquid waste that *contains fission products in sufficient concentrations;* and (B) other highly radioactive material that the Commission, consistent with existing law, determines by rule *requires permanent isolation.*" [emphasis added] DOE believes that the criteria described above properly distinguish between "highly radioactive" material from reprocessing that "requires permanent isolation" in the spent nuclear fuel repository and "non-highly radioactive" material from reprocessing that does not.

We recognize that some doubt has been cast on the correctness of this view by the Idaho District Court decision in NRDC v. Abraham. The Department has appealed that decision and has also asked Congress to enact legislation to clarify this matter.

DEFINING HIGH-LEVEL WASTE

Question. Part of the debate over WIR involves the rather unclear definition of high-level waste. We now identify waste depending on how it was generated, not on how radioactive it is—that doesn't make much sense. Do you agree that a serious National Academy of Sciences study to improve the definition of high-level waste might help clarify this issue and avoid the kind of debates you are now having with Waste Incidental to Reprocessing?

Answer. The Department agrees that identifying waste depending on how it was generated rather than on its radioactivity does not make much sense. However, while a serious National Academy of Sciences study to improve the definition of high-level waste might help clarify this issue, such a study would not provide DOE the legal certainty it needs to make the kinds of decisions it must make to clean up the tank farms.

DOE's accelerated cleanup plans for the tank farms at Idaho, Hanford, and Savannah River all depend, in part, on DOE's being able to classify certain waste from reprocessing as low-level or transuranic waste. DOE's problem is that the District Court has ruled that the underpinnings of these cleanup plans are contrary to Federal law, and that if it proceeds with key aspects of the current cleanup plans, the District Court has signaled that it will issue an injunction telling DOE to stop.

Therefore, any new or different criteria DOE might promulgate, even if based on the advice of the National Academy of Sciences, would also likely be the subject of legal challenge. Unless Congress acts quickly to clarify the Department's authority to proceed, our efforts to clean up the tank farms at these sites, which are at the core of our accelerated cleanup plans there, will be largely paralyzed.

Question. It is unclear from the budget how much material there is at each of the sites and the amounts of material DOE believes should be designated as high level, transuranic and low-level waste at each of the sites.

Answer. DOE currently has roughly 91 million gallons of waste from reprocessing stored in tanks in Idaho, Savannah River, and Hanford. Stabilizing and disposing of this material and closing the tanks is the Department's single largest ongoing environmental risk-reduction project.

DOE's plans at all three sites call for removing on the order of 99 percent or more of the radioactivity from the tanks. At all three sites, DOE's plans then call for solidifying, treating and disposing of the vast bulk of the removed radioactivity from these stored wastes in a deep geologic repository for spent nuclear fuel and high-level waste. At two of the sites (Savannah River and Hanford) DOE's plans call for solidifying, treating and disposing of some of the removed waste, consisting of lower-

activity salts that in most instances will have been further treated to remove additional actinides and cesium, and which will contain only a small fraction of the radioactivity from the tanks, as low-level waste on-site. Likewise, at two of the sites (Idaho and Hanford), DOE's plans call for solidifying, treating and disposing of some of the removed waste, again containing a small fraction of the tank radioactivity, as transuranic waste at the Waste Isolation Pilot Plant (WIPP). Finally, at all three sites DOE's plans call for grouting in place in the tanks a very small amount of residual waste remaining in the tanks.

Waste Destined for Spent Fuel Repository

Specifically, of the 99 percent or more of the curies removed from the tanks, at Idaho, DOE already has finished calcining the wastes destined for the spent fuel repository, representing on the order of 98 percent of the total tank waste radioactivity. At Savannah River, DOE is currently vitrifying the wastes destined for the spent fuel repository, representing on the order of 99 percent or more of the total tank waste radioactivity, through the Defense Waste Processing Facility. At Hanford, DOE is not as far along in the cleanup process, since it is still building the principal facility it will use to prepare waste for disposal at the spent fuel repository and developing other aspects of its plans. There too, however, DOE anticipates that it will treat and dispose of the vast bulk of the radioactivity in the spent fuel repository using the new Waste Treatment Plant currently under construction.

Waste Anticipated To Be Disposed of On-Site as Low-Level Waste

In addition, of the 99 percent or more of the radioactivity to be removed from the tanks, at Savannah River and Hanford, DOE's plans call for retrieving and processing the lower-activity salt waste from the tanks that in most instances will have been further treated to remove additional actinides and cesium for disposal on-site as low-level waste in saltstone vaults at Savannah River and at a facility permitted under the Resource Conservation and Recovery Act (RCRA) for mixed low-level waste disposal at Hanford. Again, this waste represents a small fraction of the radioactivity from the tanks—on the order of 1 percent or less of the tank waste radioactivity at Savannah River and a small amount of the tank waste radioactivity at Hanford. At both sites, this waste would have to meet the performance objectives for disposal of low-level waste specified in 10 C.F.R. Part 61 under which a member of the general population cannot receive an annual dose of more than 25 millirem from the residues, and an inadvertent intruder must be protected as well. In addition, at both sites, the waste would have to be disposed of in accordance with State environmental law permits because of its chemical constituents, and DOE would have to account for this waste disposal in overall site remediation and closure under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

Waste Potentially Disposed of as Transuranic Waste at WIPP

Further, at Idaho and Hanford, of the 99 percent or more of the curies removed from the tanks, DOE's plans call for retrieving and processing some of the tank waste (representing a small fraction of the radioactivity in the tanks) for disposal as transuranic waste at WIPP. This would contain on the order of 1 percent of the tank waste radioactivity at Idaho and less than 1 percent of the tank waste radioactivity at Hanford. This includes the sodium-bearing waste which comprises the remaining liquids in the 8 tanks in Idaho, and the contents of between 8 and 20 tanks of the 177 tanks at Hanford. This waste would have to meet WIPP's waste acceptance criteria in order to be sent there. Its disposal there would have to be shown to be consistent with the assumptions made in WIPP's performance assessment, which demonstrates that the repository and the waste disposed of there complies with the Environmental Protection Agency's standards for disposal of transuranic waste and is protective of humans and the environment. It also would have to comply with any other relevant WIPP limits such as the WIPP Land Withdrawal Act's statutory limit on how much remote-handled transuranic waste may be disposed of at WIPP. In addition, DOE has committed to New Mexico to seek a specific WIPP RCRA permit modification from the State addressing these waste streams before sending them there.

Tank Residues

Finally, at all three sites, DOE's plans call for grouting in place a very small amount of residual waste remaining in the tanks. DOE anticipates that these residues will constitute on the order of 1 percent or less of the overall tank radioactivity. More importantly, under DOE's plans, when this process is complete, the residual waste grouted in place will have to meet standards for disposal of low-level waste specified in 10 C.F.R. Part 61, under which a member of the general popu-

lation cannot receive an annual dose of more than 25 millirem from the residues, and an inadvertent intruder must be protected as well. By comparison, a frequent flyer receives approximately 100 millirem per year from cross-country airline trips, and individuals receive at least 20 millirem from each medical X-ray. The treated and grouted residues will also have to meet State environmental law requirements with respect to their chemical constituents and will have to be accounted for in overall site remediation and closure under CERCLA.

SMALL BUSINESS CONTRACTS AND EM CLEANUP

Question. I realize that OMB is forcing DOE to increase the number of contracts they extend to small business and at the same time DOE is forcing the labs and sites to reduce their small business contracting just so DOE can meet its "quota." I don't think it makes sense for DOE to manage a large number of small business contracts at each site. This is exactly what led to the frustration that created the NNSA out of the DOE. I'm so concerned about this trend that I've scheduled a hearing in the Energy and Natural Resources Committee for this subject. I fear that some of these procurements are placing contracts with small businesses that jeopardize the safe effective performance of critical work. There are two examples of small business set asides related to EM that concern me. The first is the very complex site cleanup for Paducah and the second is the draining of sodium coolant from the FFTF reactor at Hanford, which is also an extremely dangerous job. How can you assure me that EM is not jeopardizing effective completion of critical tasks with this rush to entrust procurements to small businesses?

Answer. As part of its strategy to increase competition and the cadre of business firms with the core competencies to effectively meet the challenges of EM's accelerated cleanup mission, EM elected to issue competitive procurement actions set-aside for small business firms. Prior to making a final decision on competing a small business set-aside contract, EM publishes a Federal Business Opportunities (FedBizOps) sources sought notice inviting firms to demonstrate their capabilities to perform the work, either alone or by teaming with other firms. Responses to these notices are carefully reviewed to ensure that qualified companies are available to perform the work prior to issuance of a final solicitation. This process was followed for both Paducah and the Fast Flux Test Facility contracts.

Firms, large and small, competing to perform EM work scopes are held to the same high-level expectations. These firms must clearly demonstrate a robust safety program, sound technical approaches to safely complete the work, cost-effective work practices, commitment of a strong management team, and demonstrated experience in performing similar work. The same metrics for measuring performance after award are applied regardless of the size of the firm performing the work.

EM is pursuing small business opportunities aggressively; and I am confident that sufficient checks and balances, management commitment, and accountability are built into the acquisition and project management processes to assure that the small business firms selected for these projects will contribute substantially to EM's success in meeting accelerated cleanup schedules.

RISK BASED END STATES

Question. Earlier this year, EM raised serious concerns at Los Alamos and other sites when you asked each site to sign off on a so-called Risk Based End State (RBES), which would serve as the benchmark measuring the end of cleanup at each site. I've heard concerns at some sites that they did not have enough time to involve the public in a decision of such serious impact on the people living and working at these sites. Has EM provided additional time at each site for development of the RBES, and is the public being seriously and significantly involved in development of each of these RBES site criteria?

Answer. Stakeholder involvement is an essential part of the RBES process. The RBES documents will remain drafts for quite a while, possibly even 6 months, until we believe that we have adequately and openly addressed any issues or concerns with the public and with the regulators.

DOE PLAN TO CONVERT DEPLETED URANIUM

Question. What is the status of the depleted uranium plants located at Portsmouth and Paducah?

Answer. Construction on the depleted uranium hexafluoride (called DUF_6) project is on schedule for start by July 31, 2004. DOE is working to issue the Environmental Impact Statement Record of Decision which must be completed prior to the start of construction.

Question. Will these plants be able to accept waste material from outside the State?

Answer. We note that DOE does not consider its DUF_6 to be waste and therefore, views the facilities as conversion facilities, not waste processing facilities. Some cylinders containing DUF_6 are being received in Portsmouth, Ohio, from the East Tennessee Technology Park in Oak Ridge, Tennessee. No other off-site materials are currently planned for conversion at these sites other than possible shipments between the two sites. However, there is nothing in the design of the plants that would preclude their use for other DUF_6.

Question. Is there any additional R&D to be undertaken to demonstrate the viability of these facilities?

Answer. No. The dry conversion technology the facilities will use is a scaled up version of a process already commercially viable and in use at Richland, Washington, and in Germany.

QUESTIONS SUBMITTED BY SENATOR PATTY MURRAY

Question. Ms. Roberson, I understand you have decided to terminate at the end of this fiscal year the partnership DOE has with the General Services Administration to provide child care for Federal and contractor employees at Hanford. I also understand that child care is particularly tight in Richland, especially for infants, and that this move is likely to displace 60+ children. In addition to affecting operations of the existing facility, this decision almost certainly will kill the plans for a new state of the art facility, for which bids had already been received. Is DOE terminating this important employee benefit at all of its facilities or at ANY other site except Hanford?

Answer. Employee benefits vary from site to site so a comparison of one single area does not provide a true measure of the benefits that are afforded our Federal and contractor workforce.

The Department is hopeful that GSA will continue its plans for the new facility and sees no reason why our discontinuation of subsidy payments should be a hindrance toward that goal if GSA's survey is correct and the need for childcare in the Richland area is growing.

If GSA decides to pursue other Federal partnerships in the Richland area, it would have many to choose from, including the Federal Bureau of Investigation, the Postal Service and the Environmental Protection Agency.

Question. Why is providing childcare suddenly no longer a priority?

Answer. EM's priority is environmental restoration. With regard to the childcare facility, earlier this year a DOE assessment revealed a level of participation and interest by Federal employees that was inconsistent with the amount of Federal dollars being spent to subsidize the childcare facility. Based on this assessment, and the shrinking of both the Federal and contractor workforces as cleanup projects reach completion, DOE believes these funds would benefit a much broader range of people if invested in the workforce to accelerate Hanford cleanup.

Question. Have you considered a longer transition period to ensure DOE will continue to be a good corporate neighbor and allow a new, high quality facility to be developed?

Answer. The notification period to GSA is 120 days, taking us through the end of September 2004. This should be sufficient for the private childcare facility operator to seek funding from other entities.

Again we are hopeful that GSA will continue to pursue its idea of a new facility.

Question. Will DOE (or GSA) be liable for costs incurred in the design, bid proposals, etc. for the new childcare facility that will now (likely) not be built?

Answer. GSA is the sole Federal agency responsible for the construction of the new childcare facility. To date, we understand that GSA has spent $275,000 on architectural design and energy modeling contracts but has not awarded the construction contract for the new childcare facility, so neither costs nor penalties are currently being incurred.

Question. Ms. Roberson, contractors at the Hanford site and the Hanford Atomic Trades Council have for years successfully negotiated pension plan and other cost effective agreements—with the full approval and endorsement of DOE. It is my understanding that the DOE is actively pursuing new contracts for multiple projects, specifically the Fast Flux Test Facility Closure Project, the 222 S Analytical Services Project, and the River Corridor Closure Project. I am very concerned that these Requests for Proposals (RFPs) contain a new two-tiered pension system that only requires 5 years of pension contributions from the winning bidder. Some might see

this move as a back door attempt by the DOE to reduce their costs by reducing requirements for pension contributions.

Hanford employees have remained dedicated to completing the challenging tasks of the mission. This spirit of labor/management cooperation will be seriously jeopardized if workers are now told that the pension benefits they have earned will need to be reduced in order to save DOE money. I would like to know what you intend to do to maintain the level of pension benefits workers have been promised and have earned through years of their hard work at Hanford?

Answer. DOE agrees that the addition of new contractors and multiple pension plans for Hanford employees may have potential impacts on workers. However, the DOE Richland Operations Office will ensure that the new contracts minimize any such issues. The Department anticipates responsive resolution of any issues that may arise.

QUESTIONS SUBMITTED TO THE OFFICE OF ENVIRONMENT, SAFETY AND HEALTH

QUESTIONS SUBMITTED BY SENATOR PETE V. DOMENICI

REPORTING OF INJURY AT DOE SITES

Question. I was disappointed to read in the Washington Post that an Inspector General's draft report found that DOE failed to report a significant number of injuries that occurred at DOE sites. The Inspector General found that DOE maintained "inaccurate and incomplete accident and injury data." This article also alluded to the fact that accelerated cleanup contributed to the behavior of not reporting worker injury. Assistant Secretary Cook, since the responsibility for worker safety and environmental protection falls under your watch; I would like a full explanation as to how the IG has come to these conclusions. Are these allegations of under-reporting accurate and if so, where and to what extent has this occurred within the DOE complex?

Answer. We take all issues raised by the IG very seriously, especially those involving safety. The Inspector General has a rigorous process for generating reports and part of that process is asking for a review of the draft report for factual accuracy. Our initial findings indicate that many of the conclusions are based on out-of-date or incorrect information. We identified and began corrective actions on some of the items identified in the report over a year ago. In other cases, the Program Offices have taken other measures to get up-to-date, accurate information directly from the field sites, to resolve the delay time in getting information into the data system. I do not agree that the accident statistics for the Department are under-reported.

Question. What are you doing about the current findings of the Inspector General that DOE is not accurately reporting worker injuries?

Answer. We are providing comments to the Inspector General on the inaccuracy of some aspects of the report as it addresses reporting worker injuries while continuing to implement the changes that have been underway for over a year to correct other issues.

Question. Why are we learning of this activity from the Inspector General and not your office? What are you doing to correct this?

Answer. Actions were already underway by my office to correct the known problems with the reporting system, and by the Program Offices to obtain accurate information in other ways until these actions were completed.

OVERSIGHT REORGANIZATION REFORM

Question. Ms. Cook, your testimony references oversight changes and restructuring of your Office in 2002 and 2003. In 2002, you noted that the independent oversight functions were removed from your office and you now work to promote "safe and environmentally compliant conduct of work." In 2003, your restructuring efforts describe cuts to management and new focus on "e-government initiatives." If you aren't performing oversight in areas of worker safety—what office is?

Answer. The Office of Independent Oversight and Performance Assurance performs independent oversight of safety and security for the Department of Energy.

Question. Did any of the changes since 2002 result in your inability to hold DOE contractors to the highest level of worker safety?

Answer. DOE holds its contractors to the highest level of worker safety. EH writes the policies and requirements and provides technical assistance to the program offices who implement these requirements. The Office of Independent Oversight evaluates DOE and contractor compliance with these requirements. EH continues to

analyze the information provided by the Office of Independent Oversight, especially where contractors may not be in compliance, in order to refine the requirements to achieve the right outcomes; protecting our workforce and the public. The changes in EH over the last several years has allowed us to better focus on setting the right policies to drive the right performance.

DOE SITE PROFILES

Question. Last year, DOE testified that it was in the process of developing site profiles to pull together the necessary site data in order to speed up the case approval process for workers that were made sick while working for the Department. DOE's testimony stated that by developing a complete understanding of the occupational hazards at each of the DOE sites, it will help the doctors in evaluating claims of exposure based on the hazards a worker may have been exposed to and when. The site profiles will significantly improve the doctor's ability to do their job. Where do we stand on the development of site profiles and how much is being spent in fiscal year 2004 and how much have you provided for this effort in fiscal year 2005?

Answer. DOE already provides all available medical, work history, work exposure and facility information to the Physician Panels. We consider the information DOE has been providing to the panels to be adequate to support Physician Panel deliberations. With respect to "site profiles", the term is not clearly defined and the Department believes that creating site profiles as commonly defined by advocates of this process would be a costly and time consuming effort that would not provide substantial assistance to Part D applicants. Further, it is not clear whether there is even adequate data to profile toxic exposures at DOE facilities in any reasonable way. Regulatory requirements for the collection and maintenance of information relevant to ionizing radiation exposures, such as the data used by NIOSH for Part B, predate and far exceed such requirements for occupational exposures to potentially toxic chemicals (Part D) at worksites. Such requirements, referred to as job-exposure matrices, can be exceptionally difficult, labor intensive, and expensive, if they are scientifically feasible at all.

In fiscal year 2004, with the recent $23.3 million appropriations transfer that Congress approved, DOE will spend roughly $49 million to collect, compile, categorize and summarize the information required by the Physician Panels process. Of this, roughly $24 million will be spent on collecting information from the field sites and $25 million will be spent on data quality control, compiling, categorizing, summarizing and post-panel quality control. In fiscal year 2005, $14 million is being requested for these functions.

Question. How much will it cost and how long will it take to develop a site profile at each of the 15 largest DOE facilities?

Answer. Currently, DOE is soliciting information on how to scope a project for providing a "site overview." This project would provide for each site a generally standard format and improved categorization of existing information. At this time DOE does not have a specific dollar figure for this project. As discussed above, DOE believes that the limited value to a qualitative assessment on some pre-defined set of agents does not justify the high cost for developing this information and, therefore, DOE has no current plans to conduct or prepare comprehensive "site profiles" for DOE's facilities.

Question. Can you provide for the record a timeline as to when you expect to have site profiles for the sites?

Answer. DOE does not have a timeline for the development of site profiles. As discussed above, DOE believes it would not be prudent to develop and prepare "site profiles" as that term is commonly defined. However, DOE is investigating the development of site overviews that would better package existing data by site.

BUDGET DETAILS

Question. The fiscal year 2005 request fails to provide the same level of detail for the Office of Environment, Safety and Health as provided in the fiscal year 2004 request, especially in the area of the Energy Supply—Health Account. In addition to providing fewer details of your spending priorities there is also significantly less money. The budget provides $45 million. This is $22 million less than was provided in fiscal year 2004. I would appreciate a written description of your program budgets within each of the following accounts—Health, Employee Compensation, and Corporate Safety.

Answer. The budget is broken down in detail commensurate with the total budget amounts. However, the budget request was based on certain assumptions.

Under Health

Occupational Health ($15,902,000).—This includes former worker medical screening, former beryllium worker surveillance, medical monitoring of former workers from Rocky Flats, integrated DOE occupational medicine support, and a portion of the funding for the Radiation Emergency Accident Center/Training Site (REAC/TS).

Public Health ($13,500,000).—This includes funding to other agencies, including the National Institute for Occupational Safety and Health (NIOSH), the National Center for Environmental Health (NCEH) and the Agency for Toxic Substances and Disease Registry (ATSDR) for independent energy-related studies relevant to DOE workers and neighboring communities.

Epidemiologic Studies ($3,300,000).—This includes a collection of both medical and exposure information to expand understanding of the health effects of radiation, chemical and other hazards to current DOE workers and the public.

International Programs ($12,520,000).—This supports the upgrading and validation of our knowledge of radiation health effects among workers and populations exposed to ionizing radiation in the former Soviet Union and Spain, participation in the life span study of the Hiroshima and Nagasaki exposed population and environmental monitoring to support resettlement activities as well as special medical care for a specific group of radiation-exposed individuals in the Marshall Islands.

Total.—$45,222,000.

Under Employee Compensation

For EEOICPA, the fiscal year 2005 budget request is $43 million for the operations of the EEOICPA Part D program, which includes the following activities and funding allocations. Resource centers jointly managed with the Department of Labor are funded at $2.4 million. These centers provide outreach to potential EEOICPA applicants and support during the application process. Collecting and producing medical, work history, work exposure and facility information data from the DOE field sites are provided $14 million. Processing the Part D cases up to the Physician Panels, paying for the Physician Panels and providing for quality controls are funded at $24.6 million. Additional Federal staff to manage the 200 percent increase in case processing and the 900 percent increase in Physician Panel determinations that will be required to eliminate the backlog of Part D applications at DOE in 2006 is provided $2 million.

Corporate Safety.—$10,883,000

Performance Assessment/Information Management ($2,000,000).—This provides for the analysis and certification of DOE's performance by synthesizing operational information, and also provides web-based information technology support for effectively distributing safety and health information.

Quality Assurance ($6,483,000).—This provides quality assurance policies and requirements to support current DOE missions, and performs evaluations and accreditations to ensure that the health and environmental data that is generated by DOE is technically defensible. This includes the operation of the Radiological and Environmental Science Laboratory, a Federal reference laboratory that performs much of the Department's evaluation and accreditation services.

Facility Safety ($1,600,000).—This supports appraisals of accidents, facility authorizations bases and safety allegations, and special safety reviews on specific topics such as seismic analysis, fire protections, facility design and the startup/restart of facilities.

Enforcement ($800,000).—This activity covers the statutory mandate of the Price-Anderson Amendments Act of 1988 to enforce compliance with Code of Federal Regulations nuclear safety requirements at DOE sites and the enforcement of the Worker Occupational Safety and Health Rule.

Question. Where do you propose to make the $22 million in spending cuts from the fiscal year 2004 appropriation to meet this year's request?

Answer. The DOE EH health budget includes a variety of activities. There are several items in the health budget that require less funding in fiscal year 2004 comparable appropriation is $22 million more that the fiscal year 2005 request. The comparison to prior year funding is:

FUNDING SUMMARY

[In thousands of dollars]

	Amount
Program/Activity Health Fiscal Year 2003 Comparable Appropriation	50,051
Program/Activity Health Fiscal Year 2004 Requests	66,660

FUNDING SUMMARY—Continued

[In thousands of dollars]

	Amount
Program/Activity Health Fiscal Year 2004 Comparable Appropriation	67,335
Program/Activity Health Fiscal Year 2005 Requests	45,222

Of the total decrease of $22 million, several items account for a decrease in the request of $16 million from fiscal year 2004 to fiscal year 2005 includes:

—Decrease $12 million for international health studies. DOE's role in certain studies is reduced as they are coming to closure. The Department also plans to use carryover balances to meet some fiscal year 2005 requirements. DOE is evaluating its responsibilities and future involvement in these studies.

—Decrease of approximately $3 million for public health studies around DOE sites because studies have concluded. These studies are conducted by Health and Human Services (HHS) agencies. This is transitioning to smaller, more highly focused studies, and it is expected that HHS will complete the DOE studies in fiscal year 2007.

—Decrease of approximately $1 million for DOE occupational health programs, due to efficiencies to be realized by combining the 12 individual worker screening programs into a comprehensive nationwide program. The nationwide programs will provide the most efficient and effective method to guarantee that all former DOE workers are offered the opportunity to participate and will be served consistently across the complex.

Question. Please provide a summary of the Marshall Islands Program budget for fiscal year 2003, fiscal year 2004, and proposed for fiscal year 2005, which presents the Program's budget components, describes the activities to be changed, and the reasons for such changes.

Answer. The following breakdown of the Marshall Islands Program is provided for fiscal year 2003, fiscal year 2004 and fiscal year 2005.

[In thousands of dollars]

Program Activity	Fiscal Year 2003	Fiscal Year 2004 Allocated	Fiscal Year 2005
Medical	2,340	2,100	2,100
Environmental	3,950	2,200	1,900
TOTAL	6,290	4,300	4,000

There are no activities to be changed in the level of services provided as part of medical surveillance and treatment of radiation-related conditions in fiscal year 2005. The medical program provider has managed the program for 6 years, therefore the program is under review and options for its future design and management are being considered. Upon review of options with Federal partners, the options will be presented to the Government of the Republic of the Marshall Islands, and the governments of the two affected atolls for discussion.

For the environmental program, the changes in fiscal year 2004 were directed at clearing up the analysis backlog of the environmental samples gathered form the Marshall Islands and the preparation a final analytical summary report to support future program planning purposes. To date $4.3 million has been allocated as detailed in the above chart. Other than reductions associated with Congressionally directed prior-year offsets and rescissions, the only difference between appropriated and allocated-year-to-date is $1.5 million. That amount is being held in reserve to address additional activities which will be developed in conjunction with the Marshallese during the annual June-July meeting sponsored by DOE.

The field missions for fiscal year 2004 were suspended to allow the scientists to focus on this backlog. The suspension did not delay any work required to assist in resettlement of Rongelap Island. In fiscal year 2005, the environmental program will support resettlement activities on Rongelap Island and the network of whole body counting facilities. The funds requested are adequate for these two activities.

DOE AND HHS STUDIES

Question. DOE and HHS have signed cooperative MOUs over the past 15 years that require DOE to provide funding to the National Institute for Occupational Safety and Health (NIOSH) for epidemiological studies on former DOE workers. I under-

stand that the existing MOU will expire at the end of this year. Will you sign another agreement to provide for independent health studies of former DOE workers?

Answer. It is the intention of DOE to develop, in cooperation with HHS organizations, a new MOU for the conduct of independent health studies. A draft revised MOU has been prepared; following internal review it will be sent to HHS for comment.

MARSHALL ISLANDS HEALTH TESTING

Question. The traditional mission of the Marshall Islands Program has been to monitor health and the environment in the four affected communities. In the 1990's, the Program entered into MOAs with the four Atolls to support remediation and resettlement activities, but DOE's level of commitment to these new activities is unclear. Does DOE regard its support for remediation and resettlement activities as dependent on its traditional monitoring activities?

Answer. DOE is committed to and will continue to meet its responsibilities to provide medical surveillance and treatment for radiation-related conditions among the exposed population on Rongelap and Utrik Atolls and to support resettlement activities. DOE will be negotiating annual work plans with each of the four atolls to assure continued environmental monitoring support for resettlement.

Question. Are these activities undertaken on an "as funds available" basis, or would DOE request funds if necessary to support the remediation and resettlement activities set forth in the various MOAs?

Answer. DOE annually requests funding that will assure continuity in medical surveillance and treatment of radiation-related conditions and support for resettlement activities. Environmental monitoring activities in the MOU's have in the past been supported on an "as funds are available" basis. It is DOE's intention to request and dedicate resources to meet its legislative responsibilities.

Question. What is the status of DOE's MOAs with the four affected communities? Does DOE plan to extend the MOAs upon on their expiration?

Answer. The Bikini MOU expired several years ago and has been replaced with an annual work plan; the Rongelap MOU extension expires this June; the Enewetak MOU expires in 2005, and the Utrik MOU in 2007. It is DOE's intention to explore with representatives of the four Atolls transitioning from MOUs to annual work plans that would focus activities on providing environmental monitoring support to resettlement.

Question. Do you plan to have a physical DOE presence in the Marshall Islands, if so, where and what will their responsibilities entail?

Answer. DOE is evaluating the need for a physical presence, beyond the logistical support office on Kwajalein Island, in order to provide environmental monitoring support to resettlement.

MARSHALL ISLANDS CARRYOVER FUNDS

Question. It is my understanding that $1.5 million in fiscal year 2004 funds has not been expended at this time. Is that correct? What work is not being performed in the Marshall Islands as a result of the withholding of this $1.5 million?

Answer. It is correct that $1.5 million in fiscal year 2004 funds appropriated for the Marshall Islands are not currently planned to be expended in fiscal year 2004. This funding was identified for conducting an environmental mission to the Marshall Islands.

Question. Given that there are 6 remaining months in this fiscal year, why hasn't this funding been obligated?

Answer. It is felt that it is most important at this time to dedicate contractor resources to the development and publication of scientific and technical reports and articles on the latest radiological status. These reports and articles, providing the latest results of analysis of samples from previous environmental missions, will be critical to informing all parties in the conduct of deliberations concerning the Republic of the Marshall Islands Changed Circumstances Petition. The Department conducts annual meeting with the Marshallese and jointly prioritizes additional activities. These funds may be used for those specific activities or other follow-on activities jointly determined to be needed.

Question. Could the remaining $1.5 million be used pursuant to DOE's MOAs with the four affected atolls? If yes, why hasn't DOE pursued this option?

Answer. It is important that contactor efforts be dedicated to the development and publication of scientific and technical reports and articles analyzing the results of prior environmental missions at this time. It is DOE's intention to support activities in the MOU's consistent with these legislative responsibilities. The remaining $1.5

million will be dedicated to the Marshall Islands program in the conduct of future activities in support of the medical care and resettlement activities.

Question. Can this $1.5 million be reprogrammed to other activities within DOE or must it be expended within the Marshall Islands Program?

Answer. It is DOE's intention to support its legislative responsibilities in the Marshall Islands. The $1.5 million could be reprogrammed in fiscal year 2004, with Congressional approval, but DOE has no intention of doing so at this time.

EXISTING SAMPLES—MARSHALL ISLANDS

Question. What is the status of the previous samples that have been taken by Livermore scientists at the Marshall Islands?

Answer. The DOE contractor is in the process of completing analysis and writing scientific and technical reports and articles to provide the latest data and information on radiological conditions on the four Atolls in the Marshall Islands.

Question. Is it correct that, at this time, the samples have been analyzed and the Department is in the process of preparing a summary report? If yes, when will that report be available?

Answer. Yes, the DOE contractor is in the process of preparing scientific and technical reports and articles on radiological conditions in the Marshall Islands. The contractors draft report is to be submitted to DOE for review. DOE has seen an early draft of the Whole Body Counting results, is awaiting a draft report on plutonium uptake data results, and expects a draft report on "where we stand" on the radiological characterization of the four Atolls in the near future. The contractor has not determined its delivery dates for the deliverables to DOE.

MARSHALL ISLANDS ANNUAL MEETING

Question. Will Program officials hold their next annual meeting with representatives of the four Atolls in June 2004? If not, when will that annual meeting take place?

Answer. DOE Program officials do plan to hold the annual meeting with representatives of the four Atolls in June 2004 timeframe.

QUESTIONS SUBMITTED BY SENATOR PATTY MURRAY

Question. Ms. Cook, why ramp down the Hanford Former Worker Program (Hanford FWP) if there are over 2,700 workers with significant past exposures and who have requested examinations waiting to be screened at that site?

Answer. We are not ramping down the program. We are transitioning to a nationwide medical screening program that will serve all former workers from all DOE sites locally. The Hanford Former Production Worker Medical Screening Project was initiated in 1996 as a 5-year pilot project. Any former worker interested in medical screening who is not seen this year by the Hanford Former Production Worker Medical Screening Project will be seen by the nationwide program, which is scheduled to be in place in October 2004.

Question. Ms. Cook, how will USDOE ensure that workers who are currently awaiting exams in the FWPs do not risk being dropped from the program in the transition to a national program (subject of new RFA)?

Answer. DOE has provided the principal investigator of each site-specific project with a toll-free number that can be given to individuals interested in screening but for whom the ongoing medical screening projects cannot see this year. Additionally, through the existing site-specific projects, DOE will soon mail an information package regarding the transition to a nationwide program. Included in this package is an authorization for individuals to sign requesting that their names and mailing addresses be provided to DOE. DOE will then send them additional information upon initiation of the new nationwide program.

Question. Ms. Cook, has performance of medical screening grantees known as the former worker program been satisfactory?

Answer. For the most part, yes. However, there are several lessons learned from this effort. These include the following:

—DOE's central management of these projects is complicated by the multiple management teams within each of the numerous cooperative agreements, each with layers of their own management and subcontractor management;

—Multiple layers of management per project resulting in increased overhead charges and fees;

—Communication between DOE and participating organizations, as well as participating organizations and former workers, is cumbersome;

—Recruitment of participants has been a major cost for many of the projects, with additional years of funding for some projects resulting in minimal increases in worker participation;
—Coordination efforts between the FWP and the Former Beryllium Worker Medical Surveillance Program at DOE sites have been challenging;
—The significant resource needs for each of the site-specific efforts conducted to date has resulted in a delay in the initiation of screening for former workers at remaining defense nuclear sites.

Question. Ms. Cook, how will the new national program coordinate State workers compensation and EEOICP claims (sub-part D), e.g. will the examination sites around the country be expected to file Washington State worker's compensation claims and sub-part D claims as workers currently get?

Answer. The current programs were not expected to file state workers compensation claims on behalf of workers. The workers who participate in the new program will be directed to the Federal and State resource centers as appropriate, where they will get the assistance they need to file.

Question. Ms. Cook, why are the Former Worker Programs (FWPs) being asked to destroy workers' data? What are the risks to privacy when such data are protected by Institutional Review Boards responsible for protecting human research subjects?

Answer. The Former Worker Programs are being asked to handle records appropriately based on the workers' desires. The worker gets to decide what happens to their records. Of course, a worker may have their own records. Then the worker can decide if they would like the DOE to keep copies. The worker may also decide that they would like the former program to have copies of their records and use them for other purposes, but that is a decision to be made by each worker. Additionally, the clinics that conduct the medical screening under the FWPs are required by State law to maintain the workers' medical records for a certain number of years. Workers have the option of obtaining copies from these clinics in the future as well.

Question. Ms. Cook, how will the Office of Worker Advocacy (OWA) obtain records from FWPs who are being told to destroy such records?

Answer. The Office of Worked Advocacy can only obtain records from the worker, or with the worker's permission. The DOE does not have open access to workers' records.

Question. Ms. Cook, has NIOSH reviewed the new RFA, as required by Section 3162 of the 1993 Defense Authorization Act?

Answer. Section 3162 of the 1993 Defense Authorization Act does not require NIOSH to review the RFA. We have also referred back to the original MOU signed by Energy Secretary Hazel O'Leary and HHS Secretary Donna Shalala in August 1995, and this MOU does not call for HHS (NIOSH) review of DOE-issued RFAs either.

Question. Ms. Cook, are lessons learned and experience from the FWPs during the 8 years of operation being utilized in the RFA?

Answer. Yes, they are. The current program is expensive and cumbersome to operate when divided into 12 separate cooperative agreements. There are workers at many sites that are still waiting for an opportunity to have screening exams. We understand we must provide this screening more efficiently and effectively and we believe the nationwide medical screening program will accomplish this objective.

—DOE's central management of these projects is complicated by the multiple management teams within each of the numerous cooperative agreements, each with layers of their own management and subcontractor management;
—Multiple layers of management per project resulting in increased overhead charges and fees;
—Communication between DOE and participating organizations, as well as participating organizations and former workers, is cumbersome;
—Recruitment of participants has been a major cost for many of the projects, with additional years of funding for some projects resulting in minimal increases in worker participation;
—Coordination efforts between the FWP and the Former Beryllium Worker Medical Surveillance Program at DOE sites have been challenging;
—The significant resource needs for each of the site-specific efforts conducted to date has resulted in a delay in the initiation of screening for former workers.

QUESTIONS SUBMITTED TO THE OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT

QUESTIONS SUBMITTED BY SENATOR PETE V. DOMENICI

BUDGET REQUEST

Question. The President's budget requests $880 million for Yucca Mountain. A significant portion of this funding is to be paid for by fees assessed to utility customers. The fund will collect $749 million this year. The budget proposes that the annual receipts be reclassified as discretionary funds and then appropriated. As the former Budget Committee Chairman, I know you can't waive a magic wand to reclassify these fees. It requires legislation and some degree of cooperation. I am not optimistic this can be accomplished this year. However, if we fail to get agreement to reclassify the fees, the Senate Budget Resolution assumes a minimum level of funding of $577 million. If Congress is only able to provide $577 million, what activities will the Department be forced to defer in fiscal year 2005?

Answer. National and Nevada transportation activities would again be deferred, with no reasonable chance for schedule recovery. Site infrastructure maintenance work would be delayed, and effort devoted to repository design and development would be reduced.

Question. Will this significantly delay the opening of Yucca Mountain beyond the 2010 target date and can you estimate what impact this would have on litigation costs for the department?

Answer. We are at the point where any reduction in our funding profile, in fiscal year 2005 or the out-years, will adversely affect the scheduled 2010 opening date for the repository. If funding for fiscal year 2005 is frozen at the fiscal year 2004 level of $577 million, the Department's ability to meet the scheduled 2010 repository opening date will be severely compromised and most likely lost. To date, more than 65 claims have been filed by utilities in the Court of Federal Claims for breach of contract to recover monetary damages incurred as a result of the Department's delay. For each year of delay beyond 2010 that the Department is unable to begin accepting spent nuclear fuel from commercial reactors pursuant to the Department's contracts with utilities, the Department estimates that the utilities will incur costs of $500 million a year to store their spent fuel at utility sites, some portion of which the Department would be liable for. A delay in opening the repository could substantially increase the government's liability.

YUCCA MOUNTAIN—METAL STORAGE CONTAINERS

Question. I have read that Nuclear Regulatory Commission (NRC) Chairman Nils Diaz disputes the controversial evaluation made by the Nuclear Waste Technical Review Board regarding the corrosion analysis of the metal containers that will be used at Yucca Mountain. Dr. Chu could you please explain where you believe the science comes out on this issue and share with the committee how site managers have dealt with this issue?

Answer. The EPA's radiation protection standards and NRC's licensing regulations require DOE to evaluate long-term repository safety based on risk to the public. This requires an assessment of the total system, and must take into account the likelihood of events occurring and their effect on public health and safety.

The NWTRB's report focuses on a specific component of the repository system, namely the disposal canisters, and does not address the effect on the safety of the total system. In addition, the NWTRB position relies on the presence of very specific conditions in the repository tunnels, which DOE technical studies show are very unlikely and will have no significant effect on public health and safety.

DOE's current design will meet the EPA and NRC regulations, and we will demonstrate this in our license application to the NRC. DOE will continue to discuss the corrosion issues with the NWTRB at their regularly scheduled public meetings. Finally, if required by the NRC, the issues will be fully and openly explored during the licensing proceedings.

Question. Do you believe that the U.S. population would be safer to locate spent fuel in Yucca Mountain as opposed to leaving the waste where it currently is scattered across the country?

Answer. As Secretary Abraham indicated in his Yucca Mountain Site Recommendation statement, spent nuclear fuel and high-level radioactive waste is currently stored in surface facilities at nearly 130 locations in 39 States awaiting final disposition. Most of these temporary storage facilities are located near major population centers, and because nuclear reactors need abundant water, are located near rivers, lakes and seacoasts. More than 161 million Americans live within 75 miles

of these temporary storage facilities. It is clearly preferable to locate these wastes at Yucca Mountain, on Federal land, more than 90 miles from any major population center, where they would be placed 1,000 feet underground.

YUCCA TRANSPORTATION

Question. It is my understanding that the Department has not made a final decision as to whether it will use rail or truck transportation to move the waste to Yucca, or decided on a specific route. When will the Department make its final decision and begin the Environmental Impact Study?

Answer. On April 2, 2004, I signed the Record of Decision selecting mostly rail as the transportation mode, and the Caliente corridor as the rail corridor in Nevada. To initiate the Environmental Impact Statement development process for a specific rail alignment within the corridor, DOE conducted five public scoping meetings in Nevada from May 3 through May 17, 2004. The public comment period is scheduled to end June 1, 2004. We expect to issue the Draft EIS early next year and issue the Final EIS later in the same year.

SUBCOMMITTEE RECESS

Senator DOMENICI. That's what it is. So we stand in recess until the call of the Chair.

[Whereupon, at 11:45 a.m., Wednesday, March 31, the subcommittee was recessed, to reconvene subject to the call of the Chair.]

ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 2005

TUESDAY, APRIL 20, 2004

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10:05 a.m., in room SD–124, Dirksen Senate Office Building, Hon. Pete V. Domenici (chairman) presiding.

Present: Senators Domenici, Cochran, Burns, Craig, Stevens, Reid, Murray, and Dorgan.

DEPARTMENT OF THE INTERIOR

BUREAU OF RECLAMATION

STATEMENT OF JOHN W. KEYS, III, COMMISSIONER

ACCOMPANIED BY:

J. RONALD JOHNSTON, PROGRAM DIRECTOR, CENTRAL UTAH PROJECT COMPLETION ACT OFFICE

BOB WOLF, DIRECTOR, BUDGET OFFICE

PAM HAYES, BUDGET OFFICE

OPENING STATEMENT OF SENATOR PETE V. DOMENICI

Senator DOMENICI. The hearing will please come to order. We understand Senator Reid will be joining us shortly, perhaps some other Senators, but we're going to go right on through with what we've got to do today.

Okay, Panel One will be Mr. John Keys, Commissioner of the Bureau of Reclamation. We welcome you, Commissioner, and thank you for all your hard work. We know this is a very difficult time for you because of the budget. If you don't mind, and Senator Burns doesn't mind, I'd like to summarize where we are.

We're once again in a difficult position because of some assumptions that the White House makes, that OMB makes, with reference to how we might save some money or maybe add some money to our pot, which I don't think we're going to be able to do. So today the Bureau of Reclamation and the Corps of Engineers—and we will appropriately address the General when he comes up here, with reference to this being his last testimony before he leaves—there will be two panels, and, in the tradition of the subcommittee, this year we will begin with the Bureau, and then we will go the Corps as a second panel.

This subcommittee has jurisdiction over our country's water resources, under which falls the Bureau of Reclamation and the Corps of Engineers. Both agencies are responsible for managing this precious national resource in a cost-effective manner, while balancing the needs of its diverse users.

I believe the mission of these two agencies will only become more critical over time, as increasing pressure is placed on our water resources. Unfortunately, I fear this is a budget request that only exacerbates the problem that we face in addressing our various water resource requirements. Overall, I believe it will be very difficult, if not impossible, to meet what I consider a workable budget for these two agencies because the administration has proposed such a low starting point.

For the Bureau of Reclamation, for instance, the President has requested, for fiscal year 2005, $956 million, a $14 million increase over 2004. However, that request assumes an offsetting collection of Power Marketing Association—Senator Reid, you know that's not possible; and welcome to the meeting—and the maintenance of activities which are not likely to be enacted, and, therefore, effectively becomes a cut of $30 million. If you back out these assumed savings, which are not going to happen, which I regret—OMB continues to try, and puts them in, knowing full well, they're not going to happen—then if you back out these assumed savings, the true 2005 request is $926 million, a $17 million reduction over 2004.

There are a few items of particular concern regarding the Bureau's budget. The proposed funding for the silver minnow, a listed species in my home State of New Mexico, is $18 million—a listed species, which I don't believe can get along with that small amount—that's a $14 million reduction from 2004, and we've not been able to make any real headway in establishing alternatives that might cost less. Now, I know that the administration does not find this as high a priority as I do, but I believe this number is just not workable.

Recently, the committee held a hearing regarding the Animas-La Plata. You're fully aware of that hearing's contents, Mr. Commissioner, and the understated cost estimate. As you know, I shared my frustration, as did some other Senators, with the Bureau, because they permitted this to occur. And the Department knows how a number of us feel about this predicament. As we look forward, I must say that I am concerned that this year's funding request does not take into account this recent cost increase in the project.

This year, the administration proposes to replace the Western Water Initiative by Water 2025, and the request is $20 million, up $11.6 million from 2004. The program is to continue to address critical western water issues. The biggest change here is that this program is proposed to become a grant-based effort, whereby local projects would meet criteria in order to be a recipient. Actually, with the water needs in the country, it is almost hilarious to have a proposal for $20 million for the water needs of our country.

Last year in my State, the Middle Rio Grande District was provided funds under the Western Water Initiative. I'd like to hear from you how this effort has improved the situation in the West and on the Rio Grande and Albuquerque.

PREPARED STATEMENT

Now, for the Corps, we have similar problems. I will wait until we get the Corps, and then make my statement regarding the same.

[The statement follows:]

PREPARED STATEMENT OF SENATOR PETE V. DOMENICI

The committee will please come to order.

Today we have the Bureau of Reclamation and the Corps of Engineers before us to testify regarding their fiscal year 2005 budgets. There will be two panels, and as the subcommittee's tradition dictates, this year we will begin with the Bureau of Reclamation in the first panel and the Corps of Engineers in the second panel.

This subcommittee has jurisdiction over our country's water resources, under which falls the Bureau of Reclamation and the Corps of Engineers. Both agencies are responsible for managing this precious natural resource in a cost-effective manner while balancing the needs of its diverse users.

I believe that the mission of these two agencies will only become more critical over time, as increasing pressure is placed on our water resources. Unfortunately, I fear this is a budget request that only exacerbates problems we face in addressing our various water resource requirements. Overall, I believe it will be very difficult to meet what I would consider a workable budget for these two agencies because the administration has proposed such a low starting point.

For the Bureau of Reclamation, the President has requested for fiscal year 2005 $956 million, a $14 million increase over fiscal year 2004. However, the request assumes an offsetting collection for Power Marketing Association operation and maintenance activities which are not likely to be enacted and therefore effectively becomes a cut of $30 million. If you back out these assumed savings, the true 2005 request for the Bureau is $926 million, a $17 million reduction from fiscal year 2004.

There are a few items of particular concern to me regarding the Bureau's budget. The proposed funding for the silvery minnow, a listed species in my home State of New Mexico, is $18 million, a $14 million reduction from fiscal year 2004. Now I know that the administration does not find this as high as a priority as I do, but I believe this number is just not workable given the State's continued drought. I will discuss this further when we get to the questions.

Recently, this committee held a hearing regarding the Animas-La Plata project and the understated cost-estimate. As you know Commissioner, I shared my frustration with the Bureau and the Department about how we got in this predicament. I am sure you share my same frustration. As we look forward, I must say that I am concerned that this year's funding request does not take into account this recent cost increase in the project.

This year the administration proposes to replace the Western Water Initiative by Water 2025 and the request is $20 million, up $11.6 million from fiscal year 2004. The program is to continue to address critical Western water issues. The biggest change here is that this program is proposed to become a grant-based effort whereby local projects must meet criteria in order to be a recipient. The proposed cost-share is 50/50.

Last year the Middle Rio Grande Conservancy District was provided funds under the Western Water Initiative. I'd like to hear from you how this effort has improved the situation on the Rio Grande and elsewhere in the West.

For the Corps in fiscal year 2005, the President has requested $4.215 billion, which is $356 million below the fiscal year 2004 enacted of $4.571 billion. There are a variety of policy changes, most of which I find ridiculous and irresponsible. Mr. Woodley, I will tell you that in many instances in the Corps' budget it appears as if you cut the Corps' budget and then after the fact, you tried to justify it by proposing a change in policy.

The two that come to mind are the beach restoration policy which you propose to abolish. The second is the 29 projects, currently mid-construction—let me repeat, mid-construction—which you propose to cancel altogether. Now, how can you honestly propose to cancel a project half-way through construction, so that the Federal Government cannot realize any of the projects benefits and protections? I will tell you Mr. Woodley you will not find this provision enacted at the end of the year.

The Corps' request, like the Bureau's, assumes again this year an offsetting collection for direct funding Power Marketing Association's operation and maintenance activities. This provision is included in the current draft of the Energy Bill but does

not cover fiscal year 2005. The effect of not having this enacted is that it results in a further cut of $150 million making the true fiscal year 2005 request $4.065 billion, an 11 percent reduction from fiscal year 2004.

I would like to share with my colleagues who may not already be aware, that the Corps is the project management agent in Iraq. They are the agency directly tasked with the physical reconstruction of Iraq because of both its expertise in project management on a large scale, and in the rehabilitation of critical infrastructure.

I find it ironic that the Corps' talent we are all relying on so heavily in Iraq is the very same one that is most negatively impacted by the administration's budget. I believe that if the administration had its way, the Corps would merely become an operations and maintenance agency. I will tell you Mr. Woodley that the very Corps talent we are utilizing in Iraq was only developed as a direct result of its domestic work in all of our States.

I think the administration is missing the point that this country's economic well-being is closely linked to its waterways, be they rivers, harbors, or wetlands. Further, it is in our interest to ensure that we maintain these resources for our continued successful competition within the world marketplace.

This country has an aging water resources infrastructure. For example, approximately 50 percent of the Bureau of Reclamation's dams were built from 1900 to the 1950's, before the current state-of-the-art construction techniques, therefore they require special maintenance measures. Even though budgets are tight, I am concerned that no one is working to address this longer term problem. An aging infrastructure is one of those problems that we all put off until we absolutely have to, which in the end, will just cost us more and may very well endanger life and property.

More importantly, the budget exercise we go through each year is not an effort to figure out how little we can spend, but one that carefully balances the greatest needs with our limited resources.

I would like to talk today about the impact the proposed fiscal year 2005 budget will have on both agencies and what the Congress can do to ensure that they can continue to effectively manage the country's water resources.

On our first panel will be the Bureau of Reclamation. Appearing before us will be Commissioner of the Bureau of Reclamation, John Keys, and Program Director Ronald Johnston from the CUP Office.

I would like to welcome the members of the second panel from the Corps of Engineers. They are Assistant Secretary for Civil Works, John Paul Woodley, Jr.; Lieutenant General Flowers, Chief of Engineers; Major General Griffin, Director for Civil Works; and Rob Vining, Chief, Programs Management Division.

I would ask both panels to keep your statements to 10 minutes if possible.

Senator Reid would you like to make your opening remarks before we start off with the Commissioner?

Senator DOMENICI. Now, having said that, if you don't mind, Senator Reid, I will proceed on the basis of arrival, and——

Senator REID. Sure, that's fine.

Senator DOMENICI [continuing]. Senator Burns has been waiting for a long time.

Senator BURNS. I'd yield to the Ranking Member.

Senator DOMENICI. Thank you so much.

Senator Reid.

STATEMENT OF SENATOR HARRY REID

Senator REID. Thank you very much, Senator Burns. Appreciate your courtesy.

I first want to thank the witnesses that we're going to have today for the two panels, Commissioner of the Bureau of Reclamation, and, of course, General Flowers, who knows—and the Assistant Secretary, John Woodley.

It's awkward and difficult, I know, for you to defend the budget proposals presented by the administration this year. For fiscal year 2005, as my friend, Senator Domenici has indicated, the administration has proposed large spending increases for a number of our Nation's defense and homeland security. And I support that. But to have a secure Nation includes things other than the things that

explode. We have to do what we can with the Bureau of Reclamation and the Army Corps to make sure that these projects also are funded at a level that we can live with.

Everyone should understand, if we went forward with this budget, it would cost the American people more to shut the projects down than would be available for few remaining. It's troubling.

We cannot secure the homeland without a strong economy. We have with us today the Chairman of the Homeland Security Subcommittee of Appropriations, Senator Cochran, an important new subcommittee. And I support the subcommittee and the problems that they have.

Take, for example, water resource projects funded in this bill. They, in my opinion, are a significant part of our national economy and provide important and positive economic benefits. The chief of engineers cannot even recommend a project to this administration or this Congress unless the analysis shows that positive net economic benefits will accrue to the national economy. The same is true for the Commissioner of the Bureau. Therefore, the only conclusion I can draw from this budget is that the administration places our economy, our economic security, in a different category than our homeland security. I don't share this view. I believe it's shortsighted.

Water resource infrastructure benefits every American. How many of us realize that a typical household uses only 50 to 85 gallons of water a day? However, it takes nearly 1,200 gallons of water per person per day to meet the needs of farmers, factories, electric utilities, and many other organizations that make it possible for us to have food on our table, a computer on our desk, and power for our homes.

During a hundred years, the Bureau of Reclamation has had a major impact on life in the West. The first project ever in the history of the country was the Newlands Project in Northern Nevada, which is still operable. Without Bureau water projects, the western population economy could not be sustained. Certainly, that's the case in the State of Nevada.

The Bureau and the Corps water-storage projects have a total capacity of nearly 570-odd-million acre feet. This provides municipal and industrial water supply to millions of our citizens. The water-supply infrastructure provided by the Bureau and the Corps in the West are the lifeblood of the communities they serve. Without these investments, the tremendous population growth in our western States would not have been possible. Further, the tremendous bounty of our western farms could not be achieved without these projects.

Today, the Bureau is having a major impact on many of our citizens' lives in the Great Plains providing clean drinking water where many have never had it before. In many of our western States, the water that comes into people's homes is the color of a strong cup of tea. Water out of the Colorado, until it's strained, is like mud. When people try to wash their clothes without the work done by the agencies I've spoken of, it stains them. Sinks, tubs, and toilets are all stained by this water. The Bureau's rural water programs have been a godsend to these communities. However, funding for these programs needs to be increased, not decreased. I'm

glad that, for the fiscal year 2005, the administration seems to recognize the worth of these programs. I hope so, anyway.

Reclaimed water projects in the West have allowed many States to stretch their precious water resources. Nevada relies heavily on recycled water for golf courses and water features on the Las Vegas strip and for many other uses. Without this recycled water, Nevada would find it very difficult to live within its allocation on the Colorado River. Yet funding for these vital projects was again severely cut this year.

The people preparing this budget don't realize it, but the Federal limit for most of these projects is extremely low to begin with. The Federal dollars, when leveraged with the State and local dollars, make these projects viable. The Bureau and the Corps provide about 35 percent of the Nation's hydroelectric power, which amounts to nearly 5 percent of the total U.S. electric capacity. Four out of five homes in the Northwest are powered by hydroelectric.

The administration's budget request contains a huge number of gimmicks designed to mask the huge deficits they're running up. The administration has again recycled the hydropower gimmick for the Corps, and expanded it to include the Bureau. The budget proposal includes the assumption that the Power Marketing of the administration, as Senator Domenici has said, will contribute $30 million toward operation and maintenance of Bureau hydropower facilities and $150 million toward Army Corps facilities. This is just absolutely foolishness.

Enabling legislation of these proposals has not been enacted. We could ignore the proposal and not fund a portion of Bureau and Army Corps hydropower. This would have an extreme impact on electricity production. The other option is for us to appropriate the necessary funds. To take funding away from other priorities to fund this unfunded necessary task is—due to these budget gimmicks. This is the third straight year that the administration has included this proposal for the Army Corps, and we still don't have the enabling legislation.

One would think we're sending the appropriate message in this proposal, but someone doesn't understand it. Forty-one States are served by the Corps ports and waterways. These ports and waterways provide an integrated, efficient, and safe system for moving cargo. Two-point-three billion tons of cargo are moved through these ports and waterways. The value of this cargo to our national economy is $700 billion. Navigable waterways generate over 13 million jobs and nearly $150 billion in Federal taxes.

The budget proposal cuts operation and maintenance funding to low-use waterways and ports. This is akin to not funding snow removal on secondary streets, while completely clearing the interstate highway system. You end up with a great system with no way to fully utilize it. The same is true of low-use waterways and ports and their relations to our deepwater harbors. The inland waterway system operates as an integrated unit. Not funding a portion of it drags down other parts of the system.

Average annual damages prevented by the Corps flood-control projects exceed $20 billion. From 1928 to 2000, cumulative flood damages prevented, when adjusted for inflation, were $709 billion, for an investment of $122 billion. That is nearly a 6:1 return. It's

hard to find many things in the Federal budget that have a 6:1 rate of return, and yet this area has been severely underfunded in the budget. Again, only the Simms Bayou, Eastern Texas project, and Westbank, in the vicinity New Orleans, projects were adequately funded. The Corps will likely have to juggle the funding shortfalls for remaining projects to keep work going on them. Remember what I said initially. To follow what we have in this budget would cost more than we would save, and that's an understatement.

The President's budget proposals also include another new beach policy. It's the third year in 3 years. This is the worst one yet. I have to believe that someone in the bowels of the administration that comes up with these policies isn't thinking. Beaches are the leading tourist destination in our country. California beaches alone receive nearly 600 million tourist visits every year. This is more tourist visits than to all the lands controlled by the National Park Service and the Bureau of Land Management combined. Beach tourists contribute $260 million to the U.S. economy and $60 billion in Federal taxes, yet for this budget that we're asked to approve, the administration has decided that the Federal Government should only participate in the initial construction of beach restoration, and that local interests should be responsible for all subsequent beach renourishments. This proposal tells our citizens that government will provide your initial storm-damage protection, but after we finish, you're on your own.

The impacts of this policy resonate through this budget, and are impacting execution of funding provided this year. Both the Corps and Bureau contribute to our Nation's environmental protection. Over $1 billion, or 25 percent of the Army's Corps fiscal appropriation, were targeted for environmental activities. Reclamation expended a similar percentage on their budget.

One final note. I would be remiss if I didn't mention the Brazos Island Texas Project—the Island Harbor Texas Project. In fiscal year 2004, the first year of funding was provided to determine the Federal interest. The fiscal year 2005 budget has unilaterally determined that not only is the project in the Federal interest, but it should be funded for construction even though a feasibility study has not been conducted, nor has the project been authorized. Five hundred thousand dollars provided in the request to conduct a feasibility study, and $9½ million was provided to construct this unauthorized project. I can't remember a time when funding was provided for these two phases at the same time. This is astounding, in light of the fact that the administration is holding up funding for numerous projects that have been fully vetted by the Corps and the Assistant Secretary, yet the administration exempted this project not only from the entire review system, but also from being authorized by Congress for construction. This project should face the same scrutiny as all other projects, and I intend to treat this project the same as all other projects.

PREPARED STATEMENT

It's clear to me, and it should be clear to all of us, that investments in our water infrastructure strengthen our economy and, thereby, directly contribute to our homeland security. So I intend

to work with Senator Domenici, the full committee chairman, Senator Stevens, and Senator Byrd, to try to find additional resources to more adequately fund our water infrastructure.

Thank you very much for your patience, and especially you, Senator Burns.

[The information follows:]

PREPARED STATEMENT OF SENATOR HARRY REID

Good morning.

I am glad to be here today with my good friend, Senator Domenici and his staff as we work towards preparing our annual Energy and Water spending package.

These hearings are intended to help us prepare our funding proposals. We depend on the open exchange of information that we receive in these hearings to explain and elaborate on the President's budget proposals.

However, most importantly, we will develop our appropriations bill by taking into account the needs of our Members and the American people.

I want to thank our witnesses from the Bureau of Reclamation and the U.S. Army Corps of Engineers for appearing before us today. I know that it is both awkward and difficult for you to defend the budget proposals presented by the administration in this year's budget.

For fiscal year 2005, the administration has proposed large spending increases for our Nation's defense and our homeland security, and yet the budget proposals for the Bureau of Reclamation and the Army Corps are not only flat, they are counterproductive and will, if enacted, cost the American people more to shut projects down than will be available to move the few remaining.

I find this very troubling.

Homeland security has rightly been a priority within this administration. However, I do not believe that we can secure the homeland without a strong economy.

The water resource projects funded in this bill are a significant part of our national economy and provide important and positive economic benefits.

The Chief of Engineers cannot even recommend a project to this administration or this Congress unless the analysis shows that positive net economic benefits will accrue to the national economy. The same is true for the Commissioner of the Bureau of Reclamation.

Therefore, the only conclusion that I can draw from this budget is that the administration places our economic security in a different category than our homeland security.

I do not share this shortsighted view. Water resource infrastructure benefits all of us.

I wonder how many of us realize that the typical household only uses 50 to 85 gallons of water a day. However, it takes nearly 1,200 gallons of water per person per day to meet the needs of farmers, factories, electrical utilities, and the many other organizations that make it possible for us to have food on our table, a computer on our desk and power for our homes.

During their 100-year history, the Bureau of Reclamation has had a major impact on life in the west. Without Bureau water projects, the western population and economy could not be sustained, including my home State of Nevada.

Bureau of Reclamation and Army Corps water storage projects have a total capacity of nearly 575 million acre feet of storage and provide municipal and industrial water supply to millions of our citizens. The water supply infrastructure provided by the Bureau and the Army Corps in the West are the life blood of the communities they serve. Without these infrastructure investments the tremendous population growth in our western States would not have been possible. Further, the tremendous bounty of our western farms could not be achieved without these projects.

Today the Bureau is having a major impact on many of our citizens' lives in the Great Plains by providing clean drinking water where many have never had it before. In many of our western States, the water that comes into people's homes is the color of a strong cup of tea. When people try to wash their clothes, it stains them. Sinks, tubs and toilets are all stained by this water.

The Bureau's rural water programs have been a godsend to these communities, however, funding for these programs needs to be increased. I am glad that for fiscal year 2005 the administration seems to recognize the worth of these programs after the devastating cuts made in fiscal year 2004 that Congress had to restore.

Reclaimed water projects in the west have allowed many western States to stretch their precious water resources. My own State of Nevada heavily uses recycled water for the golf courses and water features on the Las Vegas Strip and for other uses.

Without recycled water, Nevada would find it very difficult to live within its 300,000 acre-foot allocation of the Colorado River.

Yet, funding for these vital projects was again severely cut this year. Perhaps the people preparing this budget don't realize it, but the Federal limit for most of these projects is relatively low. However, the Federal dollars when leveraged with the State and local dollars make these projects viable.

The Bureau of Reclamation and the Army Corps of Engineers provide about 35 percent of the Nation's hydroelectric power which amounts to nearly 5 percent of the U.S. total electric capacity. Four out of five homes in the northwest are powered by hydroelectric power.

As always, the administration's budget request contains a huge number of budget gimmicks designed to mask the huge deficits they are running up. The administration has again recycled a hydropower gimmick for the Army Corps and expanded it to include the Bureau of Reclamation. The budget proposal includes the assumption that the Power Marketing Administrations will contribute $30 million towards operation and maintenance of Bureau of Reclamation hydropower facilities and $150 million towards Army Corps facilities.

Enabling legislation for these proposals has not been enacted. Absent this legislation, we have two choices. We could ignore the proposal and not fund this portion of Bureau and Army Corps hydropower. This would have extreme impacts on Federal hydropower production.

The other option is for us to appropriate the necessary funds. That is, to take funding away from other priorities to fund this unfunded necessary task due to budget gimmicks. This is the third straight year that the administration has included this proposal for the Army Corps and enabling legislation has still not been enacted. One would think we were sending the appropriate message on this proposal, but obviously someone does not understand it.

Forty-one States are served by Army Corps ports and waterways. These ports and waterways provide an integrated, efficient and safe system for moving bulk cargos. Two-point-three billion tons of cargo are moved though these ports and waterways. The value of this cargo to the national economy approaches $700 billion. Navigable waterways generate over 13 million jobs to the national economy and nearly $150 billion in Federal taxes.

The budget proposal again cuts operation and maintenance funding to "low use" waterways and ports. This is akin to not funding snow removal on secondary streets while completely clearing the interstate highway system. You end up with a great system with no way to fully utilize it.

The same is true of "low use" waterways and ports and their relationship to our deepwater harbors. The inland waterway system operates as an integrated unit. Not funding a portion of it drags down other parts of the system.

I am gratified to see that the budget proposal adequately funds the New York and New Jersey Harbor project as well as the Olmstead Lock and Dam project on the Ohio River, however, it does this at the expense of all of the other navigation projects. Only these two chosen projects will be able to initiate any new work for fiscal year 2005. All of the projects will have to limp by on the remaining funding.

Average annual damages prevented by Army Corps flood control projects exceed $20 billion. From 1928–2000, cumulative flood damages prevented when adjusted for inflation were $709 billion for an investment of $122 billion, adjusted for inflation. That is nearly a 6 to 1 return on this infrastructure investment.

It is hard to find many things in the Federal budget that have a 6 to 1 rate of return, and yet this area has been severely underfunded in the budget. Again, only the Sims Bayou, Houston, Texas, project and the West Bank and Vicinity, New Orleans, project were adequately funded. The Army Corps will likely have to juggle the funding shortfalls for the remaining projects to keep work going on them.

The President's budget proposal has also included another "new" beach policy, his third in 3 years. This is the worst one yet. I have to believe that someone in the bowels of the administration that comes up with these policies is just not thinking them through.

Beaches are the leading tourist destination in the United States. California beaches alone receive nearly 600 million tourist visits annually. This is more tourist visits than to all of the lands controlled by the National Park Service and the Bureau of Land Management combined.

Beach tourists contribute $260 billion to the U.S. economy and $60 billion in Federal taxes.

And yet, for fiscal year 2005, the administration has decided that the Federal Government should only participate in the initial construction of beach restoration projects and that the local interests should be responsible for all subsequent beach renourishments needed over the 50 year life of the project.

This proposal tells our citizens, that the government will provide your initial storm damage protection, but after we finish, you're on your own!

The impacts of this beach policy resonate throughout the fiscal year 2005 budget and are impacting execution of funding provided in fiscal year 2004.

Both the Army Corps and the Bureau contribute to our Nation's environmental protection. Over $1 billion, or about 25 percent, of the Army Corps' fiscal year 2004 appropriations was targeted for environmental activities. Reclamation expended a similar percentage of their budget on these important activities.

One final note about the President's proposal that I would be remiss if I did not mention is the Brazos Island Harbor, Texas, project. In fiscal year 2004, first year funding was provided to determine the Federal interest.

The fiscal year 2005 budget proposal has unilaterally determined that not only is the project in the Federal interest, it should be funded for construction, even though a feasibility study has not been conducted nor has the project been authorized for construction. Five hundred thousand dollars is provided in the request to conduct a feasibility study and $9.5 million was provided to construct this unauthorized project. I cannot remember a time when funding was provided for these two phases at the same time.

This is astounding in light of the fact that the administration is holding up funding for numerous projects that have been fully vetted by the Army Corps and the Assistant Secretary of the Army for Civil Works. Yet the administration has exempted this project not only from the entire review system established by the administration, but also from being authorized by Congress for construction.

I believe this project should face the same scrutiny as all of the other projects in the President's proposal and intend to treat this project the same as all other projects as we prepare our Bill.

It is clear to me and should be clear to all of us that investments in our water infrastructure strengthen our economy and thereby directly contribute to our homeland security.

I intend to work with Chairman Domenici, Chairman Stevens, and Ranking Member Byrd to try to find additional resources to more adequately fund our water infrastructure.

Thank you Senator Domenici.

Senator DOMENICI. Thank you very much, Senator Reid.

Let me ask the other Senators if they desire to speak. I'm more than willing to let them. This is a very, very serious budget.

Senator Stevens and Senator Cochran were not here when I said this, and I will not repeat my remarks. I will just tell you that on both budgets, they are slim; but, in addition, in each of the two budgets, the OMB assumed that we would do something that we can't do. Power Marketing is assumed as something that will be done that will cause us to raise money. Since that won't happen, the net effect is that we're $180 million short in the Corps and the Bureau combined, $180 million. That's a lot of money, when you figure that that's below the line, less than what we would expect, based on last year's budget. I don't know how we're going to do it, but I just want you to know that.

Now, who should go next, based——

Senator STEVENS. Senator, could I just make a comment?

Senator DOMENICI. Absolutely.

STATEMENT OF SENATOR TED STEVENS

Senator STEVENS. I came by to tell the committee that I was privileged to attend a meeting about Brazil, and I was staggered to find that Brazil had changed its dependence on foreign oil, imported oil, from 70 percent to 17 percent by reassessing all its hydroelectric potential and by having a crash program of investment in hydro potential.

I would like to ask that both of the panels—Mr. Keys and the Corps—deliver to the committee past studies of the hydroelectric

potential of the United States. And I don't care where it is. If those lands have—some of these lands have been withdrawn now in order to prevent the hydro potential, I think we should have a complete review of the hydro potential. We're in a period of escalating gasoline prices, and we face, soon, escalation in even the price of natural gas because of our increased dependence upon imported natural gas.

I do think it's one of our duties now to reassess all the alternative forms of energy that are available, and let the American public decide whether some of these hydroelectric projects should be constructed now, and that we should shift to a period of investment in future hydro potential.

I would also ask your consent, your agreement, to let me place in the record the answers to a series of questions that General Flowers was kind enough to deliver to me. We did have a visit some time ago, before the recess, and I asked him some specific questions about Alaska, and he has delivered the answers to me, and I'd like those printed in the record.

Thank you very much.

Senator DOMENICI. Senator, they will be made a part of the record.

And we will consider your two questions as if they were asked. And you understand, Commissioner, that that's been asked of you? Is General Flowers here yet?

Senator STEVENS. Well, I have the questions and answers right here.

Senator DOMENICI. All right.

Senator STEVENS. I can put them in the record, if that's all right.

Senator DOMENICI. Those are Alaska.

Senator STEVENS. They're Alaska Corps of Engineers project questions.

Senator DOMENICI. Yes, but with reference to your request that there be an assessment of potential water projects, in terms of hydro——

Senator STEVENS. Well, I just want—they've done already—I know they did—they did some of them when I was down there, in the 1950's, but I think they updated those later.

Senator DOMENICI. All right.

Senator STEVENS. All right?

Senator DOMENICI. We'll get that.

Senator STEVENS. That was in the last century, Mr. President.

Senator DOMENICI. Yes, I understand.

I mean, you are very viable. I don't know how many more centuries you'll be here, but——

You will outlive us.

I want to comment, with reference to your last observation regarding hydro, that the Senator sitting by you, right there, Senator Larry Craig, has been working on hydro, the permitting process, which has been very cumbersome. He's been working on, in fact, the energy bill, had a tremendous reform that would have moved projects, of the type the Senator from Alaska's talking about, in a much more expedited—and yet safe, from the standpoint of the environment. It got through. If we don't do the energy bill, who

knows where it will go, but we aren't going to give up on modernizing the permitting system.

Senator STEVENS. Well, Senator, God willing, if I'm able to so, I intend to invite Members of the Full Committee to take a trip to Brazil after the election and see what they have done. This is a staggering concept of reversing a total dependence——

Senator DOMENICI. Terrific.

Senator STEVENS [continuing]. On foreign oil and replacing it with alternative forms of energy in your own country.

Senator DOMENICI. Well, Senator, I just want, before you leave, to reiterate to you, when you start allocating the money—and I know you have an insurmountable problem, but you should know that you can't use the administration numbers as if we can get the job done with them, because, in each case, there is a very big amount of money that is assumed in that budget that will not occur. In each case, they assume things like the Power Marketing, which is a big one—and what's the other one? Yucca Mountain piece that they assume, and other things.

Now, Senators who are here—Senator Burns, would you like to comment?

STATEMENT OF SENATOR CONRAD BURNS

Senator BURNS. Thank you, Mr. Chairman, I just have one comment. When you look at this budget, knowing the projects we've got, I think we ought to try to do what we're supposed to do, and focus on our highest priorities. Now, I guess that's pretty easy to say when you come from a watershed State, where we're hurting a little bit in some of our irrigation districts, and we need some help.

So, I just want to make sure we keep this in mind when we set the priorities on what we're about and what we're supposed to be doing. In our part of the country food production is very important, and we've got a big problem with the Milk River that we'd like to start addressing. This budget will not get everything done, but we want to work with you and do everything we can.

There are some private entities that are willing to take over irrigation districts. Willing to take over. They've already paid them off. And yet we come to the government, and we say, "Well, now, we'd like to turn these back and—turn them over to private entities, where they paid money in, where they pay for the water, they pay for everything, and willing to do it," and yet we run into a stone wall about getting these irrigation systems moved into private entities because—they just don't want to release it because they're afraid they'll lose their job or something. I don't know what it is. But anytime that you've got the private sector wanting to take over something that's costing us money, and they're willing to assume the responsibilities of it, I think we ought to look very closely at that and how it impacts on our budget, year in and year out.

So I've got another meeting to go to now, but I just want to thank the Bureau of Rec. and also the Corps of Engineers. We've had a great year in Montana, and we've worked together on some projects that are really going to make a positive impact. But we also have some very serious problems that we have to look at and come up with some imaginative ways to deal with those problems.

And I think we can do this in a way that benefits both the people who live there and also the American taxpayer.

Thank you, Mr. Chairman.

Senator DOMENICI. Thank you.

Senator Cochran.

STATEMENT OF SENATOR THAD COCHRAN

Senator COCHRAN. Mr. Chairman, thank you very much. I have a statement specifically dealing with the budget request for the Corps of Engineers, and I ask unanimous consent that it be printed in the record.

Senator DOMENICI. It'll be made part of the record.

[The statement follows:]

PREPARED STATEMENT OF SENATOR THAD COCHRAN

Mr. Chairman, I join you in welcoming the witnesses to this hearing.

I appreciate the good work the Corps of Engineers does in the State of Mississippi. I do, however, have some serious concerns with the Corps' ability to continue to carry out its responsibilities due to declining levels of funding.

The Corps' ability to accomplish their mission is becoming more than a serious challenge. I am disappointed in the budget request for the Civil Works program.

More funding would provide greater economic and environmental benefits, as well as improved safety and security for our Nation's citizens.

Locks and dams that allow for more efficient and environmentally responsible movement of goods on our waterways continue to deteriorate, and the Corps continues to struggle to find the resources to dredge waterways that carry commercial cargo such as the Mississippi and Ohio Rivers, not to mention many other smaller waterways. The maintenance backlog also continues to grow and become more serious.

In addition, we are not adequately constructing or maintaining important flood control structures that are needed in many areas.

I appreciate the efforts by General Flowers to meet the demands being made on the Corps, and I congratulate him on his exemplary service as Chief of Engineers. Since he's retiring later this year, it may be the last time he appears before the subcommittee. I congratulate him on his outstanding service to the country.

Senator DOMENICI. Is that it?

Senator COCHRAN. Yeah.

Senator DOMENICI. All right.

Senator Dorgan.

STATEMENT OF SENATOR BYRON L. DORGAN

Senator DORGAN. Mr. Chairman, let me be brief, but I have another Appropriations subcommittee hearing going on just around the corner on this floor, and I'm involved in that, as well, so I won't be able to listen to all of the testimony. But I wanted to underscore the points you made. Water policy is critically important, and funding these represent not just ordinary expenditures, they represent good investments in the future that provide, in most cases, very high returns.

And I wanted to say to Commissioner Keys that last Thanksgiving, as you know, the people of Fort Yates, on the Indian reservation, lost their water because of a problem with the Missouri River intake. And for several days, these folks, 8,000 of them, had no water at all. And, Mr. Chairman, I should just tell you that the employees of the Bureau were down there working through the Thanksgiving holiday. They did a remarkable job. And your employees deserve a real big, hearty thank you. They worked around

the clock during the Thanksgiving holiday, and they got water restored.

But this relates to the need for a permanent solution down there. It relates to the management of the Missouri River by the Corps of Engineers. And it relates to bigger and broader issues that we have to address. We also need to deal with the rural water needs. Commissioner Keys, you were with us when we broke ground for the NAWS Project, which, by all accounts, is a great project, known as great to everyone except the Office of Management and Budget, apparently. Despite the fact that they don't allege there's anything wrong with it; they just put it as part of this PART process and don't fund it well enough. And then we also need to continue the flood-control project underway at Grand Forks, and complete that.

So this subcommittee has an enormous charge, and all of it is critically important. Mr. Chairman, I look forward to working with you and other Members of the subcommittee to find ways to meet our obligations and to work with the Corps and the Bureau to get done what we need done. We need the Red River Valley studies in Eastern North Dakota. I won't recite my displeasure with the Corps and the master-manual rewrite right now, but——

Senator DOMENICI. I understand.

PREPARED STATEMENT

Senator DORGAN. I'll do that later.

But thank you very much. And let me say, again, the part of the Chairman's statement and the part of Senator Reid's statement I heard is right on point. These are critically needed investments, and we need to find a way to do them.

[The statement follows:]

PREPARED STATEMENT OF SENATOR BYRON L. DORGAN

Assistant Secretary Woodley, Mr. Keys and General Flowers, I welcome you to our subcommittee, and I thank you for your testimony. In North Dakota, we have enormous water challenges and depend greatly on the assistance of the Corps of Engineers and the Bureau of Reclamation for flood control, irrigation, and municipal, rural and industrial water needs. The President's budget request for fiscal year 2005 does not give your agencies the funding you need to accomplish the great challenges ahead of you in my State and throughout the Nation.

I am very concerned that the President's fiscal year 2005 budget submission for water projects falls dramatically short of the investment that will be needed. The President proposes cutting nearly $356 million from the Army Corps of Engineers and $28 million from the Bureau of Reclamation's Water and Related Resources program. These cuts are coming at a time when the Federal Drought Monitor shows that almost every western State, including North Dakota, remains in drought. In North Dakota, low lake levels at Lake Sakakawea and Lake Oahe, two major lakes on the Missouri River created by the Federal Government in an effort to eliminate annual flooding of river lowlands, are causing extreme problems for communities that depend on these lakes for their water supply. We had a crisis earlier this year at Standing Rock Indian Reservation when the community of Ft. Yates lost water due to the low lake levels on Lake Oahe. To respond to this emergency, the Bureau had to divert already limited municipal, rural and industrial funds designated for other tribal projects. Other communities along Lake Sakakawea and Lake Oahe are in danger of suffering the same fate. Already, economies dependent on recreational uses of the lake have been devastated due to low lake levels and now the water supplies are also in danger.

I blame this on the Corps' mismanagement of the Missouri River. The Corps had the opportunity to change their management practices on the river to practices that would have produced a net benefit for the entire country. Instead, the Corps issued its revised Master Manual last month which simply kept the status quo.

Needless to say, I am unhappy with this so called "revision." In the President's Fiscal Year 2005 Budget Request for the Army Corps he stated, "A concerted effort by this Administration and the Congress is needed to ensure that the ongoing and future efforts of the Corps are environmentally sustainable, economically responsible, and fiscally sound. Achieving this goal will require a transformation in cultural attitudes." The President is correct in his assumption that attitudes must change in order for us to reap the economic benefits from water projects such as the Missouri River Basin.

The President's Budget Request further states, "In developing its budget proposal for 2005, the Corps assessed the relative merits of each potential investment in each of its program areas. This approach represents an important step towards the President's goal of making fiscally responsible funding decisions based more on results and less on factors such as 'what did they get last year.' This is the essence of the Corps' performance-based budget. The Administration funds activities that will yield the greatest net benefit to society per dollar invested."

I wish it could be said that the Corps actually took this type of approach when revising the Master Manual. Studies show that every dollar the public spends to operate and maintain the Missouri River only generates 40.6¢ in transportation savings to barge companies, export elevators, importers and grain producers. It has been further shown that the actual O&M expenses for the Missouri River ($7.1 million) exceed the net benefits provided by the barging industry ($6.9 million). This, to me, seems like a waste of taxpayer funding. (There are only three barging companies currently operating on the MO River). If the administration is serious in its efforts to focus funding on those activities that will yield the greatest net benefit to society as a whole, then it would seem that reforming the management practices on the Missouri River would be an initiative the Corps would take seriously and address in a manner more consistent with the administration's directive.

I hope the "revised" Master Manual is something the Corps will continue to look at and is not something they feel no longer needs to be reevaluated. I believe the Corps should do more than simply reprint the 1979 Master Manual. The people of the Missouri River Basin deserve and expect more. The towns and communities that have grown dependent on the reservoirs and river need to know what they can expect from the Federal Government in the future. They need to know that the government is more concerned with the safety and welfare of the Nation, rather than simply a few downstream barge companies. We need to reevaluate and set the goals for our future use on the river and judging from the past, the status quo is no longer an option.

As you know, my top priority within the Bureau of Reclamation's budget is adequate funding for the Garrison project. A total of 155,000 acres of Ft. Berthold Indian Reservation land was taken for building the second-largest earth filled dam in America, the Garrison Dam-Lake Sakakawea project. The water divided the Reservation down the middle. The Federal Government owes this tribe and others in North Dakota for its sacrifice for the Nation. We have promised, in an authorization bill, to provide $200 million for Indian municipal, rural and industrial water needs and $200 million for State MR&I. But this administration's budget once again fails to come through on that promise recommending only recommending $22.1 million for the Garrison project which does not even maintain the historic funding level, ignores the needs of the current program and does not keep up with the price increases expected in the major programs as delays occur. This year, the budget only provides about $5.485 million for rural water projects—half for the State program which includes the Northwest Area Supply (NAWS) and the other half for Indian programs. This is almost $45 million short of what North Dakota needs for Indian and State MR&I. We simply must do better or the costs of this project are going to overwhelm us in the outgoing years. If the current funding trend, a disaster will occur in only a few years when an additional $30 million will be needed for the Red River Valley program.

I am also very concerned about the impact of the President's budget recommendation for the Grand Forks/East Grand Forks Flood Control Project. This year, the President only recommends $31 million for this project which is nearly $24 million short of the amount that will be needed to bring the project to substantial completion. We are so close to providing this community permanent flood control protection and I just don't understand why the administration would not choose to finish the project this year. A wet spring recently caused severe flooding in areas just west of Grand Forks and we are once again reminded that the community is not safe from another flood until this permanent protection project is finished. This subcommittee has invested so much into that project and I will be asking for my colleagues for their help in getting this project substantially completed this year before

FEMA remaps the area only to have to spend the money to do it again after the project is completed.

As you'll see, I think we have a lot of challenges in front of us but I thank you for appearing before us today.

Senator DOMENICI. Thank you very much.

Senator Larry Craig.

STATEMENT OF SENATOR LARRY E. CRAIG

Senator CRAIG. Thank you, Mr. Chairman. I'll be brief. I got here late, but I do want to make a couple of opening comments because it's an opportunity to have John before us to talk about issues that are obviously critical.

And, let's see, Commissioner, have you gone to Idaho yet? When are you going?

Commissioner KEYS. I'm sorry, sir?

Senator CRAIG. I thought you were going to go to Idaho this coming week.

Commissioner KEYS. I am there the 6th and 7th of May to——

Senator CRAIG. Okay.

Commissioner KEYS [continuing]. Work with them on the groundwater issue.

Senator CRAIG. Right. I knew that you were—that your trip out there was timely in relation to what's happening in Idaho, but also what's happening in the West, Mr. Chairman.

I just, during this Easter break, spent time with the Twin Falls Irrigation Company, the Twin Falls Canal Company. For the record, Mr. Chairman, that is one of the largest irrigation companies in the State of Idaho, that irrigates all—from, you know, Bureau of Rec. development programs, the whole development of the central/mid Snake River Basin area.

Here is what I concluded from them, and here is what we have to conclude in the West today. The West is drying up, and it's getting progressively drier. And it is now extended over a near 10-year period, Mr. Chairman. Lake Meade is—or Lake Powell is at an all-time low since it was filled. Lake Meade is down. There is a guesstimate now, and the figures would show the progressive decline in the flow of the Snake River is upwards of 500,000 acre feet now, on an annualized basis. Every chart I see over the last decade shows a decline in overall springs and spring recharge. You're going out to talk about the need to try to recharge the Snake River Plain Aquifer and the Federal impediments that may or may not exist there as it relates to doing that.

It quit raining and snowing in Idaho the 1st of March after what appeared to be a very good wet winter, and it hasn't snowed or rained since.

Senator DOMENICI. What was that date?

Senator CRAIG. First of March. The snow is evaporating or going into the ground, our rivers are showing little to no spring surge, and many of our reservoirs are nearly empty. The great American Falls Reservoir irrigation system, that reservoir will not spill this year. It appears that it may get only to 70 percent capacity.

The West is in deep water trouble. It's also an area where everyone else wants to share water that was once dedicated for another purposes, and so the conflicts are growing, whether it is fish, or

whether it is human consumption. It also is a segment of the region that is growing the fastest of any in the United States. Whether it's Idaho and Idaho's growth, or New Mexico, or Arizona, or Nevada, all of it's growing, and growing faster than any segment. And yet the one resource that will dictate its growth or dictate how people live is the resource of water. And, frankly, we're doing nothing to add to the overall capacity of the systems.

We started dewatering the State of Idaho a decade ago, when we decided that it was important that we leave some water in the system for purposes of flush for fish, and we haven't added any upstream capacity. We've brought more water in that was once dedicated for something else, which meant water was leaving the ground to go into the system.

But it is an alarming figure. And I have a variety of charts here in front of me, but probably this is the most significant one. That's a decade of flow in the Snake River system, all of it in decline. Used to be we had 5- to 6-year cycles. It's very difficult to find a decade or more of progressive decline in overall flows.

I say that today—Mr. Chairman, you've experienced it in New Mexico, throughout the West. The arid, high-desert West is getting drier. And the one agency that can play a role in helping is your agency. And the problem we have today is that the idea—and the chairman of the full committee talked about hydro projects and putting dams in rivers—oh, how dare we even think about that idea again—but there is capacity in the systems off main stem, in areas that would have little environmental impact, to increase the overall abundance of water in an arid West, and much of that could be dedicated to in-stream flow to increase water quality within the main-stem systems. And yet even some of our environmental friends will ignore the obvious, because they have dedicated themselves to being anti- and not pro-environment in many instances.

That's a conflict we're into, but it was brought to reality this week, this past week, when I sat down with Idaho's largest irrigation company and saw their dramatic declines in overall resource. And they're now rushed to manage, rushed to conserve, as we grow increasingly drier in the West.

Thank you, Mr. Chairman.

Senator DOMENICI. Thank you very much.

Now, when you say the Bureau of Reclamation can help with this, let me say publicly that this gentleman has tried mightily, but the truth of the matter is they've made some mistakes in the past year. The biggest one is the Animas-La Plata, which turns out to be Animas-La Plata Lite. And even with Animas-La Plata Lite, they have messed up the estimates terribly. They promise me that they're going to fix it, and they're going to come back with estimates that are right, and spread it out a little bit so it doesn't beat our budget up. How could we pay for it with what we've got? I mean, if they end up with 40 to 50 million dollars that they need, they can't get it. We can't pay for projects right now that have, you know, been going for a long, long time.

My last remarks are directed at OMB. I honestly don't believe that, in considering the budget, that they consider any of the things we've been talking about here. It's pure numbers. You know, pure numbers. Can you imagine to come up and say we've got a

new water program he put in it for the West, and we put $20 million in it? You know, $20 million? We need a revolving fund of a billion dollars, with grants and matching funds. Anybody that sees that—sees what's going on out there knows that.

Now, enough of us. Let's hear the Commissioner.

Proceed.

SUMMARY STATEMENT OF COMMISSIONER KEYS

Commissioner KEYS. Mr. Chairman, good morning. It's my absolute pleasure to be here today to talk about the President's fiscal year 2000 budget request for the Bureau of Reclamation.

We do appreciate all the support that we've had from the committee, and certainly look forward to working with you on Bureau projects in the future.

I have a statement for the record that has been sent forward that I would certainly appreciate your including as part of the record.

Senator DOMENICI. It will be made part of the record.

Commissioner KEYS. Assistant Secretary Bennett Raley, Assistant Secretary of Water and Science, could not be here today, and he has also submitted a statement that we would appreciate being put in the record.

Senator DOMENICI. It will be made part of the record.

Commissioner KEYS. And I have with me Ron Johnston, who is here to talk, if you would like, about the Central Utah Project Completion Act, and I have Bob Wolf and Pam Hayes, our budget folks, with us if we need further information from them.

Mr. Chairman, before I get to the budget, we would like to update you on water-supply situation in the Western United States. This year, unfortunately, as we've talked about, the drought remains with us and—put the green one up first, the big one——

Senator DOMENICI. I didn't read your testimony beforehand, I'm sorry, Mr. Commissioner, but thank goodness you're covering this. Please proceed.

Commissioner KEYS. Mr. Chairman, you talked about growth in the West, and this first chart shows exactly what you were talking about. In the decade between 1990 and 2000, State of Nevada grew by 60 percent, State of Arizona by 40 percent, Colorado and Idaho by 30 percent, New Mexico by 20 percent. That, in itself, tells you some of the crisis and conflict that we face in the Western United States.

The next chart shows that annual precipitation that we have depended on for a number of years, and certainly you can see that in the Western United States it ranges somewhere from 3 inches up to an average of less than 20 inches in most places.

Now, if you consider the drought that we're in, it almost looks like a bulls-eye on the Western United States. In the year 2003, there was only one State out of the 17 that Reclamation works with that experienced normal or above precipitation; that was California. This year, we're started out, and there's even some dry in Southern California that was not there last year. We anticipate it being a dry year, and certainly we're trying to manage toward that.

Now, one of the efforts that we have entered into in trying to look at the drought, look at the demands for water and the conflict and crisis that we could get into is the Water 2025 Program. This

is a chart that we put together as part of that to show those hot-spots in the Western United States. Hot-spots, meaning that they would have water requirements from exploding populations, from demands from the Endangered Species Act, demands from other fish and wildlife, from new industry, from new requirements that we didn't even know about. These are the hot-spots that we are trying to deal with in the Western United States.

Now, with that said, I would go to the information on the fiscal year 2005 budget. The overall Reclamation budget totals $956 million in current authority and is offset by discretionary receipts from the Central Valley Project Restoration Fund of $46 million, and hydropower direct financing of $30 million. While the request is partially offset by underfinancing of $36 million, I'm concerned that increasing above this amount, as has occurred in the recent past, may adversely affect our ability to address activities at our aging infrastructure. And I look forward to working with the committee to identify ways to address this critical area.

Our 2005 budget request continues the President's commitment——

Yes, sir?

Senator DOMENICI. Commissioner, did that last statement, that you want to work with us on these critical areas, were those presented to OMB?

Commissioner KEYS. Mr. Chairman, the under-financing is a figure that we work with the committee directly on every year. We propose a level of under-financing that we think makes good business sense, and then you work with us to see what it should be. In the past 2 years, it's actually been quite a bit more than we had recommended.

Senator DOMENICI. Well, let me tell you, that's a very, very risky business. When you have a budget that's as tight as this budget, everywhere—you know, we don't know how we're going to do that, because every year the chairman of the committee that makes the allocations has mercy on us and gives us a little bit of allocation over an amount. But what if they don't do it this year? Then, you know, you better be prepared to tell us what can we cut or hold from your ongoing projects that we can use to keep this—you know, the parts that are desperate, to keep them alive.

I don't know how. I've looked at it, and I don't know where the heck we're going to—I don't know where we're going to get the money.

Commissioner KEYS. Mr. Chairman, we certainly will work with you every step of the way on that.

Senator DOMENICI. Good.

Commissioner KEYS. Our fiscal year 2000 continues the President's commitment to a more citizen-centered government founded on the principle of getting results rather than creating process, as well as the Secretary's four C's, "conservation through consultation, cooperation, and communication."

The request also continues to emphasize the operation and maintenance of Reclamation facilities in a safe, efficient, economic, and reliable manner while sustaining the health and integrity of ecosystems that address the water needs of a growing population.

Mr. Chairman, the highlights of our budget are—the Water 2025 Program in 2005 requests $20 million. That request would continue Secretary Norton's 2025 Initiative, building off of the fiscal year 2004 Western Water Initiative. Water 2025 is a high priority for Reclamation, focusing resources, both financial and technical, on areas of the West where conflict and crisis over water either exist now or can be predicted and prevented using the tools to deal with the realities outlined in the initiative.

Water 2025 provides Federal seed money in the form of competitive grants with performance measures to empower local citizens and communities to do what the government cannot do alone. Our fiscal year 2004 budget included $4 million in the Western Water Initiative for these competitive grants. This request is about $20 million for those competitive grants.

In the Klamath Project, in Oregon and California, we're asking for $25 million. The fiscal year 2005 request continues and increases funding for our efforts in the Klamath Basin that will improve water supplies to meet competing demands for water in the Basin and ensure continued delivery of water to this project. Coupled with efforts from other Federal agencies, Interior is proposing over $67 million in fiscal year 2005 to keep its commitment to help restore the Basin, provide water necessary to meet the needs of the farmers.

Now, on the Middle Rio Grande Project, we're asking for $18 million. The fiscal year 2005 request continues funding in support of the Endangered Species Collaborative Program. In addition, the request continues funding for requiring supplemental water, doing the necessary channel maintenance, and government-to-government consultation with Pueblos and tribes. The funding will continue efforts that support the protection and contribute to the recovery of the Rio Grande silvery minnow and the southwestern willow flycatcher.

One effort that——

Senator DOMENICI. How much less is that than the previous year?

Commissioner KEYS. Mr. Chairman, our request for fiscal year 2005 is $1 million more than it was in fiscal year 2004.

Senator DOMENICI. We don't have that number. We ought to consult on that. We have a number that it's $14 million less. But, anyway——

Commissioner KEYS. Mr. Chairman, we'd certainly work with you on that number.

Senator DOMENICI. Okay.

Commissioner KEYS. On the Animas-La Plata Project in Colorado and New Mexico, we're requesting $52 million. The Animas-La Plata Project is currently under construction and resolves, through authorizing legislation passed by the Congress in 2000, longstanding Indian water-right claims in the Basin.

In response to your comments before, I can assure you that Reclamation has made changes in the personnel on the project and the procedures that we are using to complete the project as it was designed, and to ensure that we don't run into those problems on other projects throughout the Western United States. Those changes have been made. We are continuing to look at the organi-

zation and our engineering expertise to be sure that it is there for another century to come.

On site security, we have asked for $43 million in fiscal year 2005. The funding request is necessary to cover the cost of site-security activities, including surveillance and law enforcement, antiterrorism activities, including physical, information, and personnel security, and threat management, and physical emergency security upgrades, with the primary focus on our national critical infrastructure facilities.

I do want to call your attention to a change that will be occurring in how we address the cost of site-security activities. Beginning in fiscal year 2005, annual costs associated with activities for guarding our facilities will be treated as project operation and maintenance cost, subject to reimbursibility based upon project cost allocations. You'll be hearing more on this approach in the future.

Our Safety of Dams Program, we ask for $64 million in fiscal year 2005. As our infrastructure ages, we must direct increasing resources toward upgrading and maintaining our facilities through the use of science and new technologies to ensure the continued reliability so important to our western stakeholders. The fiscal year 2005 request is being made to reduce risks to public safety, particularly those identified as having deficiencies.

On the Rural Water Program, we have asked for $67.5 million. The fiscal year 2005 funding for rural water projects emphasizes a commitment to completing ongoing municipal, rural, and industrial systems. This one, in fact, would complete the Mid-Dakota project in South Dakota that we've been working on. Funding is included for the Mni Wiconi, Mid-Dakota, Garrison, Lewis and Clark, and Perkins County projects.

The administration will convene an interagency group to review programs of all Federal agencies with rural water infrastructure needs. We just, about 3 weeks ago, working with your office and Mr. Bingaman, submitted a new bill for which you have sponsored, Senate Bill 2218, the Reclamation Rural Water Act of 2004. That, we think, will give us a good structured approach to addressing rural water needs in the future, and give us a better way to handle them than we have been working with in the past.

In talking about the hydropower direct financing, that's the $30-million figure that we had talked about before. The fiscal year 2005 budget proposes to finance the cost of operation and maintenance of certain Reclamation hydropower facilities directly from receipts collected by the Western Area Power Administration. Each year, Western Area Power Administration would transfer an agreed-upon amount to the Bureau of Reclamation for deposit in its "water and related resources" account. A direct-funding arrangement already is in place with the Bonneville Power Administration.

PREPARED STATEMENTS

Mr. Chairman, in conclusion, I want to strongly reiterate that the fiscal year 2005 budget request demonstrates Reclamation's commitment to meeting the water and power needs of the West in a fiscally responsible manner. This budget continues Reclamation's commitment to sound water-resources management and the delivery and management of those valuable resources. Our goals for

2005 and accomplishments for fiscal year 2003 are described in my official statement, and I'd be glad to provide more detail if you would like.

That concludes my prepared remarks, and I would certainly stand for any questions that you might have today.

[The statements follow:]

PREPARED STATEMENT OF JOHN W. KEYS, III

Thank you, Mr. Chairman, Mr. Reid, and members of the subcommittee, thank you again for the opportunity to appear before you today to support the President's fiscal year 2005 budget request for the Bureau of Reclamation. With me today is Bob Wolf, Director of Program and Budget.

Our fiscal year 2005 request has been designed to support Reclamation's mission of delivering water and generating hydropower, "consistent with applicable state and Federal law, in an environmentally responsible and cost efficient manner."

Funding is proposed for key projects that are important to the Department and in line with administration objectives. The budget request also supports Reclamation's participation in efforts to meet emerging water supply needs to promote water conservation and sound water resource management, and help prevent conflict and crises over water in the west.

The fiscal year 2005 current authority request for Reclamation totals $956.3 million and is offset by discretionary receipts in the Central Valley Project Restoration Fund of $46.4 million and proposed hydropower direct financing of $30.0 million. In addition, Reclamation's program includes permanent authority of $90.6 million. The total program, after offsets to current authority and the inclusion of permanent authority is $970.5 million.

WATER AND RELATED RESOURCES

The fiscal year 2005 request for the Water and Related Resources account is $828.5 million. The request provides funding for five major program activities: Water and Energy Management and Development ($376.4 million); Land Management and Development ($39.4 million); Fish and Wildlife Management and Development ($82.7 million); Facility Operations ($188.6 million); and Facility Maintenance and Rehabilitation ($178.0 million). The request is partially offset by an undistributed reduction of $36.6 million, commonly referred to as underfinancing, in anticipation of delays in construction schedules and other planned activities.

The request continues to emphasize the operation and maintenance of Reclamation facilities in a safe, efficient, economic, and reliable manner, while meeting our requirements to sustain the health and integrity of ecosystems that are connected to those operations. It will also assist the States, tribes, and local entities in solving contemporary water resource issues in advance of crises over water.

Highlights of the Fiscal Year 2005 Request for Water and Related Resources include:

Water 2025 ($20 million).—The Water 2025 Initiative allows Reclamation to continue playing an important role in working with State and local communities to develop solutions that will help meet the increased demands for limited water resources in the West, and avoid water conflicts in areas particularly susceptible to an imbalance between supply and demand. The request will benefit fast growing western communities that are struggling with increased water demands, inadequate water supplies, and compliance with the Endangered Species Act and other ecosystem water needs. The monies for the precursor effort, the Western Water Initiative, will be awarded in the form of competitive grants; this 2004 effort will assist in developing grant criteria and tracking program impacts; the experience from this effort will then be used to refine the Water 2025 effort for 2005. The projects in fiscal year 2004 will facilitate and promote new or existing intrastate water banks and provide cost sharing monies to assist various stakeholders in implementing measures that will lead to improved water management and help avoid future water supply conflicts.

Klamath Project in Oregon and California ($25.0 million).—The fiscal year 2005 funding request will provide on-the-ground initiatives to improve water supplies to meet agricultural, tribal, wildlife refuge, and environmental needs in the Klamath Basin and to improve fish passage and habitat. This is part of a $67.2 million Department of Interior request spread across several bureaus, focused on making immediate on-the-ground impacts, while the Department, in consultation with the Klamath River Basin Federal Working Group, led by Secretary Norton, develops a

long-term resolution to conflict in the Basin that will provide water to farmers and tribes while protecting and enhancing the health of fish populations, and meeting other water needs, such as those of the adjacent National Wildlife Refuge.

Middle Rio Grande ($18.0 million).—The fiscal year 2005 request continues funding in support of the Endangered Species Collaborative Program. In addition, the request continues funding for acquiring supplemental water, channel maintenance, and pursuing government-to-government consultations with Pueblos and Tribes. Finally, the funding will continue efforts that support the protection and contribute to the recovery of the Rio Grande silvery minnow and southwestern willow flycatcher.

Animas-La Plata in Colorado and New Mexico ($52.0 million).—The fiscal year 2005 request includes $52.0 million for the continued construction of Ridges Basin Dam and Durango Pumping Plant and preconstruction activities for Navajo Nation Municipal Pipeline, Ridges Basin Inlet Conduit, utility relocations, and project support activities.

Columbia/Snake River Salmon Recovery in Idaho, Oregon, Montana, and Washington ($17.5 million).—This program addresses the implementation of Reasonable and Prudent Alternatives (RPAs) included in two Biological Opinions issued in December 2000. The fiscal year 2005 funding will address significantly increased regional coordination, off-site mitigation activities in selected sub-basins to offset hydrosystem impacts, and continue research, monitoring and evaluation efforts.

Site Security ($43.2 million).—Since September 11, 2001, Reclamation has maintained heightened security at its facilities to protect the public, its employees, and infrastructures.

The funding in fiscal year 2005 is necessary to cover the costs of site security activities including:

—surveillance and law enforcement;
—anti-terrorism activities including physical, information, and personnel security, and threat management; and
—physical emergency security upgrades, with a primary focus on our National Critical Infrastructure facilities.

Beginning in fiscal year 2005, annual costs associated with activities for guarding our facilities will be treated as project O&M costs subject to reimbursability based upon project cost allocations.

Rural Water ($67.5 million).—The fiscal year 2005 funding for rural water projects emphasizes a commitment to completing ongoing municipal, rural, and industrial systems. Funding is included for Mni Wiconi, Mid-Dakota, Garrison, Lewis and Clark and Perkins County projects. Funding required for Mid-Dakota is sufficient to complete the project. The administration is convening an interagency group to review the rural water programs of all Federal agencies, with any recommendations coming out of this to be included in the President's Fiscal Year 2006 Budget. The administration has submitted legislation to formally establish a rural water program within Reclamation.

Hydropower Direct Financing ($30.0 million).—The fiscal year 2005 budget proposes to finance the costs of operation and maintenance of certain Reclamation hydropower facilities directly from receipts collected by the Western Area Power Administration from the sale of electricity. Western Area Power Administration would transfer an agreed-upon amount to the Bureau of Reclamation for deposit in its Water and Related Resources account. The transferred funds would be treated as an offsetting collection. A direct funding arrangement is already in place for the Bonneville Power Administration.

Safety of Dams ($64.0 million).—The safety and reliability of Reclamation dams is one of Reclamation's highest priorities. Approximately 50 percent of Reclamation's dams were built between 1900 and 1950, and 90 percent of those dams were built before the advent of current state-of-the-art foundation treatment, and before filter techniques were incorporated in embankment dams to control seepage. Safe performance of Reclamation's dams continues to be of great concern and requires a greater emphasis on the risk management activities provided by the program. The fiscal year 2005 request of $64.0 million for the Safety of Dams Program is being made to reduce risks to public safety at Reclamation dams, particularly those identified as having deficiencies. The slight reduction from the fiscal year 2004 level is a result of the completion of certain ongoing Safety of Dams actions, and does not reflect a reduced emphasis on the importance of this program.

POLICY AND ADMINISTRATION

The request for Policy and Administration is $58.2 million. These funds are used to develop and implement Reclamation-wide policy, rules and regulations (including

actions under the Government Performance and Results Act) and to perform functions which, by statute, cannot be charged to specific project or program activities covered by separate funding authority. These funds support general administrative and management functions.

CENTRAL VALLEY PROJECT RESTORATION FUND

The fiscal year 2005 Reclamation budget includes a request for the CVP Restoration Fund of $54.7 million, and is expected to be offset by discretionary receipts totaling $46.4 million collected from project beneficiaries under provisions of Section 3407(d) of the Act. These funds will be used for habitat restoration, improvement and acquisition, and other fish and wildlife restoration activities in the Central Valley Project area of California. This fund was established by the Central Valley Project Improvement Act, Title XXXIV of Public Law 102–575, October 30, 1992. The funding request is calculated based on a 3-year rolling average of collections. The increase is driven by formulas spelled out in the 1992 Act.

Reclamation is seeking appropriations for the full amount of funds of the estimated collections for fiscal year 2005.

CALIFORNIA BAY-DELTA RESTORATION

The fiscal year 2005 Reclamation budget includes a request of $15.0 million for California Bay-Delta restoration. The funds will be used consistent with a commitment to find long-term solutions in improving water quality; habitat and ecological functions; and water supply reliability; while reducing the risk of catastrophic breaching of Delta levees. Further, the fiscal year 2005 budget contains funds for Bay-Delta activities that can be undertaken within existing statutory authorities for implementation of Stage 1 activities. Those activities are included in the preferred program alternative recommended by CALFED and approved by the Secretary of the Interior. The majority of these funds will specifically address the environmental water account, storage studies, and program administration.

PROGRAM ASSESSMENT RATING TOOL (PART)

Reclamation, in close cooperation with the Department and the Office of Management and Budget, completed one new PART analysis in conjunction with the fiscal year 2005 budget request, and revised a 2004 PART. Our Science and Technology Program, with its emphasis on research with direct applicability to the operation of Reclamation facilities, received a favorable score of 87 percent. The PART review assisted the program by highlighting areas where more precise data gathering is needed, which will allow for increasingly accurate measures of performance.

Also, the administration revised the PART analysis on our Hydropower Program, which had been one of three programs reviewed in the fiscal year 2004 budget request. As a result, improved performance measures were implemented and the program received a score of 92 percent, indicative of a well-run effort.

PRESIDENT'S MANAGEMENT AGENDA

E-Government.—Reclamation is actively participating in Recreation One-Stop, which provides citizens information about recreational activities on public lands; Geospatial One-Stop, which makes it easier, faster, and less expensive for all levels of government and the public to access geospatial information; and Volunteer.gov which provides information on volunteer activities. Reclamation program managers continue to work with stakeholders to leverage technology to accomplish our mission work.

Financial Management Improvement.—Reclamation submitted its fiscal year 2003 Financial Statement on an accelerated schedule and received a clean audit opinion. We continue to make progress to ensure that our financial systems are compliant with the Joint Financial Management Improvement Program core requirements. To ensure that accurate and timely financial information is provided, our financial management program uses the Federal Financial System, the Program and Budget System, and its corporate database system to report summary and transactions data. Reclamation is enhancing its financial policies and procedures and is participating in the Department's development of a new financial management system.

Competitive Sourcing.—Reclamation has completed competitive sourcing studies of 348.6 FTE and directly converted to contract 136.1 FTE, for a reportable savings of approximately $1.1 million. Our goals for 2002, 2003, and 2004 have been completed and a strategy has been developed for completing competitive sourcing studies in 2005–2008.

Human Capital.—Reclamation effectively deploys the appropriate workforce mix to accomplish mission requirements. The use of existing human resources flexibilities, tools, and technology is in a strategic, efficient, and effective manner, designed to address the serious challenges we face in terms of an aging workforce and increased competition for the engineering skills that Reclamation relies on to carry out our core activities. Our workforce plan addresses E-Government and Competitive Sourcing and a plan is in place for recruitment, retention, and development of current and future leaders.

Performance and Budget Integration.—Reclamation continues to integrate its budget, planning and performance processes by relating budget dollars to goals and performance.

In October 2003, Activity Based Costing was fully implemented within Reclamation. The implementation of ABC will link our work to the Department activities, track the costs associated with those activities, and align cost and activities to strategic goals to further our integration of performance and budget. The availability of this information will provide Reclamation with additional tools for management and decisionmaking.

DEMONSTRATED COMMITMENT AND ACCOMPLISHMENTS

In fiscal year 2003, Reclamation delivered 10 trillion gallons of water to over 31 million people in the 17 western States for municipal, rural, and industrial uses. Reclamation facilities stored over 245 million acre-feet of water, serving one of every five western farmers to irrigate about 10 million acres of land. Those irrigated lands produced 60 percent of the Nation's vegetables and 25 percent of its fruits and nuts. As the largest water resources management agency in the West, Reclamation continues to administer and/or operate 348 reservoirs, 56,000 miles of water conveyance systems, and 58 hydroelectric facilities, which generate 42 billion kilowatt-hours annually.

Reclamation also continues to manage approximately 8.6 million acres of Federal land, plus another 600,000 acres of land under easements. In addition, our facilities provide substantial flood control, recreation, and fish and wildlife benefits. Reclamation and its employees take very seriously their mission of managing, developing, and protecting water and related resources in an environmentally and economically sound manner in the interest of the American public.

The historic Colorado River Water Pact was signed on October 16, 2003, by the Secretary, the governor of California and officials from San Diego County Water Authority, Imperial Irrigation District, Metropolitan Water District of Southern California and Coachella Valley Water District, embarking on a new era of cooperation on the river by fulfilling a promise the State of California made more than 70 years ago. Under Secretary Norton's leadership, California has agreed to take specific, incremental steps that will reduce its over-reliance on the Colorado River water in the next 14 years, allowing the State to live within its authorized annual share of 4.4 million acre-feet. The agreement allows the six other Colorado River Basin States to protect their authorized shares to meet future needs.

The fiscal year 2005 budget request demonstrates Reclamation's commitment in meeting the water and power needs of the West in a fiscally responsible manner. This budget continues Reclamation's emphasis on delivering and managing those valuable public resources. In cooperation and consultation with the State, tribal, and local governments, along with other stakeholders and the public at large, Reclamation offers workable solutions regarding water and power resource issues that are consistent with the demands for power and water. With the need to pursue cost effective and environmentally sound approaches, Reclamation's strategy is to continue to use the Secretary's four "C's:" "Conservation through Cooperation, Communication, and Consultation". These principles provide Reclamation an opportunity, in consultation with our stakeholders, to use decision support tools, including risk analyses, in order to develop the most efficient and cost-effective solutions to the complex challenges that we face.

Moreover, Reclamation's request reflects the need to address an aging infrastructure and the rising costs and management challenges associated with scarce water resources. As our infrastructure ages, we must direct increasing resources toward technological upgrades, new science and technologies; and preventative maintenance to ensure reliability; which will increase output, and improve safety.

In fiscal year 2003, critical Safety of Dams modifications of significant cost and scope were initiated at Deadwood Dam, ID; and Deer Creek Dam, UT.

The site security activities in fiscal year 2003 included integrated security system analysis to determine emergency security upgrades and long-term measures for four National Critical facilities and 14 of Reclamation's highest priority facilities. Facility

fortifications totaling $5.5 million are now in place. In addition, we completed threat and physical security risk analyses and developed security plans.

FISCAL YEAR 2005 PLANNED ACTIVITIES

In fiscal year 2005, Reclamation plans to continue making the required deliveries of water under Reclamation contracts; optimize hydropower generation, consistent with other project purposes, agreements, and the President's energy policy; and incorporate environmental, recreational, land management, fish and wildlife management and enhancement, water quality control, cultural resources management, and other concerns into the water supply and power generation actions of Reclamation. Finally, Reclamation plans to identify water supply needs for consumptive and nonconsumptive purposes in Reclamation States in the next 25 years that are likely to be unmet with existing resources.

Reclamation also plans to continue ranking within the upper 75th percentile of low cost hydropower producers; by comparing power production costs per megawatt capacity. Reclamation plans to achieve a forced outage rate of 50 percent better than the industry average which is currently 3 percent. While Reclamation anticipates completing the baseline condition assessments for 80 percent of the recreation facilities it manages, it plans to continue to maintain the overall facility condition rating assessed at the fiscal year 2003 baseline level.

CONCLUSION

Mr. Chairman, Please allow me to express my sincere appreciation for the continued support that this committee has provided Reclamation. I would like to thank several members of the Appropriations staff that have provided invaluable support to Reclamation during this past year: Clay Sell, Drew Willison, Tammy Perrin, Erin McHale, and Roger Cockrell. We have enjoyed working with Clay Sell over the years and wish him well. This completes my statement. I would be happy to answer any questions you may have at this time.

PREPARED STATEMENT OF BENNETT W. RALEY, ASSISTANT SECRETARY FOR WATER AND SCIENCE, DEPARTMENT OF THE INTERIOR

Good morning. On behalf of the Secretary of the Interior, I am pleased to be here today before the Subcommittee on Energy and Water Development to discuss the fiscal year 2005 budget for the Department of the Interior. I appreciate the opportunity to highlight our priorities and key goals.

The Department of the Interior's mission is complex and multi-faceted. We provide recreation opportunities. We provide access to resources. We protect some of the Nation's most significant cultural, historic, and natural places. We serve communities through science, wildland firefighting, and law enforcement. We deliver water and power. We fulfill trust and other responsibilities to American Indians, Alaska natives, and the Nation's affiliated island communities.

Interior's mission is also challenging. It is challenging because the world around is increasingly complex as expectations evolve, new technologies emerge, and our responsibilities to the American people increase.

Above all, our mission is inspiring. We have close connections to America's lands and people, whether American Indians and naturalists, hikers and hunters, ranchers and recreation enthusiasts, or environmentalists and entrepreneurs. Our responsibilities touch the lives of individuals across the Nation. How well we fulfill our mission influences:

—Whether farmers will have water and people can turn on the tap;
—Whether our children will enjoy America's grand vistas, places, and history;
—Whether we can hike, bird watch, canoe, or hunt and fish; and
—Whether we can warm our homes and fuel our transportation systems.

By fulfilling Interior's mission, we can leave a legacy of healthy lands and waters, thriving communities, and dynamic economies. That legacy depends on our ability to work together across landscapes and with communities. It depends on the efforts of our 70,000 employees, 200,000 volunteers and thousands of partners.

BUDGET OVERVIEW

Our 2005 budget request for current appropriations is $11.0 billion. The Department anticipates collection of $10.1 billion in receipts in 2005, equivalent to 92 percent of our current appropriations request.

The 2005 request includes $10.0 billion for programs funded in the Interior and Related Agencies Appropriations Act, an increase of $228.4 million or 2.3 percent over the 2004 enacted level.

Our budget also includes $1.0 billion for programs funded in the Energy and Water Development Appropriations Act, an increase of $21.8 million, or 2.2 percent above 2004.

Interior's 2005 budget request provides the single clearest statement of how we plan to work toward our goals in the upcoming year. Our budget fulfills the President's commitments to fully fund the Land and Water Conservation Fund; address the backlog of park repair and maintenance needs; fix Bureau of Indian Affairs schools; and re-establish healthy forests and rangelands.

Our 2005 budget also advances other key goals. It accelerates the cleanup of abandoned coal mine lands; expands opportunities for cooperative conservation; advances trust reform; seeks to avoid water conflicts throughout the West through Water 2025; and supports the goals of the National Energy Plan.

BUREAU OF RECLAMATION

The Bureau of Reclamation is the largest supplier and manager of water in the 17 western States. Its facilities include 348 reservoirs and 456 dams with the capacity to store 245 million acre-feet of water. These facilities deliver water to one of every five western farmers for about 10 million acres of irrigated land and provide water to over 31 million people for municipal, rural, and industrial uses. Reclamation is also the Nation's second largest producer of hydroelectric power, generating 42 billion kilowatt hours of energy each year from 58 power plants. In addition, Reclamation's facilities provide substantial flood control, recreation, and fish and wildlife benefits.

Since its establishment in 1902, Reclamation has developed water supply facilities that have contributed to sustained economic growth and an enhanced quality of life in the western States. Lands and communities served by the bureau's projects have been developed to meet agricultural, tribal, urban, and industrial needs. In more recent years, the public has demanded better environmental protections and more recreational opportunities, while municipal and industrial development has required more high quality water. Continuing population growth, especially in urban areas, will inevitably lead to even greater competition for the West's limited water resources. These increased demands are further compounded during periods of drought.

The 2005 request for current appropriations is $956.3 million, a net increase of $13.5 million above the 2004 enacted level. The request for current appropriations is offset by discretionary receipts in the Central Valley Project Restoration Fund and by a proposal to finance by direct funding certain hydropower operation and maintenance activities, resulting in a net discretionary request of $880.0 million, a decrease of $32.1 million from the 2004 enacted level. The request for permanent appropriations totals $90.5 million.

The request for the Water and Related Resources account is $828.5 million. The account total includes an undistributed reduction of $36.6 million in anticipation of delays in construction schedules and other planned activities. The 2004 Energy and Water Development Appropriations Act, for the first time, directed Reclamation to prorate underfinancing to each project and program. In accordance with this direction, the basis for comparing the amount of 2005 funding changes is the 2004 enacted level with underfinancing applied.

The 2005 request provides a total of $366.6 million for facility operations, maintenance, and rehabilitation. This includes $64.0 million for the Dam Safety program to protect the downstream public by ensuring the safety and reliability of Reclamation dams. The 2005 request also includes a total of $498.4 million for resource management and development activities.

Water 2025.—Chronic water supply problems in the West will continue to challenge the Nation to find effective approaches to long-term management of water resources. Recent crises in the Klamath and Middle Rio Grande basins, where water shortages have affected American Indians, farmers, urban residents, and fish and wildlife vividly demonstrate the consequences of failing to address strategically the problem of competing demands for constrained water supplies.

The 2005 budget includes $21.0 million for Water 2025 to minimize future western water crises by fostering conservation and interagency coordination, enhancing water supplies through improved technologies, and managing water resources in cooperation with others. Collaborative approaches and market-based water transfers will help address emerging needs. Federal investments in research and development will improve water treatment technologies such as desalination.

A Water 2025 increase of $12.5 million for the Bureau of Reclamation will build on the 2004 Western Water Initiative, providing a total of $20.0 million to retrofit and modernize existing facilities, promote conservation and more efficient use of existing water supplies, improve water management by using excess capacity at Federal facilities, and facilitate research to provide alternative water supplies.

The U.S. Geological Survey's 2005 budget includes $1.0 million for Water 2025 to conduct groundwater availability assessments, develop tools and techniques for protecting biological resources while meeting water supply needs, and to improve methods to characterize aquifers.

Animas La Plata.—The 2005 budget proposes funding Animas La Plata at 2004 levels, prior to the application of underfinancing. This level of $52.0 million allows progress towards satisfying the Indian water rights settlement with the continued construction of Ridges Basin Dam and Durango Pumping Plant; road and utility relocations; preconstruction activities for the Navajo Nation municipal pipeline; and design and contract preparation for the Ridge Basin Inlet Conduit.

In the fall of 2003, Reclamation completed an internal investigation into why Animas La Plata project costs were underestimated by $162 million or 48 percent. As a result of the investigation, Reclamation has recalculated the construction cost estimate and will review/reconfigure its internal organizational approach to the project; review its Indian Self-Determination and Assistance Act process to improve construction efficiencies; improve interaction and communication with the project sponsors; seek ways to reduce costs; and review its own procedures for developing construction cost estimates.

CAP and CVP.—The request provides $34.1 million for the Central Arizona Project. The request also includes $162.9 million for operating, managing and improving California's Central Valley Project. This includes a total of $23.2 million for CVP's Replacement, Additions, and Extraordinary Maintenance program. The CVP request also includes the third and final $34.0 million payment to the plaintiffs for the settlement of *Sumner Peck Ranch Inc.* v. *Bureau of Reclamation*.

Multiple-use Management.—The budget puts continued emphasis on Reclamation's core mission of delivering water and power, while focusing on ensuring site security and on maximizing efficient ways to conserve water for multiple uses, including endangered species protection. The Klamath, Columbia Basin, and Savage Rapids Dam projects, along with the Columbia/Snake Rivers salmon recovery and the ESA recovery implementation programs, are funded at $72.2 million, which is $15.7 million above 2004 enacted levels. These increases, together with the Water 2025 initiative, will help optimize water supply through effective and more efficient water management.

The Middle Rio Grande project is funded at $18.0 million, $14.3 million below the 2004 enacted level. This funding level is consistent with the President's budget request in recent years and addresses needs for ESA coordination, the Middle Rio Grande Endangered Species Act Collaborative program, and facility operations to manage and control water flow.

Rural Water.—The 2005 budget request for rural water projects is $67.5 million, a decrease of $9.1 million from the 2004 enacted level (with underfinancing applied) and an increase of $49.5 million above the 2004 President's budget. The budget request supports the Department's strategy to complete construction projects to increase water delivery infrastructure and water availability. In the long-term, the water needs of rural communities may benefit from Water 2025 by helping communities look at new technologies and new management strategies for their water resources.

Other Project Requests.—The budget includes $43.2 million, an increase of $15.4 million, for site security. This increase will be used to assure the safety and security of Reclamation facilities that will in turn lower the risk of harm to life and property. Beginning in 2005, the budget assumes that the guards and surveillance-related security costs for Reclamation's facilities are reimbursed by project beneficiaries.

The budget request also establishes a direct financing relationship between Reclamation hydropower facilities and their customers, for those facilities where such an arrangement is not already in place and includes an offsetting collection proposal of $30.0 million.

Other funds are requested to assist the Bureau in meeting objectives in the areas of improved water management and environmental compliance. Examples include $15.3 million for the Lower Colorado River Operations program and $13.6 million for the Colorado River Storage Project.

The 2005 Reclamation budget includes a request for $54.7 million from the Central Valley Project Restoration Fund, which is the estimated level of collections from CVP water and power users. This request is offset by collections estimated at $46.4

million from mitigation and restoration charges authorized by the Central Valley Project Improvement Act.

The 2005 budget includes $15.0 million for the implementation of Stage one CALFED activities consistent with existing authorities. These activities are included in the preferred program alternative recommended by CALFED and approved by the Secretary of the Interior. The majority of these funds will specifically address the environmental water account, water storage and conveyance studies, and program administration.

CENTRAL UTAH PROJECT COMPLETION ACT

The Central Utah Project Completion Act provides for completion of the project by the Central Utah Water Conservancy District. The Completion Act also authorizes funding for fish, wildlife, and recreation mitigation and conservation activities; establishes the Utah Reclamation Mitigation and Conservation Commission to oversee implementation of those activities; and authorizes funding for the Ute Indian Rights Settlement. A program office located in Provo, Utah provides liaison with the District, Mitigation Commission, and the Ute Indian Tribe and otherwise assists in carrying out responsibilities of the Secretary. Under the Act, the responsibilities of the Secretary cannot be delegated to the Bureau of Reclamation.

The 2005 Central Utah Project requests $46.3 million, an increase of $8.3 million over the 2004 enacted level. Most of this increase is due to a transfer of budgetary authority and responsibility from the Western Area Power Administration to the Department. The request includes: $28.4 million for planning and construction activities administered by the District; $15.5 million for mitigation and conservation activities funded through the Mitigation Commission; and $2.4 million for activities administered by the program office, which includes $700,000 for mitigation and conservation activities funded through the program office.

KLAMATH BASIN

The Department's partnership efforts are bringing about change in the Klamath Basin. Interior bureaus, partnering with other Federal agencies, are restoring habitat, removing fish migration barriers, acquiring land, using water banking, and researching the ecology of the federally-listed fish species. Through these partnership efforts, the Department is seeking long-term resolution of conflicts over water and land management.

The 2005 budget includes $67.6 million for this effort, a $17.9 million increase over 2004 funding levels. Other government agencies will provide an additional $38 million, bringing a total of $105 million to this effort. The budget includes funds to remove the Chiloquin Dam, which impedes passage of endangered suckers to 70 miles of spawning habitat on the Sprague River, and to acquire lands adjacent to Agency Lake Ranch to increase water storage and fisheries habitat restoration. Additional funding will also support water banking, water supply enhancement, and water quality improvement. Reclamation's budget contains $25.0 million for Klamath.

ADDRESSING LONG-STANDING DEPARTMENT CHALLENGES

Abandoned Mine Lands.—Since enactment of the Surface Mining Control and Reclamation Act in 1977, the Department has partnered with States, Tribes, local governments, and others to reclaim over 225,000 acres of damaged and dangerous lands. Despite these accomplishments over the past two and a half decades, dangerous abandoned coal mines remain within 1 mile of the homes of more than 3.5 million Americans. Since 1999 a total of 100 people have died in incidents related to abandoned coal mines.

The primary impediment to completing reclamation of abandoned mines is the fundamental imbalance between the goals of the 1977 Act and the requirements for allocating funds under the Act. The statutory allocation formula limits the ability of the Office of Surface Mining to meet its primary objective of abating the highest-priority abandoned coalmines. The majority of funding in the program, or 71 percent, is distributed to States on the basis of current production. Yet there is no relationship between current production and the number of priority sites in each State, which is a function of pre-1977 production.

Over the past 25 years, the allocation formula has enabled some States and Tribes to complete reclamation of all abandoned coal mines. Others are decades away from completing work on the most critical, high-priority sites. We estimate it will take 60 years to reclaim dangerous abandoned mine sites in Pennsylvania and 50 years in West Virginia.

Our 2005 budget proposal seeks to correct this problem. We propose to direct reclamation grants to sites where the danger is greatest. The reauthorization proposal will allow all States to eliminate significant health and safety problems within 25 years and would remove 142,000 people from risk annually. At the same time, by shifting funds to speed resolution of serious health and safety problems, the proposal will reduce fee collections and spending by $3 billion over the life of the program.

Under our proposal, States and Tribes that have certified completion of high-priority projects will be paid their accumulated State share balances in the abandoned mine lands fund as of September 30, 2004. These payments will be made over a 10-year period. Going forward, the grants would be distributed for high priority mine reclamation projects.

The 2005 budget proposes an appropriation of $243.8 million for the abandoned mine lands program, including $53.0 million for the initial State share balance distribution to certified States and Tribes.

Indian Trust Programs.—Fulfilling the Department's trust responsibilities continues as one of our highest priorities and greatest challenges. The assets of the trust today include over 56 million acres of land. On these lands, the Department manages over 100,000 leases for individual Indians and Tribes. We collect approximately $194 million per year from leasing, use permits, sale revenues, and interest for 260,000 open individual Indian money accounts. About $378 million per year is collected in 1,400 tribal accounts for 300 Tribes. In addition, the trust manages approximately $2.9 billion in tribal funds and $400 million in individual Indian funds.

For 2005, we are seeking $614 million for our Unified Trust budget, a net increase of $161 million.

In 2003 we began to reorganize trust functions in the Bureau of Indian Affairs and the Office of the Special Trustee for American Indians. The new organization is based on a detailed analysis and a year-long consultation process with tribal leaders. Our reorganization reflects a synthesis of the views heard during the consultation process. When fully implemented, the new organization will better meet fiduciary trust responsibilities, be more accountable at every level, and operate with people trained in the principles of fiduciary trust management.

To support continued implementation of the new organization, the 2005 budget proposes a net increase of $7.2 million, including funding for 85 new trust-related positions at the local level. We request an additional $4.0 million to quicken the pace at which probate cases are resolved.

Improving our trust organization will not by itself resolve the issues that we face in managing the trust. A still greater challenge remains. That challenge is the fractionation, or continuing subdivision, of individual Indian interests in the land that the Federal Government holds in trust. Indian trust lands are primarily transferred through inheritance. With each passing generation, individual interests in the land become further subdivided among heirs, each of whom holds a smaller and smaller interest in the land. Many acres of trust land are already owned in such small ownership interests that no individual owner will derive any meaningful value from that ownership. Without corrective action, this problem will grow exponentially.

As the number of interests grows, we expect the cost to the Federal Government for managing, accounting for, and probating these interests to increase substantially, possibly to as much as $1 billion at the end of the next 20 years.

The Indian Land Consolidation program, which acquires small ownership shares in allotted land from willing sellers, is a critical component of trust reform. We have conducted this program as a pilot for several years. The pilot has taught valuable lessons about the need to target purchases to maximize return of land to productive use and allow closure of accounts associated with fractional interests.

The 2005 budget proposes an unprecedented amount of $75.0 million for Indian land consolidation, an increase of $53.3 million. This funding will support an expansion beyond the seven pilot reservations to include additional reservations with the most highly fractionated lands. On a nationwide basis, we are targeting opportunities to purchase the most fractionated interests. Interior plans to use contractual arrangements with Tribes or private entities to acquire individual interests.

This commitment to end fractionation will also require legislative action to provide for workable probate reform, disposal of unclaimed property, and partition of land. We want to continue to work with the Congress to find meaningful and constructive solutions to these issues.

The 2005 budget also proposes funding to address the issue of accounting for past transactions in the trust. As the committee is aware, the American Indian Trust Management Reform Act of 1994 requires the Secretary of the Interior to "account" for "the daily and annual balance of all funds held in trust by the United States

for the benefit of an Indian Tribe or an individual Indian which are deposited or invested pursuant to the Act of June 24, 1938."

The Department is currently involved in a major class action, *Cobell* v. *Norton*, and 25 tribal suits over the Department's management of Indian trust funds. On January 6, 2003, as ordered by the District Court in the *Cobell* litigation, the Department filed The Historical Accounting Plan for Individual Indian Money Accounts. This plan provides for an historical accounting for about 260,000 individual Indian accounts over a 5-year period at a cost of approximately $335 million. The accuracy of the transactions would be verified by reviewing support documentation on a transaction-by-transaction basis for all transactions over $5,000 and by statistically sampling transactions under $5,000. The sampling methodology would be designed to provide a 99 percent confidence level at any error rate.

On September 25, 2003, the *Cobell* court issued a structural injunction directing a far more expansive accounting and requiring that it be completed under more constrained time lines. We estimate that the cost of compliance with the structural injunction would be between $6 billion to $12 billion. An appeal from the September decision is pending. The Court of Appeals for the D.C. Circuit has stayed the structural injunction. In addition, the 2004 Interior Appropriations Act provides that the Department is not required to commence or continue an accounting for IIM accounts until 2004 or the Congress amends the Trust Management Reform Act to delineate the Department's historical accounting obligations or until December 31, 2004, whichever occurs first.

The 2005 budget includes $109.4 million for historical accounting. This increase of $65.0 million over the enacted 2004 appropriation is targeted to provide $80.0 million for IIM accounting and $29.4 million for tribal accounting. The budget for IIM accounting is based on the estimate of the Department's costs to continue implementation of its historical accounting process. This amount may be revised depending on how the Court of Appeals rules with regard to the structural injunction in the *Cobell* case and on whether Congress acts to delineate the specific historical accounting obligations of the Department as suggested in the 2004 Appropriations Act. The Department will continue to work with the Congress and trust beneficiaries to consider settlement of the historical accounting and related issues.

INVESTING IN CONSERVATION

Cooperative Conservation.—Among Interior's most inspiring roles is its mission to conserve lands and waters across America. As we are all aware, nature knows no jurisdictional boundaries. Conservation in the 21st century depends increasingly upon partnerships across a mosaic of land ownerships. At Interior, we recognize that we cannot manage Federal lands successfully unless we are able to work with adjacent landowners, States, Tribes, and communities. We also recognize that the Nation cannot achieve its conservation goals solely by relying upon—and adding to—the Federal dominion of lands.

These two perspectives underscore the importance of cooperative conservation. Through a variety of conservation partnerships, Interior's land managers are joining with citizen stewards to remove invasive species, reduce stream bank erosion, and enhance habitat for threatened and endangered species. Through these partnerships, the Department is building the new environmentalism of citizen stewards called for by President Bush. These partnerships leverage Federal dollars by a factor of two or more. They engage Americans in conservation. They help us work with citizens to find common ground and simultaneously achieve healthy lands, thriving communities, and dynamic economies. We look forward to working with members of Congress and their constituents in these conservation successes.

The 2005 budget proposal expands opportunities for conservation partnerships with citizens, organizations, and communities throughout the Nation. The budget proposes to spend $507.3 million, a 20 percent increase, to expand opportunities for conservation partnerships with citizens, organizations and communities.

A cornerstone of our conservation partnership budget is the Cooperative Conservation Initiative. The Department has a long history of working cooperatively with others to achieve its conservation mission. Yet the resources available to land managers to foster innovative and collaborative conservation have fallen short of the demand. Across the Nation, citizens are working to overcome conflict and, instead, work together to maintain healthy lands and waters. Our Cooperative Conservation Initiative seeks to address this growing, giving managers the support necessary to leverage funds with private citizens, States, Tribes, communities, and businesses to protect and restore habitats, wildlife and plants.

Our Cooperative Conservation Initiative builds on existing conservation partnership programs that have established productive relationships with local commu-

nities and citizens. In total, we propose that this initiative will provide $129.5 million, an increase of $25.5 million, for a suite of seven programs: the challenge cost share programs in the Bureau of Land Management, the Fish and Wildlife Service, and the National Park Service; the FWS Coastal program; FWS Migratory Bird Joint Ventures; FWS Partners for Fish and Wildlife; and Take Pride in America.

The budget proposes $29.6 million for challenge cost-share activities, an increase of $8.4 million over 2004. This request will enable land managers to undertake additional natural resource restoration and species protection projects on or impacting Federal lands. Dynamic partnerships with individuals, Tribes, State and local governments, non-profit organizations, and others will support an array of projects to restore damaged habitats and lands and achieve the conservation goals of the Department's land management agencies. Projects require a one-to-one match or better, thereby at least doubling the benefits of Federal dollars. The request for the bureau traditional challenge cost-share programs is $24.4 million.

In 2003, challenge cost-share programs funded 256 resource restoration projects with more than 700 partners in 40 States and Puerto Rico. The ratio of matching non-Federal funds to Federal funds was nearly 2 to 1, with the Federal portion at $12.9 million and total funding at $36.0 million.

The 2005 budget includes $50.0 million for the Partners for Fish and Wildlife program. Through the Partners program, the Fish and Wildlife Service has established productive relationships with communities and over 30,000 landowners, providing financial and technical assistance and restoration expertise to private landowners, Tribes, and other conservation partners. Since its inception in 1987, the Partners program has restored 677,000 acres of wetlands; nearly 1.3 million acres of prairie, native grassland, and other uplands; and 5,560 miles of stream and streamside habitat.

In 2005 the Partners program will leverage $5.0 million in the High Plans region through a public/private initiative that will restore grassland habitats and declining species over an 11-State region. In cooperation with landowners and other partners, the Fish and Wildlife Service will focus conservation efforts on restoring, enhancing, and protecting 2 million acres over the next 10 years. The 2005 Partners budget also includes $6.2 million for partnership efforts in the Upper Klamath basin.

Augmenting our partnership achievements is the work of over 200,000 volunteers who provide over 8 million hours to Interior's programs and projects throughout the Nation. These volunteers help repair and maintain trails, restore habitat, participate in monitoring and research programs, and assist our land managers in many other ways. To promote this spirit of volunteerism, the Department has reactivated the Take Pride in America program. In California, volunteers enlisted through Take Pride pledged 400,000 hours of service to help restore areas devastated by wild land fires. The 2005 budget includes $1.0 million for the Take Pride program as part of the Cooperative Conservation Initiative.

Also funded within the Cooperative Conservation Initiative is the Fish and Wildlife Service's Coastal program, for which we propose a funding increase of $2.9 million, bringing total funding to $13.1 million. The Coastal program leads FWS conservation efforts in bays, estuaries, and watersheds around the U.S. coastline and leverages Federal funding at a rate of 4:1. We also propose to increase funding for the Migratory Bird Joint Ventures program by $1.2 million for a total of $11.4 million. The funding increase will allow FWS to enhance 15 existing Joint Ventures and fund the Northern Great Plains and Central Hardwoods Joint Ventures.

Endangered Species Grant Programs.—The Department's cooperative conservation efforts also include a number of grant programs that provide expanded opportunities for State, tribal, local and private partners to participate in conservation and protection of endangered, threatened, and at-risk species. These programs will help this nation invest habitat protection and recovery of species—the ultimate goal of the Endangered Species Act. Through these investments, we can achieve on-the-ground conservation results and help avoid the conflicts, land management stresses, and procedural workloads that ensue when species become endangered.

The Landowner Incentive Program provides competitive matching grants to States, Territories, and Tribes to create, supplement, or expand programs to protect and manage habitats on private lands that benefit listed species or species at risk. The 2005 budget includes $50.0 million to assist private landowners in conserving and restoring habitat for endangered species and other at-risk plants and animals. This is an increase of $20.4 million over 2004.

The Private Stewardship Grants program provides grants and other assistance to individuals and groups engaged in local, private, and voluntary conservation efforts that benefit federally listed, proposed, candidate or other at-risk species. A panel of representatives from State and Federal Government, agricultural and private development interests, and the scientific and conservation communities assess and make

recommendations regarding these grants. The 2005 budget proposes $10.0 million for the program, a $2.6 million increase over 2004.

The Cooperative Endangered Species Conservation Fund provides grants to States and Territories to participate in projects to conserve candidate, proposed, and threatened and endangered species. Grants to States and Territories allow them to participate in an array of voluntary conservation projects for candidate, proposed, and listed species. These funds may in turn be awarded to private landowners and groups for conservation projects. The CESCF grants include funding for States and Territories to implement conservation projects to support the development of Habitat Conservation Plans and to acquire habitat for threatened or endangered species. The 2005 budget proposes $90 million, an increase of $8.4 million, for the appropriated portion of this program.

Our grant programs also aid a wide variety of other wildlife. The 2005 budget proposes $80.0 million for the State and Tribal Wildlife Grants program. These grants help develop and implement State and tribal programs for the benefit of wildlife and its habitat, not limited to species that are hunted or fished. The program exemplifies our cooperative conservation vision, allowing States and Tribes to tailor their conservation efforts in a manner that best fits local conditions. A $10.9 million increase for the program in 2005 will significantly advance efforts of State and tribal fish and game agencies to address on-the-ground wildlife needs. Based on the high level of interest in this program, we expect this program will have lasting benefits for fish and wildlife, while fostering stronger working relationships between Federal, State and tribal governments.

Full Funding for the Land and Water Conservation Fund.—Our cooperative conservation programs are an important component of the 2005 Land and Water Conservation Fund budget request. Overall, the Department's budget seeks $660.6 million from the Land and Water Conservation Fund for 2005, including $153.3 million for land acquisition and $93.8 million for the State grant program. The Department's request, combined with the request for the U.S. Forest Service, brings total government-wide LWCF funding to $900.2 million.

The 2005 LWCF budget includes the same mix of programs proposed in 2004. This mix strikes an effective balance between Federal land acquisition and cooperative efforts to fulfill LWCF goals.

We believe effective conservation of lands and natural resources cannot rely primarily on expanding the Federal estate through land acquisition. Such acquisitions remove lands from the local tax base. Equally significant, each time we acquire more Federal lands, future operations and maintenance costs ensue in perpetuity. Supporting local recreation and conservation through partnership programs enables us to leverage Federal funding. In many cases, these programs match Federal funds at a ratio of more than 2:1. They give us an opportunity to work hand-in-hand with States, communities, and local landowners to build support for long-term conservation.

CONCLUSION

The budget plays a key role in advancing our vision of healthy lands, thriving communities, and dynamic economies. Behind these numbers lie people, places, and partnerships. Our goals become reality through the energy and creativity efforts of our employees, volunteers, and partners. They provide the foundation for achieving the goals highlighted in our 2005 budget.

This concludes my overview of the 2005 budget proposal for the Department of the Interior and my written statement. I will be happy to answer any questions that you may have.

PREPARED STATEMENT OF J. RONALD JOHNSTON

My name is Ronald Johnston. I serve as the Program Director of the Central Utah Project Completion Act Office under the Assistant Secretary—Water and Science in the Department of the Interior. I am pleased to provide the following information about the President's fiscal year 2005 budget for implementation of the Central Utah Project Completion Act.

The Central Utah Project Completion Act, Titles II–VI of Public Law 102–575, provides for completion of the Central Utah Project (CUP) by the Central Utah Water Conservancy District. The Act also authorizes funding for fish, wildlife, and recreation mitigation and conservation; establishes an account in the Treasury for deposit of these funds and other contributions; establishes the Utah Reclamation Mitigation and Conservation Commission to coordinate mitigation and conservation activities; and provides for the Ute Indian Water Rights Settlement.

The Act provides that the Secretary may not delegate responsibility under the Act to the Bureau of Reclamation. As a result, the Department has established an office in Provo, Utah, with a Program Director to provide oversight, review, and liaison with the District, the Commission, and the Ute Indian Tribe, and to assist in administering the responsibilities of the Secretary under the Act.

The 2005 request for the Central Utah Project Completion Account provides $46.3 million for use by the District, the Commission, and the Department to implement Titles II–IV of the Act, which is $8.3 million more than the 2004 enacted level. Most of this increase is due to a transfer of budgetary authority and responsibility from the Western Area Power Administration to the Department of the Interior ($6.1 million).

The funds requested for the District ($28.4 million) will be used to continue the completion of the Diamond Fork System ($8.5 million); to continue construction on Uinta Basin Replacement Project ($13.0 million); and to implement water conservation measures, local development projects, and continue planning and NEPA compliance for the Utah Lake System ($6.9 million). We are pleased to report that the problems in the Diamond Fork System associated with a cave-in and dangerous levels of hydrogen sulfide gas have been resolved, the construction of the alternative facilities is nearly complete, and water should be delivered through the facilities this summer. We are planning a celebration of the completion of these major facilities this summer. The members of the committee will be invited to attend.

The funds requested for the Mitigation Commission ($15.5 million) will be used to implement the fish, wildlife, and recreation mitigation and conservation projects authorized in Title III ($7.4 million); to implement the fish and wildlife activities associated with the Uinta Basin Replacement Project ($1.0 million); to complete mitigation measures committed to in pre-1992 Bureau of Reclamation planning documents ($1.0 million); and to fulfill the mitigation obligations required under section 402(b)(3)(B) of the Act ($6.1 million). Title III activities funded in 2004 include the Provo River Restoration Project; acquisition of habitat, access, and water rights; and fish hatchery improvements.

Finally, the request includes $2.4 million for the Program Office. This includes $1.7 million for program administration, $300,000 for mitigation and conservation projects outside the State of Utah, and $400,000 for operation and maintenance costs associated with instream flows and fish hatchery facilities.

In conclusion, we appreciate the opportunity to testify before the committee and would be happy to respond to any questions.

Senator DOMENICI. Yes, sir.

Senator Craig, do you have some questions?

Senator CRAIG. Just a couple.

Senator DOMENICI. All right.

Senator CRAIG. And, again, John, let me thank you for your presence here and the work you're doing. Your reality check, by the graphs and charts you've shown us, clearly demonstrate what is really at risk in the West, and the problems we all face.

In the area of site security, $43.2 million, there is a growing concern that some of this is overdone. And while site security is critically important, and we all know that, my guess is, when the dust settles from 9/11, we'll learn how to do it better with less. But what are going to be the costs to the users of these facilities? How much of—is there going to be a cost pass-through to users in fees that they might be expecting?

Commissioner KEYS. Mr. Craig, out of the $43 million that we have requested, $18 million of that is associated with guards and surveillance. Of that $18 million, $12 million would be part of the operation and maintenance budgets, and we would expect to be reimbursed by the water users. Water users being from the power side, from—all of the water users that have an allocation from those Federal projects.

Senator CRAIG. So it's a direct cost pass-through of $12 million.

Commissioner KEYS. That's correct.

Senator CRAIG. And I assume that, because you've arrived at a figure of $12 million, you know how that breaks out.

Commissioner KEYS. Mr. Craig, we do. It is based on the authorized purposes for the project and the cost allocations that have been done over—well, when the projects were completed or when the cost repayments started. So it's along the cost allocations that are already in place.

Senator CRAIG. But an increase.

Commissioner KEYS. It would increase over what they were paying before 9/11/2001.

Senator CRAIG. Okay. I'd like to see those figures. I'd like to know how that impacts both users, from the standpoint of water users, and then—and the utility. I assume you're talking about WAPA rate payers in that case, would you not be?

Commissioner KEYS. Mr. Craig, it is all of the power users. It's WAPA, it's Bonneville——

Senator CRAIG. Yeah, all of them.

Commissioner KEYS [continuing]. Power Administration, and the other water users. We can provide that breakdown for you.

[The information follows:]

In referencing preliminary estimates for guard reimbursability, Senator Craig has requested to see the figures. I have agreed to provide that breakdown. Below are those figures:

REIMBURSABILITY OF GUARD COSTS—APRIL 20, 2004

[In millions of dollars]

Projects	Fiscal Year 2005		
	Power Users	Water Users	Reimb. Amount
Hoover	4.7	.....	4.7
Parker/Davis	1.6	.....	1.6
Yuma Area Projects	.....	.....	.....
Lower Colorado Region	6.2	.....	6.2
Grand Coulee	2.9	.....	2.9
Pacific Northwest Region	2.9	.....	2.9
Central Valley Project	0.3	.....	0.3
Mid-Pacific Region	0.3	.....	0.3
Great Plains Region	.....	.....	.....
Colorado River Storage Project	1.5	0.6	2.1
Upper Colorado Region	1.5	0.6	2.1
TOTALS	10.8	0.6	11.4

These figures are generated from the best available information at the current time. They are preliminary estimates which will be further reviewed within the Bureau.

After further refinement, the guards and surveillance costs remain at $18 million. There was a greater need identified with an armed response force at Grand Coulee, a National Critical Infrastructure facility. This was offset by changing needs at other facilities.

After further review, the overall total reimbursable amount is now $17 million, based upon project cost allocations. The above table does not factor into account

Mid-Pacific and Great Plains Region's shift to reimbursability, although the customers in these regions had been apprised that they would be subject to this new reimbursability policy.

The table below clarifies the costs by region, as well as including the updated costs for guards and surveillance.

REIMBURSABILITY OF GUARD COSTS—AUGUST 4, 2004

[In millions of dollars]

Projects	Fiscal Year 2005		
	Power Users	Water Users	Reimb. Amount
Hoover	3.9		3.9
Parker/Davis	1.6		1.6
Yuma Area Projects			
Lower Colorado Region	5.5		5.5
Grand Coulee	4.1	0.2	4.4
Pacific Northwest Region	4.1	0.2	4.4
Central Valley Project	0.4	2.1	2.5
Mid-Pacific Region	0.4	2.1	2.5
Great Plains Region	1.3	1.0	2.3
Colorado River Storage Project	1.4	0.6	2.0
Upper Colorado Region	1.4	0.6	2.0
TOTALS	12.8	3.9	16.7

We will continue to refine these numbers as Reclamation's Security Program continues to assess its vulnerabilities and take appropriate measures. We will also work closely with our stakeholders to share data and guidance in the areas of risk, and take the necessary responses to ensure the delivery of water service to multiple water users.

Senator DOMENICI. Okay.

The Water 2025, first of all, I obviously applaud the initiative. I want all Americans to become more aware of the realities of the arid West and to better understand water needs out there. At the same time, to be able to work cooperatively with all of the entities involved out there, in conflict resolution and reallocation needs and all of that, will be extremely important.

As you mentioned, you're going out to Idaho this next month. The Idaho legislature spent a fair amount of time resolving, in the short term, for the short term, a growing problem in an area of Idaho, but that's a good example of where the Bureau can really be a facilitator and an assister. And what I would hope you would do, when you find conflicts impossible to resolve because of Federal legislative or regulatory impediments, that you'd come to us and let us know about them so that we might assist you in removing those impediments.

The reality check in the West, if this continues, is that we may have to change some law, we may have to rethink where we are. It isn't a matter of just cutting the slices of the pie thinner; we might need to enlarge the pie a bit. And that is a reality that we're all going to have to face.

I think the chairman spoke to that when he talked about budgets, and we need to know those kinds of things, because I'm looking at Animas-La Plata. It was 1982, and I was a freshman Congressman when I assisted a Congressman from Colorado in this initiative. Do the math. Idaho can't wait 30 years for a decision out of Washington, nor can New Mexico, when it comes to drought and water resources.

But that's what happened in Animas-La Plata. It's nearly 30 years since that idea went on the books and began to be a motivator of public policy, and I just happen to think that's an interesting reality check at a time when we're seeing unprecedented dry numbers.

Thank you, Mr. Chairman.

John, thank you.

Senator DOMENICI. Thank you very much, Senator. I greatly appreciate your participation.

I have about five questions. A couple of them are parochial, some are not.

Senator Craig, I don't know whether my observation regarding improving the use of water by farmers applies to your State, but I want to suggest sometimes there are issues that we don't quite know, in the bureaucracy of the government, where they fit. So since they don't exactly fit, nothing's done.

I believe that farmers could improve the system whereby they apply water, and save a lot of water in the process, by building systems that use the water better, those systems where you feed by a drip system, or you feed by an underground system that delivers the water, or a sprinkler system. And it seems to me that one reason the farmer doesn't do it is because it costs a lot. Now, I wonder if you might seek, in your official capacity, an analysis of whether tax relief for the farmer who enhances the application and use of water in a field of agriculture.

I know a farmer in New Mexico that is a very progressive farmer, but he also has money. And he spent a huge amount of money to make his water go further and to make sure that the application to the soil used far less water to get the job done. He came to see us, and we were talking about this approach, about tax credit of some type, and he quickly said, "Isn't it too bad that I've already made my expenditure before you consider this idea of giving us some kind of tax credit."

I would wonder—this may be a pipe dream, but I wonder if you would use your official hat to ask the Treasury Department and those who engage in agricultural funding whether this makes any sense, and get that for us.

Commissioner KEYS. Mr. Chairman, your suggestion makes all the sense in the world for us, because we are currently launched off on three major efforts on water conservation. The first one is one with the existing programs that we have in Reclamation, for which we have four or five already. And certainly we work mightily to not let the new initiative take monies away from those, so that we can keep working very closely with the farmers on our districts. The second effort is Water 2025, itself.

Senator DOMENICI. Yes.

Commissioner KEYS. That is concentrating on trying to stretch those existing water supplies so that the new demands for water don't place undue pressure on the water supplies for our irrigation projects.

If you look across the Western United States, about 80 percent of our water rights are held for irrigation.

Senator DOMENICI. Yes.

Commissioner KEYS. If we can do the conservation work and provide water for a lot of the new demands that are out there, we can keep that pressure off of the need for conversion, and that's one of the big goals of 2025.

The third thing that we're doing is working very closely with Department of Agriculture. Reclamation's main focus is on the delivery facilities, the dams, the canals, the control facilities. We're working very closely with agriculture for the on-farm stuff.

Senator DOMENICI. Well, they're not——

Commissioner KEYS. Your suggestion for a tax relief would fit very well into that, and we would certainly explore that with you and with Treasury.

Senator DOMENICI. It may very well be that it fits one of the other agencies better than yours, but I'm not really interested in that; I'm interested in somebody finding out whether it makes sense to the farmer and makes sense to the Treasury. So if you would start that initiative, I——

Commissioner KEYS. Mr. Chairman, we will take the lead in talking with Treasury and working with you and trying to see what we can do there.

Senator DOMENICI. It may very well be that it doesn't work.

Middle Rio Grande, in New Mexico. First, I appreciate your support of our Endangered Species Collaborative Program with reference to that. I acknowledge your 2004 spending and the list of agencies and groups who have signed onto the memorandum of understanding. I'm very pleased that some of the tribes have signed up as participants.

We spoke yesterday—"we," being you and our office, and you brought other people with you—we spoke about the idea of sanctuaries, which I came up with, for minnows, these endangered minnows. And I understand that the details are still being flushed out, and I look forward to your follow-up. There is a deficit of $1.5 million in your 2004 plan to do all that you have on the list of proposed activities for the year.

Now, Senator Craig, I might tell you that we have an endangered species called a silvery minnow, and it generally saves itself and prevails by being very far downstream in a sandy, sandy river, so that we lose thousands of acres in carrying the water from upstream to the bottom, low stream in order to get it to the minnow's habitat. The idea of a sanctuary would be to build ponds upstream, where there is plenty of water, and let the water go in and out so you don't lose any, and prepare that water in a way that would fit the minnow, and then do what I thought of and recommended for a year and a half, that's take the water to the minnow—no, take the minnow to the water, instead of the reverse, of taking the water to the minnow.

So I want to ask you, how do you plan to prioritize what can be done this year? And what kind of growing season do you see for this year for the farmers in my State? Will there be enough water for them? And where do the minnow sanctuaries figure into this?

Commissioner KEYS. Mr. Chairman, on the minnow sanctuary, we have a draft plan and a draft timeline for implementing that plan that we're meeting with your staff on to flesh out. There are four concerns that we're working with.

Senator DOMENICI. Yes.

Commissioner KEYS. The turbidity, the biological opinion, the land area that it takes—those things, we're working on. We think that it will probably take about 2 years to get that done, and we're trying to find ways to accelerate that if we can.

On the water year for the Basin, currently Mr. Craig's characterization of his State, for everything shutting off in March, has been true almost all over the West. We have seen all of our projected runoff figures drop about 20 percent since the first of March, and that is true in the Middle Rio Grande. We started out in the high 80 percent range, and we're below 70 percent now.

I would tell you that we have enough water identified to meet the requirements of the minnow for this year and to meet the requirements for the prior and paramount rights of the Pueblos. In looking at the water supply for the Middle Rio Grande Water Conservancy District, it appears that they have water to take them into and maybe through July, and then they may be out of water. We're working with some of the Water 2025 monies to do conservation projects on that district and seeing if there are not some ways that we can stretch that supply.

Senator DOMENICI. I have a very lengthy question about Animas-La Plata. I will submit it.

For the last 2 years, this committee funded the rehabilitation of the Middle Rio Grande levies. What's the status of the rehabilitation?

Commissioner KEYS. Mr. Chairman, we are on schedule with that 10-year program that we discussed with you a couple of years ago. Our budget this year requests adequate money to keep us on that schedule. We are requesting about $11 million for those eight or ten levies that we are working with there.

Senator DOMENICI. I have a Western Water Initiative question, and I have a contracting-out question.

I'd like to talk about two issues that I think we ought to be worried about that come within the purview of seeing if we can get more water from existing sources that might help with the problem.

In my State, Senator Craig, there is a huge basin called the Tularosa Basin. It's a salty water, underground basin. And on the edges, you can get it, just by going there and spooning it out. It's, in some places, not so salty; in other places, very salty. But I would submit that with the situation we've got, that somebody ought to take a lead in the desalinization. If we could desalinate that water, we would have huge quantities of water to move from that area to arid parts of New Mexico and maybe even some other States.

So I think that you're aware of this issue. The schedules have slipped, such that an additional $1.8 million will be needed for the

Tularosa Basin construction, and at least $7 million for 2005. Have you been aware of the funding issues? And can you commit to bringing me a solution soon so that the partnership with ONR and DOE can be maintained?

Commissioner KEYS. Mr. Chairman, I am aware of that situation, and, yes, we can craft a solution that would provide the necessary money in 2004, and then we would work with you on the funding for 2005.

Senator DOMENICI. Well, I don't know what you think about it, but I would submit to my friend, Senator Craig, that with our huge capacity and technology, it would seem rather unfortunate if, in the midst of a drought, if we had this huge underground basin right in the middle of the West, if we didn't set out sights using the best scientists and technologists to see if we can clean some of that up so we could use it, especially in the agriculture field.

And my last one has to do with another source of saving water. That has to do with the salt cedar. This was brought to the West to help erosion. Unfortunately, there has been a considerable drain on the scarce water supply, approximately 2.4 million acre-feet of water each year. I'm aware that you are using mechanical and chemical methods of removing them, and that you are replacing them with vegetation. Where are you with progress in this area? Is there a threat of erosion? And where are you with finding and certifying a biological control? Were you part of the recent Salt Cedar Conference in New Mexico?

Commissioner KEYS. Mr. Chairman, yes, we were part of that conference. I would tell you that the Department of the Interior has a large initiative on invasive species, and a large part of that initiative is on the salt cedar. And Reclamation is taking the lead for Interior in the efforts on salt cedar. We are part of that effort in Albuquerque earlier this year, and certainly we are looking at different ways to do it.

You talked about the mechanical means. That is the traditional way of doing it. We have recently received approval to release the bugs. They have found a bug that eats salt cedar. And the problem is, they didn't know what he would eat after he ate up all of the salt cedar. And they think now that they have an answer to that. I think they think he'll drop dead. But we'll have to wait and see.

But there are provisions——

Senator CRAIG. John——

Commissioner KEYS [continuing]. For releasing him——

Senator CRAIG [continuing]. It's possible that when the salt cedar is gone, he might become an endangered species.

Commissioner KEYS. Oh, my goodness.

Senator CRAIG. There would be some who would be advocates of that, so be careful of the word use "drop dead," okay?

Don't mention it.

Commissioner KEYS. But it has been approved for release, and there are a number of control areas underway where they're trying that.

On the erosion issue, it has been something that we're paying a large amount of attention to, and there are a number of ways—a number of different vegetations that you can put there that will

control that erosion and not create the problems that the salt cedar did.

Senator DOMENICI. Well, I just want to say—and I know that my friend, Senator Craig—and if we had the rest of this committee here, I think they would all agree that we can't ignore the problem of saving water that is being wasted, and converting water that is not too far from usable if it's there in large quantities, that we clearly ought to spend some money trying to fix it.

I know if Israel is worried about it, we're just as bad off. It's just that they're a lot smaller, and they can focus; and we're a lot bigger, but, I'll tell you, if you saw a map of the United States, like I have, that showed the salty underground water repositories in America, you would be shocked at how much there is. Even over in your side, there's more than you think. But in my State, there just happens to be this monster underground basin, and I think it's worth some money. And we're sitting around rationing what we've got, and it might be equally as important to try to make what we have more functional. And I intend to pursue that with vigor. It's going to take some money, but so what? We've got the United States Navy working on it, incidentally. You know that.

Commissioner KEYS. Yes, sir.

Senator DOMENICI. They have a very big interest, and they've got a major project going in this basin.

I have no further questions. Do you have any, Senator Craig?

Senator CRAIG. Just a parting observation. Your early discussion about conservation and water management is obviously going to be critical during shortages. And even with any abundance, with the kind of growth factors we're seeing in the western high-desert States, clearly management's going to be important.

Interestingly enough, management and new ideas and new alternatives have consequences. The Commissioner is going to Idaho to look at the consequence. In the Snake River Plain Aquifer, when you use the old techniques of flood irrigation, Mr. Chairman, you once fed the aquifer directly by flowing water out over the ground. Starting in the 1970's, because of the Clean Water Act and because of PMDLs and all of that kind of thing, they shifted from flood irrigation to sprinkler irrigation, and that reduced the amount of water going into the aquifer.

Senator DOMENICI. Right.

Senator CRAIG. Now, that water flows out of the aquifer at a given point. And in the 1940's and the 1950's, people filed on the excessive flow as their source of water. It was an abnormal flow from normal flows——

Senator DOMENICI. Water rights.

Senator CRAIG. They developed water rights. Now that we are using the new technologies and sprinkler irrigation, and, some instances, drip, the water is no longer flowing underground into the aquifer and out to the point source that was filed on.

So the value of 2025 is what we're calling it?

Commissioner KEYS. Yes.

Senator CRAIG. Those kinds of initiatives that not only look at how you mitigate, but try to understand what the consequence of mitigation will produce, is going to be every bit as important, because we have traditional, we have western water law, we have

fixed mandates, we have a whole complication of things that tie up inside this marvelous resource. And there are consequences for action and acts when the good intention is made. Now, when you dry these things up, are we going to dry up a wetland by that action, although it's positive? A wetland that was created by man's presence, not by Mother Nature, and on and on and on and on.

Anyway, point made. It's interesting that as we work towards solution, we're now trying to find a way to solve a problem that is created by a positive action on the part of Idaho irrigators.

Commissioner KEYS. Mr. Craig, one of the real cornerstones of Water 2025 is looking at institutional barriers that are there, lawwise or whatever, trying to find ways to make it easier to address some of the problems you're talking about, especially the one on using government facilities to convey private water. The old Warren Act issue.

Senator CRAIG. Um-hum.

Commissioner KEYS. And certainly we may have to come back for some help on the Warren Act one of these times. But we're looking at other laws that we can use to make that happen, like the 1906 Townsite Act——

Senator CRAIG. Yeah.

Commissioner KEYS [continuing]. Or the 30—Section 14 of the 1939 act, or the 1958 act, trying to find ways to make that happen. In the end, we still may have to come back and work with you folks to see how we might change that Warren Act so that it's more compatible.

Senator CRAIG. Well, we think you're headed in the right direction about those analyses. Thank you.

ADDITIONAL COMMITTEE QUESTIONS

Senator DOMENICI. I thank you, Commissioner. We're finished with you, and——

Commissioner KEYS. Okay.

Senator DOMENICI [continuing]. We'll be working with you, and thank you for your excellent testimony, and you were very well prepared.

Commissioner KEYS. Thank you, Senator.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR HARRY REID

WATER 2025

Question. Commissioner Keys, we find that the budget request has effectively eliminated funding for Title XVI projects with the exception of ongoing projects. Even with that limited commitment, the level of funding has decreased. At the same time, the budget for Water 2025 seeks almost $13 million in increases. What share of this increase will be dedicated to reuse projects and/or research projects?

Answer. Improving desalination technology is important to purifying salty and brackish waters to increase their utility. Water 2025's goal is to aid technological advances and reduce the high costs that slow adoption of new desalination technologies. The fiscal year 2005 Water 2025 budget includes $4.0 million for cost-shared demonstration projects for desalination. In addition, approximately $1.5 million for research relevant to desalination is included in the Title XVI budget.

WATER 2025/TITLE XVI

Question. We also note that the bulk of the request is dedicated to conservation, efficiency, and markets and collaboration. Please explain how the Bureau intends to distribute these resources within the Water 2025 program?

Answer. With the support of Congress in the fiscal year 2004 Budget, Secretary Norton has moved forward with the Western Water Initiative (precursor to Water 2025) Challenge Grant program that seeks projects that make real progress towards avoiding water crises in the West. The Challenge Grant Program requires a 50–50 cost share and targets irrigation and water districts in the West who are willing to leverage their money and resources with the Federal Government on projects that make more efficient and effective use of existing water supplies.

For example, Water 2025 is seeking proposals that will retrofit and modernize existing water delivery facilities, and implement and use water banks and water markets as mechanisms to use our existing water more efficiently and effectively, providing such use is recognized by applicable State and Federal laws and authorities.

Through the development of specific criteria and requirements, these projects and activities will focus, first and foremost on those areas where the competing demands for water by people and the environment mean that crises have the highest likelihood of occurring—based upon demographic or population trends combined with endangered species needs.

TITLE XVI WATER RECLAMATION AND REUSE PROGRAM

Question. What role does the Bureau see itself playing in the advancement of research into recycling?

Answer. Reclamation has requested $1.53 million for agency-wide activities associated with the Title XVI Water Reclamation and Reuse Program. This program allows Reclamation to conduct research on the treatment of impaired waters, including desalting, and to provide technical and financial assistance to local water agencies interested in investigating the potential for reusing impaired waters. In prior years, the program was focused on providing assistance to local agencies. In fiscal year 2005, the program's main emphasis will be on conducting research. The objective of this research will be to develop technologies that have broad application and that will help bring down the cost of treating all types of impaired water, including municipal and industrial wastewater used in water recycling.

Question. We note that the Water and Energy Management and Development account includes support for desalination research as part of a new initiative begun in 2004. However, the funding for this account has been reduced from $4 million to $1.5 million to support the development of high priority recycling and desalination projects as well as research. How does this reduction affect the ability to maintain research project priorities underway and identify new needs that Congress has identified? (Page 56 of the justification)

Answer. Reclamation's fiscal year 2005 Title XVI Water Reclamation and Reuse Program funding request for agency-wide activities is $1.53 million. This is $100,000 more than was requested in fiscal year 2004. This account was increased to nearly $4.0 million due to Congressional action. Among other activities, Reclamation was directed to use these additional funds to continue support for the Water Reuse Foundation Research Program, which is focused primarily on research associated with the recycling of municipal and industrial wastewater. That research is currently underway and is expected to continue well into next year. The $1.53 million requested for fiscal year 2005 for agency-wide Title XVI activities would be used to continue research on developing low-cost treatment technologies needed to make all types of impaired water suitable for beneficial use, including wastewater.

DESALINATION

Question. Based on your response to question "What role does the Bureau see itself playing in the advancement of research into recycling?" How are we to interpret the Bureau's request of $100,000 for desalination research from a current year level of $7.7 million?

Answer. The administration continues to support desalination and water purification related research within the limitations of available funding, We also continue to support the development of other water supply and water management technologies that will ensure that Reclamation and other western water managers have a complete set of tools to tackle water supply problems. In fiscal year 2005, a request for desalination research and other water purification technologies has been submitted under the five programs as summarized in the following table:

Program	Approximate Fiscal Year 2005 Allocation for Desalination Related R&D	Scope of Desalination and Other Water Purification Related R&D
WATER 2025	$4,000,000	External R&D and demonstration projects.
Water Reclamation and Reuse Program (Title XVI)	$1,500,000	External and internal R&D.
Desalination and Water Purification Research Program (a.k.a. Desalination Act).	$100,000	External R&D.
Science and Technology Program	$1,200,000	Internal R&D Reclamation-wide.
Colorado River Basin Salinity Control Project (Title I)	$781,000	Internal R&D to reduce the costs of the Yuma Desalting Plant.
Total	$7,581,000	

The $7.375 million enacted under the Desalination and Water Purification Program for fiscal year 2004 specified that $4.0 million shall be used for the construction of the Tularosa Basin National Desalination Research Facility. The reduction between fiscal year 2004-fiscal year 2005 in the Desalination and Water Purification Program stems from the uncertainty of whether the Desalination Research Act will be reauthorized or extended and the uncertainty as to whether other authorities would allow us to continue this national program. The reduction has been partially offset by the increased allocation under Water 2025. In the event of no reauthorization of the Desalination Research Act, the Water Reclamation and Reuse Program (Title XVI) provides Reclamation with the general authority to continue to fund desalination research and demonstration activities.

Question. What kind of work will not continue under the proposed budget cut? (Page 49 of the justification)

Answer. For fiscal year 2005, the Water 2025 program has requested $4 million for desalination research with an emphasis on demonstration. The following work begun in fiscal year 2004 will continue under the fiscal year 2005 budget request: external research projects (bench-scale, pilot-scale, and demonstration to increase water supplies, reduce desalination costs, reduce concentrate management issues, and to increase energy efficiency), technology transfer (desalination clearinghouse, desalination research road mapping efforts with Sandia National Labs and the guidance of the National Academies of Science, and an internal study of the potential use of advanced water treatment technologies as a resource to create net new water supplies), and partnerships and collaborations (including the Water Reclamation, Recycling, and Reuse Task Force).

TITLE XVI WATER RECLAMATION AND REUSE PROGRAM

Question. Overall, the West continues to face serious challenges in the development of alternative water supplies. A hallmark of confronting this challenge has been a strong Federal partnership in the form of Title XVI. Are we to assume that the Bureau no longer believes that a Federal partnership is advisable?

Answer. Title XVI funding has helped local agencies offset the cost to plan, design, and construct water reclamation and reuse projects. These projects, when completed, will help local water agencies meet some of their existing and future water demand. Reclamation will continue to support those ongoing construction projects that were included in the President's budget request in prior years. We would rather focus resources on completing these projects, so that project benefits may be realized, rather than diffuse resources in support of the many new proposed Title XVI projects, many of which were developed with little, if any, Reclamation involvement.

Question. If so, please explain the basis of this decision and how you propose to fill the gap created by this action.

Answer. Through the Title XVI Water Reclamation and Reuse Program, Reclamation has helped demonstrate that water recycling is a successful means of increasing a municipality's water supply. Water recycling alone, however, will not be able to meet the anticipated future demand in all areas of the West, and other resources management strategies, such as conservation and desalination, will need to be pursued. Reclamation intends to focus its future new Title XVI activities on the development of treatment technologies that can be used to make all types of impaired water available for use, regardless of geographic location.

QUESTIONS SUBMITTED BY SENATOR BYRON L. DORGAN

FORT YATES INTAKE STRUCTURE FAILURE

Question. Mr. Keys, I am know you are familiar with the water crisis at Fort Yates when it experienced loss of water due to extended droughts and low lake levels on Lake Oahe. If unaddressed, low lake levels on both Lake Oahe and Lake Sakakawea will continue to devastate local economies and endanger communities that depend on this water source.

What action will the Bureau of Reclamation take to resolve this issue for communities who depend on these lakes for their water supply?

Answer. We recognize that the drought conditions throughout the Missouri River system are having significant impacts on community water supplies. However, Reclamation's authority to address these issues is limited by the Dakota Water Resources Act of 2000 to the design, construction, operation, maintenance and replacement of the Indian municipal, rural, and industrial (MR&I) water supply facilities. Given current drought conditions, particular attention is being devoted to the Fort Berthold and Standing Rock MR&I systems which rely on the Missouri River as their water supply source. Reclamation became involved with development of the rural water system on Standing Rock with the passage of the Garrison Diversion Unit Reformulation Act of 1986. Reclamation is currently working with the Standing Rock Sioux Tribe on a contingency plan for responding to possible future drought related impacts to their water system.

With respect to the water crisis at Fort Yates, Reclamation completed the installation of a new interim intake for the Fort Yates water treatment plant. The intake was put into operation on March 16, 2004, and has operated reliably since that time. Reclamation expects this intake to provide water until decisions can be made to determine the water treatment plant and intake option that will serve the long-term needs of the Standing Rock MR&I system. Reclamation has also secured funding to investigate the feasibility of constructing horizontal wells as a replacement intake for the Fort Yates and Wakpala water treatment plants. These investigations began the week of April 19, 2004.

Question. Has there been any movement within your agency to find funds that have not been used and reallocate them to the tribal MR&I funding that had to be used during the water supply crisis last year?

Answer. As noted in our letter to you dated April 27, 2004, Reclamation is monitoring other programs for potential surplus funding.

DAKOTA WATER RESOURCES ACT

Question. Funding for the Dakota Water Resources Act is a top priority for me and for my constituents. Although Congress has promised to provide $200 million for Indian municipal, rural and industrial water needs and $200 million for State MR&I, the current budget fails to come anywhere close to what will be needed for the next fiscal year and provides only a total of $4.969 million for MR&I ($2.485 for State MR&I, including NAWS, and $2.484 for Tribal MR&I).

Given the fact that this program is severely under funded, what do you plan to do to keep up with the current needs of the program, in light of expected price increases in the major programs if delays occur?

Answer. It was recognized during the development of the Dakota Water Resources Act that funding would be provided over a number of years. To address the expected price increases caused by multi-year funding, the legislation authorized both the State and Indian MR&I project ceilings to be adjusted through the application of engineering cost indices. This measure, contained in Section 10, will account for ordinary increases in construction costs and ensure the appropriation ceiling continues to be adjusted to keep up with the current needs of the program.

Reclamation recognizes that the State and the Tribes have construction capability that exceeds the funding level proposed by the President in the fiscal year 2005 budget. Furthermore, we understand that recent budget levels have not resulted in project accomplishment that keeps pace with the annual indexing of the appropriation ceiling previously described. However, the President's budget request seeks to continue progress on Garrison Diversion Unit, and other on-going construction projects throughout the agency, within the budget targets that have been established.

RED RIVER VALLEY WATER SUPPLY PROJECT

Question. I am also very concerned about the status of the Red River Valley studies that will provide water to eastern North Dakota. I have heard some concerns

that the BOR is scaling back on some of the key items it had planned on doing and cutting back on the investigations needed to prepare a comprehensive study.

Can you update me on the status of these studies and assure me that the Bureau isn't taking shortcuts in this important matter?

Answer. The purpose of the Red River Valley Water Supply Project is to meet the comprehensive water quality and quantity needs of the Red River Valley in North Dakota. As directed by the Dakota Water Resource Act of 2000 (DWRA), Reclamation is conducting analyses to identify future water needs for the Red River Valley and options for meeting those needs. The DWRA requires an analysis of Municipal Rural and Industrial Needs, Aquatic Environment Needs, Recreation Needs, Water Quality Needs and Water Conservation Needs. It also mandates two reports, the Needs and Options Report and an Environmental Impact Statement (EIS). Reclamation is the sole lead for analysis of Needs and Options and will complete the Needs and Options Report by November 30, 2005. In accordance with DWRA, Reclamation and the State of North Dakota are preparing the EIS required to evaluate the environmental impacts of alternatives identified in the Needs and Options Report. The Draft EIS will be completed by December 31, 2005.

Reclamation is placing a high priority on conducting all investigations required for the Needs and Options Report and the EIS using objective, scientifically sound analyses. The work needed to complete both reports is on schedule and being conducted in a rigorous and scientific manner. Reclamation is taking no shortcuts in the comprehensive evaluation of water quality and quantity needs of the Red River Valley, as well as, options for meeting those needs, and the environmental analysis required under NEPA and DWRA.

PICK-SLOAN HYDROPOWER

Question. In Pick-Sloan the Bureau appears to be adding staff for hydropower activities. Please explain.

Answer. Reclamation is adding staff for hydropower activities in Pick-Sloan. Reclamation has discussed this with the preference power customers on several occasions and they agree with our staffing proposal. This staff will perform operation and maintenance to ensure the necessary reliability and availability of the 20 Reclamation Pick-Sloan Powerplants. Reclamation is facing a 40 percent attrition rate in hydropower staffing in the next 5 years and preparation must be made for this. Reclamation continues to deliver power at a cost that is less than the production costs of three-fourths of the other Federal and non-Federal hydropower facilities in the United States and with reliability twice that of the industry average. The impact to the power rate by adding this staff is minimal and Pick-Sloan customers will continue to benefit from the low wholesale rates. Furthermore, attention to such long-term operation and maintenance issues is in line with the recommendations from the 2003 re-PART of Reclamation's hydropower program, which reiterated the need to engage in long-term planning and act with foresight in managing its hydropower facilities.

Question. In addition, where are these employees being placed both geographically and as between technical field positions or administrative/policy and review positions?

Answer. As discussed with and agreed to by the preference power customers, Reclamation filled three positions last year: two apprentices in Wyoming, and one power facility manager at the Green Mountain powerplant in Colorado. In addition, by fiscal year 2006, we are in agreement to hire three apprentices and one O&M manager at the Flatiron powerplant in Colorado, and two engineering positions in the Great Plains Regional Office. These positions will be working on powerplant O&M.

Question. What cost saving measures is the Bureau planning to undertake?

Answer. Reclamation continues to undertake cost saving measures such as further standardizing O&M business practices and procedures and continually seeking measures to improve the efficiency of water use and power generation. Reclamation has been successful in doing this through changes in operations and installation of more efficient equipment.

Question. Is the Bureau attempting to coordinate activities with other Federal agencies to avoid duplication of plant equipment and services, e.g., WAPA and Corps of Engineers?

Answer. Reclamation, in conjunction with other Federal and State agencies, is utilizing the same microwave and radio communication systems. This has eliminated equipment duplication and generated cost savings. Reclamation coordinates monthly powerplant and transmission line outages with WAPA to avoid unnecessary outages and to allow both agencies to schedule work during each other's outages. Reclama-

tion and WAPA continue to communicate in an effort to avoid duplication and reduce costs. Reclamation-wide coordination of asset management and facility condition assessment activities has occurred with the Corps of Engineers, Hydro Quebec, and Bonneville Power Administration. Reclamation's Great Plains Region has recently revised its information sharing agreement with its federal power customers. The new agreement includes Reclamation, the Corps of Engineers, WAPA, as well as the power customers. Through the agreement the parties coordinate budget, operation, and maintenance activities.

SITE SECURITY

Question. The Bureau is proposing to spend $43 million for site security, including $12 million which will be reimbursable from Federal power customers. These appear to be annual costs and not one-time expenses.

Since these multi-purpose projects are national assets, benefiting millions of Americans, why are they reimbursable from power customers?

Answer. Beginning in fiscal year 2005, annual costs associated with activities for guarding our facilities will be treated as project O&M costs subject to reimbursability based upon project cost allocations and consistent with prior practices. The project beneficiaries who will be assigned these costs will be primarily power customers, water districts and some M&I water contractors.

Reclamation recognizes there are challenges ahead of us, such as working with our stakeholders in analyzing security related O&M costs to determine the beneficiary's reimbursable obligation in fiscal year 2005 consistent with project specific authorizations and contracts.

Question. Why has the Bureau changed its existing policy on reimbursability and why should the power customers be required to pay these costs?

Answer. Between September 11, 2001 and September 30, 2004, Reclamation has or will spend $124 million in anti-terrorism dollars, which include guard and surveillance activities.

Reclamation's existing policy has always stated that upon project construction completion, the responsibility of O&M of single-purpose facilities transfers to the water-user entities responsible for the project's construction costs. Beginning in fiscal year 2005, annual costs associated with activities for guarding our facilities will be treated as project O&M costs subject to reimbursability based upon project cost allocations.

The majority of Reclamation's expenditures for anti-terrorism measures, such as security reviews and subsequent implementation of anti-terrorism measures as a result of these reviews, are still considered non-reimbursable expenditures.

HYDROPOWER

Question. The budget proposes that hydropower customers assume the cost of research and development expenses of the science and technology program. This program has always been a non-reimbursable activity of the Bureau.

Why is the Bureau adding yet more costs to hydropower users?

Answer. As a result of the Reclamation Science and Technology Program Assessment Rating Tool (PART) review by the Office of Management and Budget (OMB), we believe that it is appropriate to include hydropower research and development expenses as reimbursable costs in the Power Marketing Administrations' rates since the power customers directly benefit from the successes of Reclamation's hydropower research and development program related to hydropower. These research developments have resulted in significant cost savings to project customers.

Question. Are there any activities with respect to reliability that you are not undertaking that you believe are appropriate?

Answer. Reclamation continues to assess the reliability and long-term viability of our generating facilities. We believe that we are doing everything that is appropriate at this time. We have recently conducted a condition assessment of our major equipment and have found that 46 percent of our major power components are in poor condition. As a result of the 2003 re-assessment of the PART on hydropower, we have revised our long-term performance measures and goals, and aim to reduce this percentage to 40 percent by 2014. Reducing the number of components rated in poor condition will increase generating reliability, and help avoid costly unplanned maintenance and replacement due to component failure. We will be scheduling funding to address this issue over the next several years to assure that our plants remain reliable. Another area we are evaluating is the responsiveness of our governors and excitation systems. Many of our governors are mechanical and as these governors are replaced, we are looking at replacing them with digital equipment, which improves our unit's responsiveness during periods of system distress.

Finally, North American Electric Reliability Council (NERC) and Western Electricity Coordinating Council (WECC) policy require generation owners to perform reactive capability and limit verification of generators with a capacity of 10 megawatts or greater every 5 years. The policy further requires dynamic testing, maintenance, and calibration of voltage regulators, limit functions, power system stabilizers, and governor controls. Also, NERC and WECC policy require organizations to develop and maintain documented ratings of power equipment including powerplant equipment. The ratings must be consistent with documented rating methodology. Reclamation is striving to meet these requirements.

FIVE-YEAR EXPENDITURES

Question. Please provide a specific breakdown of expenditures during the past 5 years by function and authorized project purposes.

Answer. The Bureau appreciates the continued support the committee has provided over the years. The information requested, expenditures by function and authorized project purpose for the past 5 years, is voluminous. We would welcome the opportunity to discuss this request further with the committee staff and tailor the response to ensure it is suitable and useful.

Question. I can be more specific, but it turns into three questions. The answer to these three questions should be a chart, probably with footnotes, explaining what has taken place with the funding provided. It should also show how they applied underfinancing to the project. Hope this helps.

How much money has been allocated, and spent, on the MR&I program for the past 5 years?

Answer. The attached worksheet provides the information you requested on the MR&I program for the Great Plains Region.

PROJECTS WITH RURAL WATER COMPONENTS—WATER & RELATED RESOURCES [1]

[In thousands of dollars]

	Fiscal Year 1999 Enacted/ Final Expenditure Budget	Fiscal Year 1999 Expenditures	Fiscal Year 2000 Enacted/ Final Expenditure Budget	Fiscal Year 2000 Expenditures	Fiscal Year 2001 Enacted/ Final Expenditure Budget	Fiscal Year 2001 Expenditures	Fiscal Year 2002 Enacted/ Final Expenditure Budget	Fiscal Year 2002 Expenditures	Fiscal Year 2003 Enacted/ Final Expenditure Budget	Fiscal Year 2003 Expenditures	Fiscal Year 2004 Enacted Budget	Fiscal Year 2004 U/F [2] Budget	Fiscal Year 2004 Rescission [2] Budget	Fiscal Year 2004 Enacted w/ U/F and Resc. Budget
Mni Wiconi Rural Water Component (only)	*31,344	.....	*29,400	.....	*33,735	.....	*37,489	.....	*38,800	.....	*31,471	−2,547	−171	*28,753
	32,706	32,131	28,429	27,306	31,715	31,681	34,234	34,080	37,115	36,011	.....	.....	.....	.....
Mid-Dakota Rural Water Component (only)	*15,000	.....	*14,000	.....	*8,000	.....	*15,000	.....	*17,860	.....	*15,000	−1,450	−80	*13,490
	19,208	19,195	13,882	13,847	9,539	9,459	14,384	14,020	17,297	17,295	.....	.....	.....	.....
Garrison Rural Water Component (only)	*13,413	.....	*17,386	.....	*14,059	.....	*16,305	.....	*13,933	.....	*9,031	−63	−17	*8,951
	17,966	14,566	17,431	16,678	13,707	13,456	14,349	14,183	11,214	11,134	.....	.....	.....	.....
Fort Peck Rural County Water System	*1,500	.....	*3,000	.....	*1,500	.....	*0	.....	*0	.....	*0	*0	0	0
	1,126	590	3,412	84	4,687	4,508	397	331	107	−3	.....	.....	.....	.....
Fort Peck Reservation/Dry Prairie	*360	.....	*0	.....	*435	.....	*4,000	.....	*7,500	.....	*7,500	*−719	−40	6,741
	550	329	221	199	578	500	3,697	3,627	4,840	4,492	.....	.....	.....	.....
Lewis and Clark Rural Water System	*0	.....	*0	.....	*1,000	.....	*2,000	.....	*7,000	.....	*17,000	*−1,630	−91	15,279
	0	0	600	10	1,524	1,499	1,835	1,824	5,800	5,800	.....	.....	.....	.....
Perkins County Rural Water System	*0	.....	*0	.....	*0	.....	*3,400	.....	*4,300	.....	*1,000	*−96	−5	899
	0	0	0	0	0	0	3,077	3,050	3,622	3,619	.....	.....	.....	.....
Rural Water Program—GREAT PLAINS REGION:														
Enacted Budget	*61,617	.....	*63,786	.....	*58,729	.....	*78,194	.....	*89,393	.....	*81,002	*−6,505	*−404	*74,113
Expenditure Budget/Expenditures	*71,556	*66,811	*63,975	*58,124	*61,750	*61,103	*71,973	*71,115	*79,995	*78,348	*0	*0	*0	*0

* Figures marked with an *: see footnote 1.

[1] Columns entitled "Enacted/Final Expenditure Budget": The first number in the column is marked with an asterisk to clearly show what was Enacted by Congress. The second number in the column, represents what was Enacted plus adjustments which can include prior year funds, carryover, underfinancing, rescissions, and fund transfers.

Expenditure information must be compared to the Expenditure Budget in order to receive an accurate picture.

[2] The columns entitled Fiscal Year 2004 U/F and Fiscal Year 2004 Rescission provide a breakdown of how the reductions associated with underfinancing and the rescission were applied.

In both instances, each project received an across-the-board reduction per the Fiscal Year 2004 Water and Energy Appropriation Act. For Garrison, the majority of the reductions were applied to the non MR&I components not shown on the chart. No reductions were applied to the $6 million allocated to the construction MR&I program.

Question. Did the extra $10 million that was provided by Congress in fiscal year 2004 get spent on the MR&I program?

Answer. The Great Plains Region's fiscal year 2004 Enacted MR&I program was $81,917,000 which was $63,915,000 over the President's requested amount of $18,002,000. Garrison was the only project that received a Congressional write-in of $10 million. Therefore, the following response is based on the assumption that the $10 million referred to is related to Garrison. However, we would welcome the opportunity to discuss this request further with the committee staff and tailor the response to ensure it is suitable and useful. The fiscal year 2004 President's request for the Garrison project included zero dollars for MR&I construction and $3,031,000 for MR&I operation and maintenance for the Tribal program. Of the additional $10 million received for the Garrison project, $6 million was allocated for the MR&I construction program (bringing the total Garrison MR&I program to $9,031,000); $2 million was allocated for Red River Valley to complete the studies and EIS on the schedule testified to in the December 2002 Senate Field Hearing; and $2 million was allocated to complete work at the Arrowwood National Wildlife Refuge.

Question. If not, is there any likelihood of the same occurring in fiscal year 2005?

Answer. If Congress provided additional funds for general Garrison program purposes, we anticipate they would be allocated to the MR&I programs.

DEPARTMENT OF DEFENSE—CIVIL

DEPARTMENT OF THE ARMY

CORPS OF ENGINEERS—CIVIL

STATEMENT OF JOHN PAUL WOODLEY, JR., ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS)

ACCOMPANIED BY LIEUTENANT GENERAL ROBERT B. FLOWERS, CHIEF OF ENGINEERS

Senator DOMENICI. Now, Senator Craig, I have to step out with some constituents. I wonder if you would let Panel Two, Mr. John Woodley, Assistant Secretary, and Lieutenant General Robert Flowers—although he's not here, is that right? He'll be here?—Chief of Engineers, U.S. Army Corps of Engineers. If you'd start that, I'll be back very, very soon.

Senator CRAIG [presiding]. So if the second panel would come forward, we'll proceed with testimony from the Army Corps. Army first, yeah.

Well, thank you all very much. Assistant Secretary Woodley, we appreciate you being here.

We'll allow you to proceed with your testimony, and then we'll move to—I assume both you and the General are the ones prepared for the testimony. Is that correct?

General FLOWERS. Yes, sir.

Senator CRAIG. All right, fine. Please proceed.

STATEMENT OF JOHN PAUL WOODLEY, JR.

Mr. WOODLEY. Mr. Chairman, I appreciate the opportunity to testify before the subcommittee about the President's fiscal year 2005 budget for the Civil Works function of the Army Corps of Engineers.

I'm especially delighted to be accompanied this morning by a very distinguished soldier, Lieutenant General Robert Flowers, the 50th Chief of Engineers. Mr. Chairman, this is General Flowers' last opportunity to appear before the subcommittee, and so I think that should be made note of in the record, and I'd like to express my particular appreciation, on behalf of the President, for his very fine service as Chief of Engineers.

May I also ask leave to summarize my statement and put a complete statement——

Senator CRAIG. Yeah——

Mr. WOODLEY [continuing]. In the record?

Senator CRAIG [continuing]. Your full statements will become a part of the committee record. Thank you.

Please proceed.

Mr. WOODLEY. Our total fiscal year 2005 Civil Works budget is $4.2 billion, which is about the same as last year's Civil Works

budget request. This year, to develop the budget, we began the use of a performance-based approach built around programmatic goals for our eight business programs. This approach, we feel, has and will continue in the future to enable us to make the most effective use of the limited funding available to us.

For new projects, the budget focuses on commercial navigation, flood and storm damage reduction, and aquatic ecosystem restoration. The budget directs substantial funding to the ongoing construction projects that have among the highest economic and environmental returns to the Nation. We also have given priority to 11 projects that we are able to complete in fiscal year 2005, and to eight projects that we consider high-priority projects, and to a number of dam safety and seepage correction projects.

Funding to plan or design new projects this year is limited, and is targeted to the most productive study and design activities, including five new studies, 23 design efforts, and the current phases of ongoing studies, including an expanded Louisiana Coastal Area study.

Mr. Chairman, the 2005 budget does not include a request for funding for beach renourishment. Our view is that non-Federal interests should carry out renourishment activities once the initial construction of the beaches has been completed. We have an exception to this, at a case in which we are obliged to perform renourishment under a court order.

We have also asked for leave, to free up funding for higher-priority needs, to cancel unobligated balances of projects that may not be the best—the top investments, or, for one reason or another, are not ready to proceed. This recommended cancellation, if it's approved, would take effect with the enactment of the fiscal year 2005 appropriations.

The budget also includes a number of initiatives for operation and maintenance of our existing projects. We ask leave to finance, up front, the operation and maintenance cost of hydropower facilities, with funds provided by three Federal Power Marketing Administrations. Second, we would ask to accomplish recreation modernizations by using new fees and by entering into planning and management partnerships. Third, we would continue antiterrorist protection at key projects and facilities. And finally, we ask to reserve a pool of funds for unforeseen and urgent maintenance and repairs at key projects.

Mr. Chairman, I have three priorities in mind for the Civil Works program during my time as Assistant Secretary. You will see these priorities reflected, in part, in this budget, and I believe to a greater extent in the next. One priority is to develop the Civil Works budget and manage the program based on objective performance measures. In that regard, General Flowers and I have recently provided our Civil Works strategic plan to the committee, and we look forward to working with you on developing it further and hearing your views on it. A second priority is to improve the analytical tools that we use for water resource planning and decision-making. And my third priority is to improve the effectiveness and efficiency of the Corps' regulatory program, the primarily wetlands and navigation regulatory program.

PREPARED STATEMENT

Mr. Chairman, this is a frugal budget that reflects the priorities of a Nation at war. Understandably, and I will say immediately, it does not fund all the good things that the Corps of Engineers is capable of doing, but it does move ahead with many important investments that will yield enormous returns for the Nation next year and in the future.

Thank you, Mr. Chairman.

[The statement follows:]

PREPARED STATEMENT OF JOHN PAUL WOODLEY, JR.

Mr. Chairman and distinguished members of the subcommittee, thank you for the opportunity to testify before the Energy and Water Development Subcommittee of the Appropriations Committee and to present the President's budget for the Civil Works program of the Army Corps of Engineers for fiscal year 2005.

OVERVIEW OF FISCAL YEAR 2005 ARMY CIVIL WORKS BUDGET

The fiscal year 2005 budget for Army Civil Works provides funding to continue the development and restoration of the Nation's water and related resources, the operation and maintenance of existing navigation, flood damage reduction, and multiple-purpose projects, the protection of the Nation's regulated waters and wetlands, and the cleanup of sites contaminated as a result of the Nation's early efforts to develop atomic weapons.

The fiscal year 2005 budget for Army Civil Works includes new discretionary funding requiring appropriations of $4.215 billion and an estimated $4.132 billion in outlays from discretionary funding (see Table 1). These figures are approximately the same as in the fiscal year 2004 budget.

The new discretionary funding includes $610 million from the Harbor Maintenance Trust Fund for harbor operation and maintenance and dredged material disposal facility construction. The discretionary funding also includes $115 million from the Inland Waterways Trust Fund for construction and rehabilitation on the inland waterways.

The budget includes proposed appropriations language for direct funding of hydropower facility operation and maintenance by Federal power marketing administrations. New discretionary funding of $150 million would be derived from direct funding in fiscal year 2005. This proposal is described in greater detail below.

Other sources of new discretionary funding include $3.303 billion from the general fund and $37 million from Special Recreation User Fees.

Additional program funding, over and above funding from the sources requiring discretionary appropriations, is estimated at $437 million. This total includes $71 million from the Bonneville Power Administration (BPA) for operation and maintenance of hydropower facilities in the Pacific Northwest, $287 million contributed by non-Federal interests for their shares of project costs and for project-related work, $63 million from the Coastal Wetlands Restoration Trust Fund, and $16 million from miscellaneous permanent appropriations.

The budget proposes cancellation of at least $100 million of previous discretionary budget authority. Net discretionary budget authority, including this proposal and the direct funding proposal, is $3.965 billion.

PERFORMANCE-BASED BUDGETING

Performance-based budgeting is one of the President's Management Initiatives, and the one that is most central to the preparation of the budget. For the Army Civil Works program, performance planning is built around eight program areas: Navigation (including inland waterway navigation and coastal channels and harbors); Flood and Storm Damage Reduction (including from riverine flooding and coastal storms); Environment (including aquatic ecosystem restoration, stewardship of natural resources at operating projects, and the Formerly Utilized Sites Remedial Action Program); Hydropower; Recreation; the Regulatory Program, Emergency Management; and Water Supply (storage at existing reservoirs).

The first element in our performance planning is a strategic plan, which is required by the Government Performance and Results Act (GPRA). I am happy to announce that on March 22, 2004, General Flowers and I provided our strategic plan to the committees and subcommittees of Congress responsible for water develop-

ment authorizations and appropriations, including this committee and subcommittee. This plan is a work in progress. We will continue to work with the Office of Management and Budget to establish program goals, objectives, and performance measures that are called for by GPRA and that provide a sound basis for setting performance targets and building future budgets.

The second element in our performance planning is the use of a government-wide process to assess program performance, which first was instituted for the fiscal year 2004 budget. These assessments are intended to improve the effectiveness of programs and to improve the quality of their management and oversight. Five business programs, program components, or sets of activities were assessed for the fiscal year 2004 budget: the Hydropower program; the riverine flood damage reduction component; the inland waterway navigation component; the Emergency Management program; and wetlands-related activities apart from the Regulatory Program. For fiscal year 2005, the Regulatory Program was assessed. Two of the programs—the Regulatory Program and Emergency Management—have been rated as moderately effective and have received substantial funding in the fiscal year 2005 budget.

The third element is to develop the Civil Works budget and manage the program based on objective performance measures. The fiscal year 2005 budget for Army Civil Works focuses funding on the most productive investments. This is reflected, for instance, in the allocation of funding to the most productive design activities, construction projects, and maintenance activities. At the same time, I recognize that we can do a better job of performance-based budgeting, and one of my priorities is to improve our capabilities in this area. I have placed a priority on making significant progress on further development of sound performance measures for each business program and on using the measures to build our fiscal year 2006 budget. A great deal of hard work is in store for us as we transition to this approach, but the advantages are enormous, and the Army is fully committed to this effort.

FOCUS ON HIGH-RETURN NEW INVESTMENTS

The fiscal year 2005 budget for Army Civil Works targets funding to the new investments that have very high economic or environmental returns. The budget does so by emphasizing priority missions and allocating substantial funding to new and continuing high return continuing construction projects while de-emphasizing the design and initiation of new projects. However, the budget funds three new projects that have high economic or environmental returns and several new high priority studies that competed successfully for funding. The budget also discontinues Federal participation in beach renourishment activities, and proposes to cancel unobligated balances for projects that do not provide high returns or that are not Civil Works responsibilities.

Priority Missions

The budget emphasizes ongoing studies, projects and programs that provide substantial benefits in the priority missions of the Civil Works program for new investments, namely, commercial navigation, aquatic ecosystem restoration, and flood and storm damage reduction.

The budget also provides funding for other areas of Corps involvement, including regulatory protection of waters and wetlands, cleanup of sites contaminated by the Nation's early atomic weapons program, and the management of natural resources and provision of hydroelectric power and recreation services at Federally operated Civil Works projects.

No funds are provided for studies and projects that carry out non-traditional missions that should remain the responsibility of non-Federal interests or other Federal agencies, such as wastewater treatment, irrigation water supply, and municipal and industrial water supply treatment and distribution. Furthermore, the budget does not fund individual studies and projects that are inconsistent with established policies governing the applicable missions.

Ongoing, Budgeted Construction Projects

In recent years, ongoing construction projects that the budget funds have had to compete for funding with numerous new construction starts. To maximize the net returns of the construction program and finish the construction backlog more quickly than under current trends, the budget directs funding to complete 11 ongoing projects in fiscal year 2005, and continues progress on projects consistent with long-established policies, including eight projects that are the highest priorities in the Nation. It also provides substantial funding for dam safety investments. In addition, the budget funds three new projects with high economic and environmental returns.

Altogether, the budget includes funding for construction of 149 projects, not including the projects constructed under the Continuing Authorities Program.

Consistent with this focus on projects already under construction, the budget includes funding to continue or complete design of 23 proposed projects that were selected based on their economic and environmental returns. The budget defers work on all lower priority design efforts. Similarly, we made an effort to prioritize studies of proposed projects. In general, funding is targeted to the most productive study and design activities, including $8 million for the expanded Louisiana Coastal Area Study. Funding is provided for five new studies that competed successfully with ongoing work.

Beach Renourishment

The budget does not include any funding for beach renourishment. The administration's view is that non-Federal interests should carry out renourishment activities once the initial nourishment has been accomplished, just as they operate and maintain other types of projects once the installation is complete. This policy applies to all types of projects involving beach renourishment, including projects for which Project Cooperation Agreements already have been executed. Work under such agreements is subject to the availability of funding, and the new policy specifies that funding no longer will be sought for renourishment phases.

We will continue to plan for and design shore protection projects, and we will continue to construct initial nourishment phases as well as the structural measures for coastal projects. We also will continue to deposit dredged material from navigation projects on the adjacent shores when it is the least-cost, environmentally acceptable disposal method. In addition, we will participate financially in one-time placements of dredged material for the beneficial use of shore protection, and we will perform follow-on placements for the beneficial use of shore protection if non-Federal interests finance the incremental costs. Within these ground rules, we will continue to participate in regional sediment management activities.

There is one exception to the policy in fiscal year 2005, for the Westhampton Shores, New York, area. We are funding periodic renourishment program as ordered by the district court in the settlement of the case of *Rapf et al.* vs. *Suffolk County of New York et al.*

Cancellation of Unobligated Balances

To free up funding for higher priority needs, the budget proposes to cancel the unobligated balances of 41 projects that are not consistent with current policy. The cancellation would take effect with enactment of fiscal year 2005 appropriations.

FINANCING AND MANAGEMENT INITIATIVES FOR OPERATING PROJECTS

The Operation and Maintenance program includes funding for four significant initiatives: direct funding of hydropower operation and maintenance costs; recreation modernization; a new emergency maintenance reserve fund; and anti-terror facility protection.

Direct Financing of Hydropower Operation and Maintenance Costs

Historically, each year the Army Civil Works program has financed the operation and maintenance costs of Corps of Engineers hydroelectric facilities, and Federal power marketing agencies have repaid the Treasury for these costs from the revenues provided by ratepayers. The exception has been in the Pacific Northwest, where under section 2406 of the National Energy Policy Act of 1992, Public Law 102–486, the Bonneville Power Administration (BPA) has directly financed the costs of operating and maintaining the Corps' hydroelectric facilities from which it receives power. BPA has been providing operation and maintenance funds in this manner each year, beginning in fiscal year 1999.

Each year, Corps facilities experience unplanned outages around 3 percent of the time. In 1999, the General Accounting Office found that the Corps' hydropower facilities are twice as likely to experience "unplanned outages" as private sector facilities, because the Corps does not always have funds for maintenance and repairs when needed.

To address this problem, the budget proposes that the Southeastern Power Administration, the Southwestern Power Administration, and the Western Area Power Administration finance hydropower operation and maintenance costs directly, in a manner similar to the mechanism used by Bonneville. The budget contemplates that these power marketing administrations, in consultation with the Corps, would make funding available for those hydropower operation and maintenance expenditures that they believe are justified in order to provide economical, reliable hydropower to power customers. We believe that, as a consequence, unplanned outages would decline over time to levels comparable to the industry average. The administration is submitting this as an appropriations proposal. Under current Congressional

Budget Office and Office of Management and Budget scoring, the funds provided by the power marketing administrations offset appropriated funds without PAYGO consequences.

Recreation Modernization

The second initiative is to modernize recreation facilities. The recreation modernization initiative has three components. The first is a legislative proposal that: 1) authorizes the Corps to establish a permanent recreation fee program that is consistent with the existing Federal Recreation User Fee Demonstration program; 2) authorizes the Corps to collect entrance fees; and 3) authorizes the Corps to retain all recreation use fees over $37 million per year and to use the retained fees for its recreation facilities. To support this proposal, we currently are developing a proposed schedule of recreation use fees, lease receipts, and other sources of revenue, showing the locations where we expect to collect revenue and the kinds and amounts of revenue we expect to collect at each location.

The second is six recreation demonstration projects, at Texoma Lake in Texas, Shelbyville Lake in Illinois, Rathbun Lake in Iowa, W. Kerr Scott Lake in North Carolina, Cumberland Lake in Kentucky, and Beaver Lake in Arkansas. At each location, the Corps will demonstrate new planning, management and financing partnership arrangements with State and local government park authorities and private sector concessionaires. These will be designed to upgrade Corps recreation facilities at little or no cost to the Federal Government. If these six demonstration projects are a success, the Corps will expand the model to other Corps facilities in the future.

The third is $6 million to upgrade Corps recreation facilities related to the Lewis and Clark Bicentennial commemoration.

Emergency Maintenance Reserve

The budget includes $35 million for an emergency maintenance reserve fund, from which the Assistant Secretary of the Army for Civil Works will make allocations to meet high-priority, unexpected, and urgent maintenance needs at key facilities. When an unexpected emergency occurs under current practice, it is sometimes difficult to find the needed funds on a timely basis. The new arrangement will enable us to respond to these situations promptly, without interfering with other program commitments.

The Assistant Secretary will make the allocation decisions based on the urgency of the maintenance or repair requirements, the relative availability of funding from lower-priority work, and the likelihood that additional high-priority needs would be identified in the remainder of the fiscal year.

Anti-Terrorist Facility Protection

Since the events of September 11, 2001, the Civil Works program has received appropriations of $278 million to provide facility protection measures that have recurring costs (such as guards), to perform assessments of threats and consequences at critical facilities, and to design and implement the appropriate "hard" protection at those critical facilities. The administration is continuing its commitment to facility protection in fiscal year 2005, with a budget of $84 million for facility protection. Of the $84 million, $72 million is for projects funded from the Operation and Maintenance account and $12 million is for other projects and facilities.

PRESIDENT'S MANAGEMENT AGENDA

We are pleased with the progress we are making on the President's Management Agenda. Like most agencies, we started out in 2002 with "red" ratings across the board. Our status rating for the human capital initiative is now "yellow." We now have "green" or "yellow" progress ratings for all five of the President's Management Agenda initiatives.

The Army Corps of Engineers has developed a sound, comprehensive human capital plan and has implemented its "USACE 2012" plan. The 2012 plan is the Corps guiding document for organizational changes and process changes to improve service delivery.

The Corps continues to be a strong supporter of E-Gov initiatives such as Recreation One-Stop, Geospatial, and Disaster Management. It is aggressively working to improve the overall management of its information technology investments by extensively using the Federal Enterprise Architecture to identify opportunities to identify like systems and identify possible opportunities to collaborate.

The Corps has developed a plan and management infrastructure to conduct competitive sourcing and has completed all preliminary planning steps for its first two standard competitions to be announced in fiscal year 2004.

To identify problems identified in its audits for 2002 and 2003, the Corps is improving documentation to support older assets.

We are confident that our work on the President's initiatives will yield greater program efficiency and effectiveness in the years to come.

APPROPRIATION ACCOUNTS

Although the budget was formulated largely by program area, it is presented to Congress by traditional appropriation account.

General Investigations

The budget for the General Investigations program is $90.5 million. This funding level reflects an emphasis on completing policy-consistent projects that are already budgeted in the Construction account, rather than continuing to plan, design, and initiate new work.

Within this amount, $8.6 million is to continue or complete preconstruction engineering and design of the 22 projects with the highest expected economic or environmental returns. The remaining funding will be used to continue the ongoing phases of policy-consistent reconnaissance and feasibility studies, and to continue coordination, technical assistance, and research and development. The budget funds four new studies that competed successfully with ongoing work. These studies are as follows: Southern California Wetlands Restoration, California; Boulder Creek, Colorado; Chesapeake and Delaware Canal Environmental Restoration, Delaware and Maryland; and Mississippi River-Gulf Outlet Ecosystem Restoration, Louisiana.

One of my priorities is to improve analytical tools to support water resource planning and decision-making. The budget addresses this, for instance, by increasing funding for research and development on modeling and forecasting tools, including $2.5 million for the Navigation Economic Technologies research program funded in this account.

Construction

The fiscal year 2005 budget for the Construction program is $1.4215 billion. Of that total, $115 million would be derived from the Inland Waterways Trust Fund to fund 50 percent of the costs of construction and major rehabilitation of inland waterway projects, and $10 million would be derived from the Harbor Maintenance Trust Fund to fund the Federal share of dredged material disposal facilities at operating coastal harbor projects.

The budget proposes funding for three new starts that have very high economic and environmental returns: the Washington, DC, and Vicinity flood damage reduction project; the Rio Guanajibo, Puerto Rico, flood damage reduction project; and the Everglades Pilot Projects Program, Florida. The pilot projects program is part of the Comprehensive Everglades Restoration Plan, which in turn is part of the Central and South Florida project.

Substantial funding is provided for the 11 projects completing construction in fiscal year 2005, for dam safety assurance, seepage correction, and static instability correction projects, and for eight high priority projects nationwide. The high priority projects are the New York and New Jersey Harbor deepening project ($103 million); the Olmsted Locks and Dam, IL & KY, project ($75 million); projects to restore the Florida Everglades ($125 million) and the side channels of the Upper Mississippi River system ($28 million); two projects to provide flood damage reduction to urban areas, namely, the Sims Bayou, Houston, TX, project ($16 million) and the West Bank and Vicinity, New Orleans, LA, project ($37 million); and projects to meet environmental requirements in the Columbia River Basin ($107 million) and the Missouri River basin ($69 million). The Everglades work actually is comprised of three distinct projects, as is the Columbia River Basin work.

The budget provides $52.9 million for the planning, design, and construction of projects under the Continuing Authorities Program. These are small projects for flood damage reduction, navigation, shoreline protection, streambank protection, navigation project impact mitigation, clearing and snagging, aquatic ecosystem restoration, project modifications for improvement of the environment, and beneficial uses of dredged material (including beneficial uses for environmental purposes as well as beneficial use for coastal storm damage reduction).

Flood Control, Mississippi River and Tributaries

The budget includes $270 million for the Flood Control, Mississippi River and Tributaries account.

The budget includes funding for preconstruction engineering and design for the Morganza to the Gulf, Louisiana, project. The budget also includes funding for one

new study of opportunities for the acquisition of additional real property interests in the Atchafalaya Basin.

Operation and Maintenance

The budget for Operation and Maintenance emphasizes essential operation and maintenance activities at Corps facilities, including maintenance dredging and structural repairs. The overall budget for the Operation and Maintenance account is $1.926 billion.

The budget continues the past policy of directing funding for navigation maintenance primarily to those harbors and waterways that have high volumes of commercial traffic. For small ports and recreational harbors, the budget funds maintenance work where needed to support significant commercial navigation, commercial or subsistence fishing, or public transportation benefits.

Approximately $1.103 billion is to fund projects and programs supporting navigation for commercial cargo, commercial or subsistence fishing, and public transportation. Within this amount, the budget provides about $539 million for deep draft harbors (harbors with authorized depths of greater than 14 feet); $28 million for shallow draft harbors; $411 million for inland waterways with commercial traffic of more than 1 billion ton-miles per year; and $49 million for waterways with less commercial traffic. An additional $74 million represents joint use costs at multi-purpose projects that are allocated to navigation.

Approximately $823 million is for projects and programs other than navigation, including flood damage reduction ($286 million), recreation ($253 million), natural resources management ($92 million), hydroelectric power generation ($153 million), and emergency management ($40 million, including the $35 million emergency maintenance reserve).

Regulatory Program

The recent performance assessment of this program concluded that it is moderately effective overall. The budget provides $150 million, which is a substantial increase over the fiscal year 2004 enacted amount and reflects our assessment that this program needs additional funding. The activities funded in the budget include permit evaluation, enforcement, oversight of mitigation efforts, administrative appeals, watershed studies, special area management plans, and environmental impact statements.

One of my priorities for the Civil Works program is to improve the effectiveness of aquatic resource protection and the efficiency of permit reviews and decision-making. The budget will enable us to reduce permit evaluation times, improve protection of aquatic resources, and continue wetlands protection through watershed approaches.

Formerly Utilized Sites Remedial Action Program (FUSRAP)

The Formerly Utilized Sites Remedial Action Program (FUSRAP) is an environmental cleanup program for sites contaminated as a result of the Nation's early efforts to develop atomic weapons. Congress transferred the program from the Department of Energy in fiscal year 1998. We are continuing to implement needed cleanups at contaminated sites. This year's budget is $140 million.

General Expenses

Funding budgeted for the General Expenses program is $167 million. These funds will be used for executive direction and management activities of the Corps of Engineers headquarters, the Corps division offices, and related support organizations. Within the budgeted amount, $7 million is to audit the Civil Works financial statements, a function formerly carried out by the Army Audit Agency (AAA) using its own funding. The AAA has done this work in the past, but it is not sufficiently independent of the Corps to conduct this audit under new General Accounting Office auditing standards.

Flood Control and Coastal Emergencies

The Flood Control and Coastal Emergencies account finances response and recovery activities for flood, storm, and hurricane events, as well as preparedness for these natural events and for support to the Federal Emergency Management Agency through the Federal Response Plan.

The recent performance assessment of this program concluded that it is moderately effective overall. Accordingly, the fiscal year 2005 budget includes $50 million, which is the approximate amount the Corps of Engineers spends on flood and coastal storm emergency preparedness, response, and recovery activities in a typical year. This funding will reduce the likelihood of having to borrow from other accounts or obtain supplemental appropriations.

CONCLUSION

The Army Civil Works budget for fiscal year 2005 will enable us to move ahead with many important investments that will yield enormous returns for the Nation in the future.

TABLE 1.—DEPARTMENT OF THE ARMY CORPS OF ENGINEERS—CIVIL WORKS FISCAL YEAR 2005 BUDGET

Requested New Appropriations:	
General Investigations	$90,500,000
Construction	1,421,500,000
Operation and Maintenance	1,926,000,000
Regulatory Program	150,000,000
Flood Control, Mississippi River and Tributaries	270,000,000
General Expenses	167,000,000
Flood Control and Coastal Emergencies	50,000,000
Formerly Utilized Sites Remedial Action Program	140,000,000
TOTAL	4,215,000,000
Sources of New Appropriations:	
General Fund	3,303,000,000
Harbor Maintenance Trust Fund	610,000,000
(O&M)	(600,000,000)
(Construction—Disposal Facilities)	(10,000,000)
Inland Waterways Trust Fund	115,000,000
Special Recreation User Fees	37,000,000
Power Marketing Administration Direct Funding	150,000,000
TOTAL	4,215,000,000
Additional New Resources:	
Rivers and Harbors Contributed Funds	287,000,000
Bonneville Power Administration	[1] 71,000,000
Coastal Wetlands Restoration Trust Fund	63,000,000
Permanent Appropriations	16,000,000
TOTAL	437,000,000
Total New Program Funding	4,652,000,000
Proposed Cancellation of Prior-Year Funds	(100,000,000)

[1] Beginning in fiscal year 2005, budget authority from BPA is limited to budget authority for joint use costs. Funding for the specific costs of hydropower will be executed in a BPA account and will not count as Corps budget authority. Accordingly, the amount of $71 million for fiscal year 2005 appears to be a reduction from the total fiscal year 2004 amount of $143.205 million, but in fact is a slight increase from the corresponding fiscal year 2004 amount of $69.5 million for joint use costs.

Senator DOMENICI [presiding]. Thank you very much.

General, would you like to comment also? Excuse me, I didn't have my mike on. Would you like to comment also?

General FLOWERS. Yes, sir.

Senator DOMENICI. Your statement will be made a part of the record.

STATEMENT OF LIEUTENANT GENERAL ROBERT B. FLOWERS

General FLOWERS. Sir, I am honored, again, to be testifying before you, along with the Secretary, on the President's fiscal year 2005 budget for the Army's Civil Works program.

Today, thanks to this subcommittee's strong support, this Civil Works program is balanced, responsive, and highly productive. I look forward to your continued partnership in this important program, so broadly beneficial to the Nation.

My complete statement covers more details on the fiscal year 2005 program, including the backlog, transforming the Corps, our business-management system——

Senator DOMENICI. Oh, yeah.

General FLOWERS [continuing]. And the Corps' overall value to the Nation's economy, the environment, and national defense. With your permission, I'll summarize some of the main points.

First, a word about the President's budget and the value of the Civil Works program to the Nation's economy and the environment. This budget funds the critical water-resources infrastructure that has improved the quality of our citizens' lives and provided a foundation for the economic growth and development of this country. Our projects for navigation, flood protection, ecosystem restoration, hydropower generation, and recreation directly contribute to national economic well-being. The sum of benefits realized as reduced transportation costs, avoided flood and storm damages, and improvements in environmental value is considerable.

And I'd like to share some numbers with you that illustrate the direct effect of the Civil Works mission.

First, the navigation program enables 2.4 billion tons of commerce to move on navigable waterways. The U.S. Department of Transportation estimates that these cargo movements have created jobs for 13 million people.

Second, the Corps flood-damage reduction structures have saved lives and property loss. Taxpayers save $21 billion in damages each year.

And, third, almost all of our construction work and over half of our civil planning and engineering is completed by private-industry contractors funneling money directly into the economy.

This budget also includes funding to support watershed studies. These studies will allow us to work collaboratively with many stakeholders. With the complexity of water problems today, we believe this is the direction we must take to develop the best, most comprehensive solutions.

Moving now to our backlogs, we estimate it will cost approximately $11 billion to complete the construction projects funded in the fiscal year 2005 construction general budget. The maintenance backlog continues to be challenging. The work the Corps is completing on our infrastructure is a critical element to a strong economy. Sustaining this level of service becomes more of a challenge as our infrastructure ages. The fiscal year 2005 budget includes $1.926 billion for the operations and maintenance program. I can assure you that I will continue to do all that I can to make these programs as cost effective as possible.

There are many who are interested in transforming the Corps, inside and outside of the organization. Some may have the larger goal of changes in current water policy in mind; others may want us to operate more efficiently and effectively. What I'd like to make clear is that we're listening. I've met with individuals, industry groups, and interest groups to hear what they have to say. The Corps is undergoing sweeping changes as a result of our customer and stakeholder input. We are becoming a team of teams within the organization focusing on eight regional business centers, which will more efficiently deliver service to the public and the Armed

Forces. And let me assure you, I'm committed to working with you and all who are interested, and to doing all in my power to transform the Corps to meet the Nation's needs.

I'm very proud of the Civil Works program and its support to the national security strategy. The Corps' Civil Works experience is proving invaluable as soldiers and civilians of the Corps of the Engineers help to rebuild Iraqi infrastructure. To date, over 1,000 civilian volunteer members have served in Iraq, sharing their knowledge and expertise with Iraqi engineers and other professionals, assisting the Coalition Provisional Authority and the Combined Joint Task Force in repairing and rebuilding Iraqi infrastructure.

PREPARED STATEMENT

The Corps is committed to staying at the leading edge in providing service to the Nation, and I truly appreciate your continued support to this end.

Thank you, Mr. Chairman, members of the committee. That concludes my statement.

[The statement follows:]

PREPARED STATEMENT OF LIEUTENANT GENERAL ROBERT B. FLOWERS

Mr. Chairman and distinguished members of the subcommittee, I am honored to be testifying before your subcommittee today, along with the Assistant Secretary of the Army for Civil Works, the Honorable John Paul Woodley, Jr., on the President's fiscal year 2005 (fiscal year 2005) Budget for the United States Army Corps of Engineers' Civil Works Program.

My statement covers the following 6 topics:

—Summary of Fiscal Year 2005 Program Budget,
—Civil Works Construction Backlog,
—Civil Works Program Transformation,
—Need for a More Robust Business Management System,
—Value of the Civil Works Program to the Nation's Economy, and
—Value of the Civil Works Program to the Nation's Defense.

SUMMARY OF FISCAL YEAR 2005 PROGRAM BUDGET

Introduction

This budget provides new funding for the Civil Works Program, including the Direct and Reimbursed programs, is expected to approach $5.602 billion.

Direct Program funding, including discretionary and mandatory funding appropriated directly to the Corps, totals $4.652 billion. Discretionary funding, including amounts ultimately replaced by mandatory funding, totals $4.215 billion; additional mandatory funding totals $437 million.

Reimbursed Program funding is projected to be $950 million.

Direct Program

The proposed budget reflects the administration's commitment to continued sound development and management of the Nation's water and related land resources. It provides for continued efficient operation of the Nation's navigation, flood protection, and other water resource management infrastructure, fair regulation of the Nation's wetlands, and restoration of the Nation's important environmental resources, such as the Florida Everglades.

The budget provides for continued funding of nearly all studies and projects underway, including many started in fiscal year 2005. It also provides for funding of 4 new studies under the General Investigations (GI) program.

Reimbursed Program

Through the Interagency and Intergovernmental Support Program we help non-DOD Federal agencies, State, and other countries with timely, cost-effective implementation of their programs, while maintaining and enhancing capabilities for execution of our Civil and Military Program missions. These customers rely on our extensive capabilities, experience, and successful track record. The work is principally technical oversight and management of engineering, environmental, and construc-

tion contracts performed by private sector firms, and is fully funded by the customers.

Currently, we provide reimbursable support for about 60 other Federal agencies and several State and local governments. Total reimbursement for such work in fiscal year 2005 is projected to be $950 million. The largest share—nearly $250 million—is expected from the Environmental Protection Agency (EPA) for cleanup of wastes at numerous sites under its Superfund program. Ninety percent of Reimbursed Program funding is provided by other Federal agencies.

Staffing

Total staffing for the Civil Works Program for fiscal year 2005 is 24,800 FTEs, unchanged from fiscal year 2004. Of the total, 23,700 FTEs are for the Direct Program and 1,100 FTEs are for the Reimbursed Program. Total staffing is allocated 90.6 percent to districts, 4.9 percent to laboratories and other separate field operating agencies, 2.7 percent to division offices, and 1.8 percent to headquarters.

CIVIL WORKS CONSTRUCTION BACKLOG

In the broadest sense, the "construction backlog" is unfunded work. For the Civil Works Program, it is defined more specifically, as the Federal share of unfunded continuing and future construction work at some point in time, e.g., the beginning of some funding period, such as fiscal year 2005. This definition can be further variously qualified. Such continuing and future work could include, for example, only work that is currently programmed on projects now actively under physical construction, while excluding such work where a project has not yet begun physical construction or where physical construction has been suspended for more than a year.

At the end of fiscal year 2005, it will cost approximately $11 billion in non-inflated dollars to complete the construction projects of the Construction, General, Program funded in the fiscal year 2005 budget, which represents a decrease from last year. The decrease partly reflects a decision to display the backlog in fiscal year 2005 dollars rather than inflating amounts to future dollars. The decrease is also the result of project completions, as well as the decision not to budget for periodic renourishment of shore protection projects.

As part of a comprehensive strategy to reduce the construction backlog, the Fiscal Year 2005 Budget focuses on completing those ongoing construction projects that are consistent with current policies and accelerating work on eight high-priority projects. We believe that narrowing the focus on funding and completing a smaller, more beneficial set of projects will bring higher net benefits to the Nation sooner. We need to be careful that we do not continually start new projects and subsequently stretch out the completion of existing ones. That is why the Budget proposes only three new starts of projects that have a very high benefit-cost ratio.

Maintenance Program

Water and related land resource management facilities of the Civil Works Program are aging. As stewards of this infrastructure, we are challenged to ensure that it continues to provide an appropriate level of service to the Nation. Sustaining such service, and the resultant flows of benefits, through proper operation and maintenance projects, is becoming increasingly more expensive as infrastructure ages.

The "Operation and Maintenance (O&M) Program" includes costs funded under the Operation and Maintenance, General, and Mississippi River and Tributaries, Maintenance, appropriation accounts, for the operation, maintenance and security of existing river and harbor, flood and storm damage reduction, aquatic ecosystem restoration, owned and operated by, or on behalf of, the Corps of Engineers, including administrative buildings and facilities and laboratories. Funds are also included for surveys and charting of northern and northwestern lakes and connecting waters, clearing and straightening channels, and removal of obstructions to navigation. Work to be accomplished includes dredging, repair, and operation of structures and other facilities, as authorized in the various River and Harbor, Flood Control, and Water Resources Development Acts. Related activities include aquatic plant control, monitoring of completed coastal projects and, removal of sunken vessels.

The fiscal year 2005 budget includes $1.926 billion for the Operation and Maintenance Program. In an effort to improve the efficiency of our investment in operation and maintenance, we are looking closely at how we determine the appropriate level of service and the amount of spending needed to support that level of service. Furthermore, we are searching for ways to reduce costs and thereby accomplish more with available resources.

CIVIL WORKS PROGRAM TRANSFORMATION

Throughout its long and distinguished history, the Civil Works Program has continually changed in response to advances in science, methods, and processes, changing public values and priorities, and laws. For our program to remain a viable contributor to national welfare, we must remain sensitive to such factors, and continue to reorient, rescope, and refocus the program in light of them. To that end, I'm committed to reforming the Civil Works Program to meet the Nation's current water and related land resource management needs.

We have been working very hard internally, within the Corps of Engineers, to transform. We are making our processes more open, and more collaborative. We are working to revitalize our planning capabilities, and to become more efficient, more centralized, with one planning center for each of our eight divisions.

We are becoming a team of teams within the organization, focusing on eight regional business centers, which will move efficiently and deliver service to the public and the armed forces.

Let me tell you about some of the major steps we've already taken:

—We are continuing to spread the spirit and the word of the Corps' Environmental Operating Principles—a clear commitment to accomplishing our work in environmentally sustainable ways—with the express purpose of instilling the principles as individual values in all members of the Corps team.

—We are continuing a rigorous training curriculum to improve our planning capability. This will ensure that the best science is applied in project development and that our planners will integrate economics and ecology in developing Corps projects. We're cooperating with major universities and have begun to sponsor graduate education in water resources planning. We've re-instituted our very successful Planning Associates Program, the first class graduated last year.

—Our Fiscal Year 2005 Budget for the Research and Development (R&D) Program includes funding to improve economic models. One of our principal efforts will be to focus on economic methods and tools for navigation evaluations designed to address, update, and improve specific models, and to address modeling issues raised by the Corps and others. We need to make substantial modeling advances to support decision making on proposed major investments.

—We have redoubled our efforts to engage Federal, State, and local agencies, stakeholders, and the public in meaningful dialogue. We have brought the major resource agencies to the table to assist in decision-making.

—The Corps and ASA(CW) have allocated additional resources to strengthen our internal review capability, and are considering other measures to further improve such capability. With our restructuring under USACE 2012, we have just created an Office of Water Project Review here in Headquarters which effectively doubled the size of our policy compliance review staff. The goal is to have our economists, plan formulation specialists, and environmental reviewers focus on early involvement in study development to assure compliance with established policy as projects are being developed. This group is equipped to additionally oversee administration of external independent review on controversial and complex projects through contracts with outside experts. Over the past year, we have also developed a series of policy compliance checklists to assist District and Division Commanders in the early identification and resolution of issues. I am committed to working with field commanders in providing training, lessons learned and other tools to strengthen the policy compliance quality control/quality assurance process.

—We are making good progress on developing a new Civil Works Strategic Plan that emphasizes the sustainable development, management and protection of our Nation's water and related land resources.

—We have established 5 national planning centers of expertise staffed with engineers and scientists—a step that is essential for successfully addressing the issues that increasingly arise in planning a water resources project, especially those that are costly, complex, or controversial, or which otherwise require very specialized planning work.

We're committed to change that leads to open and transparent modernization of the Civil Works Program for the 21st Century. To this end, we're committed to continuing the dialogue with you and the Corps Reform Network Steering Committee. Additionally, I have issued communication principles to ensure open, effective, and timely two-way communication with the entire community of water resources interests. We know well that we must continue to listen and communicate effectively in order to remain relevant.

NEED FOR A MORE ROBUST BUSINESS MANAGEMENT SYSTEM

Introduction

We have a reputation as the world's premier public engineering organization, which we aim to keep. Our challenge, to this end, is to "stay at the leading edge" in service to the Army, Federal Government, and Nation. The degree to which we will succeed will depend largely upon improved business operations. To enable providing service of highest relevance, we must improve our operations for more expeditious and productive performance. In recognition of this, I have been engaged, throughout my tenure as Chief, in an effort, initiated by my predecessor, to reengineer the organizations and business operations of the Corps of Engineers Civil Works and Military Programs. In that effort we have selected the project management way of doing business, or "modus operandi," as the basis for developing a business management system and attendant organizations and operations. Accordingly, we have come to call our effort the Project Management Business Process (PMBP) Initiative.

Project Management Business Process Initiative

Rationale for Selection

Our philosophy is that everything we do is a project, and every employee is a member of some one or more project teams. Selection of the project management modus operandi as the basis for developing a business management system is consistent with this philosophy. Furthermore, the Corps has used project management principles and methods in accomplishment of much of its business throughout its existence, providing seamless, flexible, efficient, and effective service for its customers. Applying this highly successful model to all of our business was eminently logical.

Purpose

In order that our 41 districts, 8 laboratories, 2 centers, and 8 divisions to work together as one United States Army Corps of Engineers (UCSACE), we established common business practices that transcend organizational and geographic boundaries. Accordingly, the purpose of our PMBP Initiative is to develop, implement, and sustain a set of modern, standardized business processes, based on industry's best business practices, and an automated information system (AIS) to facilitate use of the PMBP throughout USACE. In short we call our Project Management AIS "P2".

Implementation

The PMBP Initiative focuses on the business relationships between and among people, including customers and stakeholders; process, and communication. To create and sustain the PMBP we must examine and define, to the PMBP system, how we do our work. In the process, we are transforming ourselves into a customer-focused, team-based, learning organization. Implementation of PMBP will be accomplished in four steps, described below, under the aegis of subject matter experts from all functions and echelons of the Corps.

Business Process Manual

The PMBP Manual provides guidance for achieving our policy and doctrine. It establishes standard business processes for Corps-wide application that:

—ensure consistency in program and project execution,
—focus on meeting customer expectations,
—set parameters for means to measure progress across the entire organization, and
—enhance our ability to function both regionally and virtually with efficient management of diverse resources.

These standard business processes are used to accomplish project delivery and provide services. They enable sharing workforce resources throughout the Corps to complete projects. If a project delivery team needs someone with a particular skill to accomplish work on its project, it can borrow service of whomever may be available with that skill in any Corps office. The processes enable effective management of projects in all lines of business in our Civil Works and Military Programs. The processes are open for continuous improvement, giving all team members opportunity to change them for the better. This will lead to addressment of concerns of project managers, technical experts, and customers to assure improvements in quality, project performance, and customer satisfaction.

Automated Information System "P2"

Management of projects in accordance with the PMBP will be facilitated through use of "P2"—an automated information system. This system, expanding upon and

replacing PROMIS, will be used by the Corps team for project delivery in all lines of work. It comprises commercial-off-the-shelf (COTS) software configured with templates of our standard business processes to assist project delivery teams in managing their projects. The manufactures of this software—Oracle, Primavera, and Project Partners—are assisting the Corps in configuring the software to provide the templates.

P2 software employs state-of-the-art technology embracing program and project management best-practices and enabling compliance to our PMBP Business Manual. P2 will become the principal tool of Corps project and technical managers in collecting, manipulating and storing program and project data. P2 provides a single source of all project-related information for all programs and projects managed by field commands, and will interface with other modernized systems to assure single-source data entry. P2 will enable streamlined project and resource management, affording wider availability and Web interfaces. And, finally, because of lower costs to maintain and upgrade COTS software in future years, P2 will be more cost-effective than PROMIS.

PMBP Training

We have developed a training curriculum to promote PBBP as our new way of conducting business within the Corps and to guide individuals and organizations in the progressive development of skills for using PMBP. The curriculum promotes cultural change through individual self-paced compact-disk courses followed by small group discussions on the courses. Each individual covers the material and shares his/her interpretation with others in facilitated small group discussions. This process promotes common understanding of PMBP, its purpose, the roles of individuals, and the means to develop projects though teamwork.

Summary

In summary, the PMBP is being implemented Corps-wide to manage all Corps projects more efficiently and effectively. Supporting policy and doctrine, definitions of our business processes, and curriculum are in now in place Corps-wide. We are currently in the process of deploying P2 throughout the Corps. P2 is scheduled to be fully deployed during June of this year. Once fully deployed, the PMBP system will greatly enhance our ability to better support the Army, other Federal agencies, and the Nation.

VALUE OF THE CIVIL WORKS PROGRAM TO THE NATION'S ECONOMY AND DEFENSE

The National Welfare

Water resources management infrastructure has improved the quality of our citizens' lives and supported the economic growth and development of this country. Our systems for navigation, flood and storm damage reduction projects, and efforts to restore aquatic ecosystems contribute to our national welfare. The stream of net benefits, realized as reduced transportation costs, avoided flood and storm damages, and improvements in environmental value can be considerable.

Research and Development

Civil Works Program research and development provides the Nation with innovative engineering products, some of which can have applications in both civil and military infrastructure spheres. By creating products that improve the efficiency and competitiveness of the Nation's engineering and construction industry and providing more cost-effective ways to operate and maintain infrastructure, Civil Works Program research and development contributes to the national economy.

The National Defense

The Civil Works Program is a valuable asset in support of the National Security Strategy in that it provides a way to maintain a trained engineering workforce, with world-class expertise, capable of responding to a variety of situations across the spectrum of national defenses This force is familiar with the Army culture and responsive to the chain of command. Skills developed in managing large water and land resource management projects transfer to most tactical engineering-related operations. As a byproduct, Army Engineer officers assigned to the Civil Works Program receive valuable training, in contracting and managing large projects.

The Corps of Engineers continues to contribute to the ongoing war on terrorism, as our civil works experience proves invaluable in restoring and rebuilding Iraqi and Afghanistan infrastructure. To date, over 1,000 Corps soldiers and civilians have volunteered to serve in Iraq, sharing their technical knowledge and expertise along with their project management skills and experience with Iraqi Engineers and other professionals. Corps employees have also served in other Central Command areas

of operations providing a wide range of services and support to the CENTCOM commander's efforts.

In Iraq, we have been deeply involved in the restoration of the Iraqi Oil industry. Our involvement has helped ensure that more than 268 Million Barrels of crude oil have been exported, resulting in more than $7 billion being returned to the Iraqi economy. This income is forming the basis of the emerging national economy in Iraq, with much of the profit being reinvested in restoring Iraqi infrastructure. We are also assisting in the procurement of refined oil products in Iraq, which are essential to every day life in Iraq.

The Corps is proud to have worked closely with the Coalition Provisional Authority, U.S. Agency for International Development, and the Iraqi Governing Council in restoring reliable electricity throughout Iraq. When it became obvious that years of neglect and sabotage had brought the Iraqi electrical power production and transmission to near collapse, the Corps, working with the CPA and USAID exercised its time-proven civil emergency response capabilities and provided a much-needed boost to electricity delivery across Iraq. We continue to assist the CPA and USAID in electrical power production and distribution, and today, the average Iraqi has greater access to electricity than he had before the war. No longer is access to electricity a measure of loyalty to the Iraqi regime.

The Corps is also playing a major role in securing and making safe the more 600,000 tons of former regime munitions spread cross Iraq through our Captured Enemy Ammunition mission. As of February 10, 350,000 tons of captured enemy ammunition had been secured and protected from the hands of saboteurs and terrorists. Another 43,00 tons has been destroyed. This mission is vital to the safety of our soldiers, coalition partners, and innocent citizens of Iraq, as it helps deny terrorists access to raw materials they need to make weapons and explosives.

We are also contributing to the continuous improvement of the safety and quality of life for soldiers, sailors, airmen and marines in both Iraq and Afghanistan as we continue to construct and upgrade their living and working areas. In Afghanistan, we are also working with the USAID and the Ministry of Transportation as they restore the infrastructure necessary for a prosperous Nation.

HOMELAND SECURITY

In addition to playing an important role in supporting the war on global terrorism. We are providing security for critical physical infrastructure, throughout the Nation, including components of transportation, water, and power systems vital to our Nation's welfare. The Corps is also a key member of the Federal Response Plan team with proven experience in support of disaster response.

The Civil Works Program has completed over 300 security reviews and assessments of our inventory of locks, dams, hydropower projects and other facilities. We have improved our security engineering capability and prioritized infrastructure and are currently implementing recommended features at the highest priority security improvement projects.

For fiscal year 2005, $84 million is targeted for security enhancements at key Corps facilities. Facility security systems can include cameras, lighting, fencing, structure hardening, and access control devices designed to improve detection and delay at each facility.

CONCLUSION

Under both our Civil Works and Military Programs, we are committed to staying at the leading edge in service to the Nation. In support of that, we are working with others to transform our Civil Works Program. We're committed to change that leads to open and transparent modernization of the Civil Works Program for the 21st Century. We also are strengthening our business management capability for best performance of both programs Corps-wide.

Thank you, Mr. Chairman and Members of the committee. This concludes my statement.

Senator DOMENICI. Senator Craig, would you come down with me? We have a Senate photographer. This is the last appearance of the General, and we'd like to take a picture.

Senator CRAIG. I'm sure he'll want this committee etched firmly in his memory banks.

Senator DOMENICI. Come on, we'll do it up here. Actually, I think that his appearance before us will be memorable.

And good, not bad. Right here. Gosh, I've got to straighten up here. I don't look like a general, but—thank you. He came in a hurry.

General FLOWERS. Thank you, sir.

Senator DOMENICI. Okay. Mr. Secretary, we're not going to take your picture. You're probably going to be around here a little while.

Mr. WOODLEY. You're very optimistic.

Senator CRAIG. We're hoping.

Senator DOMENICI. I am. Why not?

Well, I want to say that all of these good things that you all have talked about may not get done, because the President's budget is pretty weak. We may be challenged, but we're doing the best we can on the numbers, and we figure that the fiscal year 2004 enacted is $4.571 billion, and the real request for 2005 is $4.065 billion. The difference is $506 million. That's the cut. Now, I hope that's wrong, but that's what my staff tells me. Now, I don't know how we can do all the things we have to do with those kinds of budgets.

General, I want to say, for the record, that you've gone through some hard times. You've gone through a period of time when you were strained by accusations and allegations that turned out to be much, much less than the hullabaloo made about them. But the Corps continues on.

And I would like to share with my colleagues, who may not already be aware, that the Corps is the project management in Iraq. They are the agent. They are the agency directly tasked with the physical reconstruction of Iraq because of both its expertise and in management, on a large scale, and its rehabilitation of critical infrastructure. I find it ironic that the Corps' talent that we are heavily relying on in Iraq is the very same one that is most negatively impacted by the budget of the administration.

I believe the administration, if it had its way, the Corps would merely become an operations and maintenance agency. I will tell you, Mr. Secretary, that the very core talent we are utilizing in Iraq was only developed as a direct result of the domestic work that we're doing in all of our States.

I think the administration is missing the point, that this country's economic well-being is closely linked to the waterways, be they rivers, harbors, or wetlands. Further, it's our interest to ensure that we maintain these resources for our continued successful competition with the world marketplace. We talk a lot about it, but we never mention that our waterways, our harbors are terrifically important as that goes on in the world.

This country has an aging water-resource infrastructure. For example, 50 percent of the Bureau of Reclamation's dams were built from 1900 into the 1950's, before the current state-of-the-art construction and the techniques that go with it; therefore, they require maintenance of a special type. Even though the budgets are tight, I am concerned that no one is working to address the longer-term problem, an aging infrastructure, one of these problems that we all put off. We absolutely have to address them.

It costs us more when we delay them, and we are going to wait around until something drastic happens, and then somebody's going to be blamed. At least we know it, at least you tell us, at

least you warn us. Nobody seems terribly interested, from what I can tell.

Now, I note that in my opening statement, which I'll make part of the record that the administration's budget is about 11 percent, that's what that number is, below the 2004 funding level. Now, that's my evaluation, because I take into consideration some things the administration assumes we're going to get, that will be moved over to the budget and be a plus. Same thing with the Bureau of Reclamation.

Mr. Woodley, if the Congress were to enact the President's request—I don't intend to put you, as an administration appointee, in too much of a bind—but if we were to enact the President's request, without modification, can you tell us now, or would you prefer to tell us in writing, what the impact on the Corps of Engineers would be?

Mr. WOODLEY. Mr. Chairman, I'll explain—I'll give you my views to the maximum extent possible now. If you'd like for me to elaborate in writing, I'd be delighted to.

Senator DOMENICI. Well, we need to know.

Mr. WOODLEY. Yes. This is a very frugal budget that will allow us to continue generally with the things that are underway in 2005, with contracts that are already in place in 2004. It will allow us to move forward in an appropriate way on the 11 projects that are expected to be completed in 2005. It will allow us to continue in an aggressive way with the priority projects that we've identified, that are very good projects. But it will cut back substantially on our ability to do studies that are needed for future work, going forward, and it definitely will not allow us to make a great deal of headway on deferred maintenance, for instance. It is a very frugal budget.

Senator DOMENICI. Well, let me tell you, Mr. Secretary, the budget contains multiple proposals, which, if enacted as proposed, would terminate many ongoing projects. You know that.

Mr. WOODLEY. Yes, sir.

Senator DOMENICI. The Energy and Water bill, and the proposal is to carry a general provision as part of that to cancel specific projects. States affected are Alabama, Alaska, Mississippi, North Dakota, West Virginia, just to name a few. Specifically, there are 29 projects which would be legislatively terminated. How this list was arrived at, I don't know. Maybe you know. Do you?

Mr. WOODLEY. Yes, sir, I do.

Senator DOMENICI. Do you want to tell us?

Mr. WOODLEY. These are projects that, for a variety of reasons, it was felt were not the best investment at the time or were not prepared and fully vetted and ready to proceed with the investment in fiscal year 2005.

Senator DOMENICI. Well, I'll tell you, I hope you know that this committee and this chairman are put in a terrific bind because you may not know, but the General knows; he's been around here long enough, but we don't have complete control over this. Senators want projects. Senators have approved of a number of these projects. And you can sit around all you want over there saying they don't make sense, et cetera, but there are none of them that don't fit the cost-benefit ratios required by the Corps.

You now say they don't fit, whatever you just said—but the cost benefit was established as a way to clear projects so they would not be irrelevant, pork-barrel, and whatever else you call them. How many of these projects are under construction, if you know? And what would be the impact of terminating?

Mr. WOODLEY. I would have to provide that for you, unless——

Senator DOMENICI. Do you know, on the Corps side, General?

General FLOWERS. I think there are 12 projects currently under contract, and 5 more were planned to be awarded in fiscal year 2004, so 17 projects, sir.

Senator DOMENICI. Seventeen projects, between those that are in-being, ongoing, and five that were ready to go that Senators and their States are expecting.

General FLOWERS. That's correct, sir.

Senator DOMENICI. Okay.

The Corps is carrying out a study to restore the Bosque along the Rio Grande, in Albuquerque. That's our green way that runs through it. You've been there, General, I think.

General FLOWERS. Yes, sir.

Senator DOMENICI. Can you update me on the status of the study and next steps? And when do you anticipate the project will be ready for construction authorization?

Anybody know?

General FLOWERS. Yes, sir. We have completed the reconnaissance phase through—or will complete that, through fiscal year 2004 funding. And fiscal year 2005 funds are used to initiate the feasibility study. And so the budget does include $175,000 toward completing the study.

Senator DOMENICI. Okay. Now, I'm fully aware, General and Mr. Secretary, that we are short of money, but, I'll tell you, I don't intend to wait around forever for this project. It's very important. It's one that will establish, for the city of Albuquerque, kind of what the city is, and that's pretty important, if you know about cities.

I want to ask a question about the internal operation of the OMB versus the Corps. What I've heard is startling, but I'd like you to tell me.

Mr. Woodley, how many OMB examiners does the Corps, which is a $4.5 billion agency, have? And how many does the rest of the Department of Defense have? Who knows?

Mr. WOODLEY. I don't know the answer to that.

Senator DOMENICI. General?

General FLOWERS. Sir, I think the last count I had, there were eight Corps examiners. That includes the two supervisors that are a part of that group.

Senator DOMENICI. Okay.

General FLOWERS. And I am not sure on the number for the rest of the Department of Defense, but I believe that number to be three.

Senator DOMENICI. Three. Well, I wonder who makes the decision that the Corps of Engineers needs eight examiners, and all of the Department of Defense has three. Who makes that kind of decision? Who knows? You don't know?

Mr. WOODLEY. I would have to ask the director of the——

Senator DOMENICI. OMB.

Mr. WOODLEY [continuing]. Of the office, Mr. Chairman.

Senator DOMENICI. Well, we're going to ask him.

Mr. WOODLEY. I don't know.

Senator DOMENICI. If the committee doesn't mind, we'll ask him now, as a result of this hearing. And if he doesn't answer, we'll haul him up here and ask him why.

I'm of the opinion that they're out to get you and it's rather strange to me that this goes on, and nobody raises any Cain. But we will. That's an unfortunate situation, unless they have some justification that I'm not aware of.

I want to close by telling you I have about eight or nine questions, but we're close to lunch, and we have two Senators who want to ask questions, and I want to let 'em.

Senator Craig, would you mind if we let the Senator proceed with a few questions? She's told me it's going to take 6 minutes.

But then she suggested 6 minutes on Senate time.

And then I suggested 6 minutes on the chairman's time.

Senator MURRAY. And I'm not sure which is better. I'll take the better one.

Senator DOMENICI. Okay. Proceed.

STATEMENT OF SENATOR PATTY MURRAY

Senator MURRAY. Thank you, Mr. Chairman. Thank you to all of you for being here today.

General Flowers, as you know, I and my Northwest colleagues have been supporting the Columbia River Channel Improvement Project. With the support of Chairman Domenici and Senator Reid, I've been able to provide $10 million for that project over the past 4 years. Each time, this subcommittee has had to add money, because the President's budget never provides any funds for the project, and this year is no different.

This page from the budget shows that, once again, the administration's budget is zero for this project, and I wanted to be here today to ask you a series of questions about the Columbia River Channel Improvement Project and the administration's lack of funding.

First, General Flowers, is it true that the recon study, feasibility study, authorization, and Chief of Engineer's report on the Columbia River Channel Improvement Project are all complete?

General FLOWERS. Yes, ma'am, it is.

Senator MURRAY. Thank you. General, in its original budget submittal to the Office of Management and Budget, did the Corps request funding for the Columbia River Channel Improvement Project in fiscal year 2005? And if they did, how much did they ask for?

General FLOWERS. Ma'am, there are a number of internal deliberations that go on inside the Agency and Administration, and there's a process that's put together to vet projects before—and clear them—before they can be included in the budget, and this one was not fully vetted and cleared, so it was not.

Senator MURRAY. So the Corps did not request funding for this project.

General FLOWERS. No, ma'am.

Senator MURRAY. Well, it was my understanding that the Corps did want to move on this project. Can you tell us why the President's budget did not contain any funding for this?

General FLOWERS. We were—the project was not cleared by OMB.

Senator MURRAY. Was not cleared by OMB. General, what would be the minimum funding level necessary to move on this project in fiscal year 2005?

General FLOWERS. It's $15 million, ma'am.

Senator MURRAY. Okay. Well, I want to ask you about a Texas project, called Brazos Island. And let me be clear with the committee, I don't know anything about that project, I have no position on it, but I do find its situation really interesting in comparison to the Columbia River Project.

Have the recon study and feasibility study been completed for the Brazos Island Project?

General FLOWERS. No, ma'am.

Senator MURRAY. Has not. Has the Chief Engineer's report been completed for that project?

General FLOWERS. Has not.

Senator MURRAY. Well, in its original 2005 budget submittal to the Office of Management and Budget, did the Corps request construction funding for Brazos Island?

General FLOWERS. No, ma'am. We—I would not request funds for a project that did not have a favorable Chief's report.

Senator MURRAY. Well, who put funding in, then, for Brazos Island?

General FLOWERS. I do not know.

Senator MURRAY. Well, in light of the Brazos Island budget, it seems clear that OMB could have provided funding for the Columbia River Channel Improvement Project based on same criteria. Would you agree with that?

General FLOWERS. Yes, ma'am.

Senator MURRAY. The Corps budget has language suggesting that the administration may propose construction funding in fiscal 2005, pending OMB review. Has the ASA report been submitted to OMB for review?

Mr. WOODLEY. Do you want me to answer that, ma'am?

Senator MURRAY. Yes. Well, I would prefer that the General did.

General FLOWERS. Yes. The answer is yes, ma'am.

Senator MURRAY. Okay. Should we expect a fiscal year 2005 revised budget request supporting construction for Columbia River Channel Project? And if so, when?

Mr. WOODLEY. Well, I'm sorry, I must not have understood the prior question——

Senator MURRAY. Should——

Mr. WOODLEY [continuing]. Senator.

Senator MURRAY. Well——

Mr. WOODLEY. I apologize. Let me say, Senator, that I have just returned——

Senator MURRAY. I——

Mr. WOODLEY [continuing]. From the region.

Senator MURRAY. I understand.

Mr. WOODLEY. I spoke with the directors of the ports and with the leaders of the division and district. We are very anxious to get that project moving forward, in spite of the fact that, as you know, we are facing litigation with respect to the project that I certainly hope will not be any kind of impediment to us.

Senator MURRAY. Well, I understand that, but——

Mr. WOODLEY. As I understand the status right now, the report is under review in my office. I have given it the highest priority, and I want it to be sent to OMB as soon as possible. And I want it to be sent this month.

Senator MURRAY. So are we to expect a revised budget request supporting construction?

Mr. WOODLEY. That is certainly something that is seriously under consideration. I certainly am not in a position to make a commitment to that, but it is under very serious consideration, and it will be done as soon as possible.

Senator MURRAY. Well, given the shortfall in the Corps overall budget, what projects that are included are going to give up funding for the Channel River Improvement Project?

Mr. WOODLEY. I think that we would have to consult on that and see what other adjustments can be made elsewhere in our budget, or elsewhere, working very closely with the Office of Management and Budget to provide the funding at the appropriate level for fiscal year 2005, but that is a——

Senator MURRAY. Well——

Mr. WOODLEY [continuing]. Project that I am anxious to move forward. I am——

Senator MURRAY. So you can't——

Mr. WOODLEY [continuing]. Doing everything I can——

Senator MURRAY [continuing]. Tell us where the money'll come from right now?

Mr. WOODLEY. Not today. No, ma'am.

Senator MURRAY. Well, General Flowers, another project, the Green/Duwamish Restoration Program, was given a new start by this subcommittee in 2004. It's authorized, and its studies are complete. Can you tell me if the Chief of Engineer's report on that program is complete?

General FLOWERS. Yes, it is.

Senator MURRAY. Can you tell me why OMB has not provided an administration position on that program, and not provided any funding for that program?

General FLOWERS. No, ma'am, I cannot. To my knowledge, it's still under OMB review.

Senator MURRAY. Well, General—Mr. Chairman, really—I am concerned about the role that OMB seems to be playing in delaying or advancing these projects, and I'm wondering if OMB is also playing a role in the final position of the Chief of Engineer's report.

Can we be assured, General, that the Corps alone is determining all final reports and can stand before a judge and swear to each one's integrity?

General FLOWERS. Ma'am, until this year, the answer to that question would have been absolutely yes, but I am now concerned. And I would like to give a very brief explanation.

No intent to beat up on OMB. I think they are civil servants, who are trying to do their job. And in so doing, they are now trying to take a more active role in looking at projects as the Corps is going through its process. And I commit to you that I will resist the—I will resist any attacks on the integrity of the Chief's report, because my job is to provide you the best engineering and science and recommendations——

Senator MURRAY. Sure.

General FLOWERS [continuing]. Based on that, that's possible. But there is a tendency now for the Office of Management and Budget to try to clear pieces of our process before we are permitted to continue. And we are internally debating that right now, and I can't tell you what the outcome will be.

Senator MURRAY. Well, thank you, General, for your honesty.

Mr. Chairman, I find that deeply disconcerting, and I hope this committee pursues that.

Senator DOMENICI. You heard me awhile ago.

Senator MURRAY. I did.

Senator DOMENICI. The reason they can do it is because they have so many of their people, OMB's people, hanging around the Corps——

Senator MURRAY. Yeah.

Senator DOMENICI [continuing]. Doing all kinds of investigations and analysis, and that's a lot. I mean, there are some big departments that don't have eight, I can tell you that. If they did, they wouldn't have enough space for OMB. They'd be coming out—they'd have to have an office of their own.

Senator Craig.

Senator CRAIG. Thank you, Mr. Chairman.

General Flowers, what the Senator from Washington has just led you through is something that is strongly supported by the delegations of the three States affected by that Lower Columbia Basin—or Lower Columbia River dredging. If we want to render the Port of Portland and Tacoma, and all of that area down through there, ineffective after hundreds of millions of dollars of investment, all the way through to Lewiston, Idaho, which is the last port facility in that series of facilities along the Snake and the Columbia system, then we will do so by simply not dredging that stretch from Portland, west to the mouth. And it's been a long time coming, a tremendous investment has been made, phenomenal efforts at environmental mitigation have occurred. It is ripe and ready, and there is no reason it should not move forward.

Or you simply turn the lights out at the Port of Portland, and then you progressively turn the lights out up the system, and that is not our intent. It will not be our intent. And I'm glad to hear that it's under critical review again. I hope it becomes a priority, posthaste, as it relates to funding. Enough said about that.

All I will comment, Mr. Secretary—as it relates to the 41 projects that are not consistent with current policy, here's the operative question. And the question goes like this. Senator *x* says to this Chairman, "Mr. Chairman, is one of my projects of the 41?" And if it is, then that Senator is going to put phenomenal pressure on this chairman to deny you what you're attempting to do. I've not

yet asked that operative question of the chairman "Are any one of these 41 in Idaho?", but the question will get asked. Here is——

Senator DOMENICI. And then, besides, when you get the answer, if it is that it is, you will go to work——

Senator CRAIG. Of course.

Senator DOMENICI [continuing]. In the committee to try to get it.

Senator CRAIG. Yeah.

Senator DOMENICI. Not just me. If you go to work on me, I don't have all the votes; I might say I won't do that, Senator Craig. But then you'll go to work on Senators, and they will have what we always have, and that's that Senators of the United States want it.

Senator CRAIG. Yeah.

Senator DOMENICI. All right?

Senator CRAIG. Yeah.

Mr. Secretary, here is—before I close, General Flowers, let me again thank you for your service to this country and to this area, and, most importantly, your work before this committee, your forthright-fulness. We appreciate it greatly, and we thank you, and we hope you have success in a different role in a different life.

General FLOWERS. Thank you, sir.

Senator CRAIG. Mr. Secretary, let me turn to you for my last question, and it's a bit involved, but I think it's an important one. And, Mr. Chairman, for the work that you've been doing the last good number of years, along with me and others, I think this is an important question.

Congress has been working on a comprehensive energy bill for over 3 years now, and this chairman has led a phenomenal effort. There is no question that our country needs an energy policy, and we've been trying to deliver that to the American people. One of the key elements of the pending legislation is infrastructure reform.

Although we've focused on infrastructure nationwide, there is a growing concern about natural-gas infrastructure in the Northeast. The market for natural gas has grown considerably in the Northeast, and new pipeline construction is critical to meet this growth. The Federal Energy Regulatory Commission is the jurisdictional agency for reviewing and approving natural-gas pipeline construction in the United States.

Like the hydroelectric licensing process at FERC, the pipeline construction process at FERC is substantial and complicated, but I'm learning that the process is becoming even more complicated because other agencies, like the Corps are also involved in the pipeline construction process and bringing their own understanding of purpose and need to the project. In the Corps' case, your agency is involved in a—is a consequence—the Corps' involvement is a consequence of the Clean Water Act authority to issue Section 404 permits before construction can take place.

Here's my problem. FERC is the agency given the responsibility to determine whether a pipeline project can—should be constructed. That determination must include an assessment of need, as well as environmental impact. By law, the Corps, as well as other interested Federal and State agencies, have been given the opportunity to participate in the process.

Here are the questions. Why, then, would it take over 17 months since the issuance of the FERC certificate for the Islander East Pipeline for the Corps to act on a Section 404 permit for that project? If you don't have the answer, I'd like to know the answer. Seventeen months. A year and a half, or nearly that. Why would you act in a sequential fashion after the Commission has acted on this project?

My bigger question is—and one more focused on the purpose of this hearing today—why are you using resources to redo work already done by a Federal agency with the exclusive jurisdiction of determining the need and environmental sufficiency of a pipeline project? This is government redundancy run amok. Or by at least appearance, it is.

What expertise does your district office have in pipeline siting and construction that would put your staff in a position to second-guess the Commission's staff, public review, and determination of what constitutes a reasonable set of viable alternatives? Would you support the concept of one Federal—one lead Federal agency record for the review of infrastructure proposals by all agencies?

Those are the series of questions that we're trying to address in the energy bill. And in sorting through what's going on out there, the Islander East Pipeline appears to be a perfect example of why we ought to be changing the way this system doesn't work.

Your response?

Mr. WOODLEY. Senator, certainly the question of taking 17 months on a single permit cries out for an investigation, and I will investigate that. I am not aware of the details of the project as I sit here before you. We are very much in need of a streamlined process, and the administration has been working on streamlining our processes in many arenas. I'm aware of transportation work, I'm aware of some work in the energy arena, and the Corps has been part of that, and I want to continue that and foster it and support it in every way.

We have to proceed very carefully, however, because of the potential for litigation in these contexts. I'm concerned. For instance, if you look at the situation that we're facing with coal mining in the Appalachian region, where we have the Office of Surface Mining, for many years the Corps deferred to their expertise in this arena, which I believe was entirely appropriate. Unfortunately, a Federal court decided that it was not appropriate, and we have a very difficult situation that we are trying to manage in that region to get a permitting operation in place there that will be effective and efficient, and will survive Federal court scrutiny.

Senator CRAIG. Well, I've asked a series of questions, and I would hope that you would search for answers——

Mr. WOODLEY. I will, indeed.

Senator CRAIG [continuing]. Because the reason it is asked is, in part, to be critical, but it is also to point out that you may be part of a problem. And it's a problem we're trying to solve. And when you have district offices who would assume to have the expertise that a national office who specializes in a given area has, and would second-guess them or third-guess them, that's a kind of duplication this country can ill afford. And I've not even talked about State agencies' roles yet, or role that they play in these siting situ-

ations. While they are critical—and we're trying to bring a major delivery system down out of Alaska into the Lower 48 to distribute gas and drive down costs and hopefully drive up employment and avoid the dislocation of industries that are today employing thousands of people that are now going offshore, and we can't—and we have to wait 17 months for a process, why should we do our effort? Unless we go right down to the system and clean it out.

Now, I know that the administration is very intent on trying to streamline and organize. We've talked about centralizing and—so that we can get a certification or a movement process that isn't redundant upon—this idea of time, time, time. The chairman spoke of my effort in hydro relicensing. Perfect example is right here now in pipeline. You know, 2, 3, 4, 5, 6, 7 years? Because agencies upon agencies thought they knew better than somebody else and could dot an "i" better than somebody else could? It would seem to me almost easier to do it within your authority, to do it reasonably. And if you get locked up in the courts, you might get into court and get a decision sooner than 17 months. And you're not even guaranteed now that you will get that after the fact. So another 17 months from now, we may still be waiting for this to be processed by a court.

Senator DOMENICI. Yup.

Senator CRAIG. And now we're into another couple of years. I mean, I've spoken my frustration here. I'm very happy to work with you on this. These kinds of problems have to get resolved, unless our country just implodes on its own ability to produce and supply energy, and we drive everything offshore. Shame on us if we do. But if we can solve it, and we're trying to, and we want you to work with us, here's a good example. And maybe this ought to be a template by which we can make a decision on what ought to be improved and changed.

Mr. WOODLEY. Yes, sir.

Senator CRAIG. I thank you all very much.

Senator DOMENICI. Well, General, you got by without me asking you about our famous Acequias in New Mexico, but I think we've at least taught you how to say it.

General FLOWERS. Yes, sir.

Senator DOMENICI. These are these little ditches in New Mexico that are historic, and it's one of the few projects that you don't have to have a cost-benefit ratio, because there's a statute saying we want to protect them. They're 400 years old.

But I will say, just ask, there's nothing holding this project up other than budgeting, is that right?

General FLOWERS. No, sir, there's nothing holding it up.

Senator DOMENICI. All right. And this is another year where the administration didn't fund it. Didn't even fund $2 million worth. We'll find it and keep it going.

Let me ask, General, what's the difference between the Corps that you are part of and the soldiers that are part of the Corps that are going to Iraq? Aren't they all the same?

General FLOWERS. Yes, sir. We have a way of describing ourselves. We call ourselves the Engineer Regiment, and it's made up of soldiers from all components—active, guard, and reserve—Department of the Army civilians, and contractors, who work, in some

cases as part of our staff, and who perform all of the work that we do. Then the Civil Works program that is a great part of the Corps of Engineers is a capability that the Nation leverages, particularly when it transitions from peace into conflict, or conflict back into peace. And, as I mentioned, we've had over a thousand of our civilian employees volunteer and serve, many from our Civil Works program, and have served both in Iraq and Afghanistan.

Senator DOMENICI. I tell you why it comes to my mind. You know there's such a rotation system, and it's so firm that we lose our colonel in New Mexico just about the time he understands how to say Acequia and just about the time he knows what New Mexico's problems are. But this last time, he was down on the Rio Grande River, where such a beautiful job was being done in cutting down salt cedar and burned-down trees, and he didn't look too happy. And I asked him what was the matter. He said, "Well, I'm going to leave here in a couple of weeks, and I have a wife and one baby—and she's pregnant—and I'm going to Iraq." I had no idea, at that point, that somebody like that would go to Iraq, but I found out from him that he's very much needed, and he'll go over there and fit right in and be part of the team that's building things, right?

General FLOWERS. Yes, sir.

ADDITIONAL COMMITTEE QUESTIONS

Senator DOMENICI. And they're good at it, and it is amazing, to me. And I'm going to find out why that the Office of Management and Budget spends so much time and effort and so many people dedicated to trying to find out what you do and how you do it, and what you do right and what you do wrong. I just don't understand it. I'm going to ask them how many they'd need if they gave this ratio to all the departments in the government. It would be a very interesting fact. In fact, we'll submit that question to them as a result of this meeting, just tell them we've heard about this and found out about this and we'd like to know.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR TED STEVENS

Question. The Corps started studying the Tatitlek breakwater and harbor in 1994, it was approved as a Section 107 project in 1995, the study phase was almost completed in 2001, with a draft report circulated within the Corps and submitted to the Pacific Ocean Division. Since then it has been stalled with little progress in the last 2 years. Does the Corps plan to get this project back on track?

Answer. A Draft Detailed Project Report and EIS was presented to the Local Sponsor and the Village of Tatitlek on March 11, 2004 regarding development of a harbor at Tatitlek using the Section 107 Continuing Authority Program for small navigation projects. The cost for the National Economic Development plan was estimated at $10.3 million of which a non-Federal sponsor would need to provide about $6.8 million due to the $4 million statutory Federal limit on Section 107 projects. The Local Sponsor (Alaska DOT and PF) and the Village of Tatitlek are currently evaluating their options and trying to identify potential sources of funds to build a harbor. Due to depletion of existing funds, if the Local Sponsor decides to continue the Section 107 study, the Local Sponsor will be required to provide additional matching funds (as required by the Water Resources Development Act of 1986) to finalize the Detailed Project Report and EIS.

Question. Language was included in the fiscal year 2004 Omnibus Appropriations Bill to waive the matching requirements for the City of Sitka to correct the design

deficiency for the breakwater for the Thomsen Harbor. However, the Corps has informed us that the language was not sufficient to waive the local match and that Sitka must still provide a match to redesign the breakwater that was not designed/constructed properly in the first place. Does the Corps intend to require Sitka to fund the local match of the breakwater for a second time?

Answer. The State of Alaska, rather than the City and Borough of Sitka (CBS), funded construction of the Thomsen Harbor breakwaters. The breaks in the breakwaters were installed at the request of environmental resource agencies with the full knowledge of the State and the CBS. At the time the State and the CBS did not want to spend the money and take the time required to conduct a physical model study of the breakwaters configuration. If physical modeling were performed at that time, the deficiency in the breakwaters would have been apparent. A technical study, which includes physical modeling and updates of the economics and environmental aspects of Thomsen Harbor, would need to be performed before design and construction could be initiated. Unfortunately, the language to waive cost sharing in the fiscal year 2004 Appropriation Bill Senate Report does not override the cost sharing law of WRDA 1986.

Question. All of the Alaska District construction projects require additional funding for the projects to stay on track. Why is there such limited funding for construction projects in Alaska?

Answer. The Alaska District has received almost $20 million from other Districts in fiscal year 2004 for construction projects. The Alaska District has funding for four construction projects in the fiscal year 2005 budget proposal, Chignik, Nome, St. Paul, and Sand Point harbors. The funding for these projects was limited to the appropriate amount consistent with the administration's assessment of national priorities for Federal investments. Additional capabilities have been expressed for each of these projects as follows: Chignik—$3 million, Nome—$23 million, St. Paul—$16 million, and Sand Point harbor—$10 million. Kake Dam, False Pass, Seward, and Wrangell harbors will also be under construction in fiscal year 2005 but have not been budgeted. Kake Dam's outcome is not considered a high priority by the administration and the remaining projects will not be budgeted until after OMB review of the respective decision documents is complete. Capabilities for these projects are Kake Dam—$7 million, False Pass—$10 million, Seward—$6 million, and Wrangell harbor—$10 million.

Question. There is $50,000 in fiscal year 2005 budget for the Anchorage Harbor Deepening. Is the Corps coordinating this work with the Port of Anchorage with regard to the port expansion?

Answer. Yes, we have been working closely with the Port of Anchorage and congressional staffers to develop authorizing language for dredging that will be required as a result of the port expansion.

Question. There is no funding in the fiscal year 2005 budget for ongoing construction work at Seward Harbor. Does the Corps intend to complete this project?

Answer. Please refer to the response to question No. 3. The construction contract for Seward Harbor was awarded on Feb. 3, 2004 in the amount of $8.47 million. Alaska District was given authority and funding (Public Law 108–7) to award the construction contract even though OMB has not approved the feasibility report. The Corps will not be allowed to budget for this project until it receives OMB approval of the project. The anticipated construction placement in fiscal year 2005 for this project is $6 million, which will complete this project. If sufficient funding is available, the Corps intends to complete construction activities in fiscal year 2005.

Question. The Permit for King Cove road was issued on January 22, 2004 and the preferred alternative for the road is one supported by the community which extends the road 17 miles and utilizes a hover craft to cross Cold Bay to King Cove. Do you anticipate any further problems or potential delays for King Cove road?

Answer. There is no reason to expect any delays caused by permitting requirements. Aleutian East Borough has awarded the construction contract to SKW (Arctic Slope Regional Corporation-Nugget); they are scheduled to start fieldwork in June 2004. The Corps has received no indication from any organization or group indicating that there would be any legal challenge to the permit authorization.

Question. I understand there are some concerns with work being done at St. Paul Harbor regarding NOAA requesting the Corps to perform diesel seep site remediation. What is the status of these discussions?

Answer. NOAA did ask the Alaska District to modify the existing Saint Paul Harbor, Phase II, contract. We had several concerns about modifying the existing contract, and suggested that we use another contract mechanism that would allow the diesel seep work to be awarded in fiscal year 2004 and performed in fiscal year 2005. NOAA has verbally informed us that they will use one of their own contracts to perform the work in fiscal year 2004. We will continue to work closely with

NOAA to assure that our respective work that is in the same area proceeds smoothly.

Question. It is my understanding that the Corps does not believe that there will be any Federal interest in the proposed Knik Arm Bridge. What is your understanding of this matter and do you believe the Corps should be involved in the planning, be it greater dredging and deepening in the Cook Inlet, or otherwise for the Knik Arm Bridge?

Answer. The Corps is still performing the Knik Arm Bridge reconnaissance study. Funding is being used to complete a 905(b) assessment that will determine if there is Federal interest in further studies. However, the addition of bridge approaches, abutments, and piers could greatly affect the sediment deposition patterns and tidal currents at the Port of Anchorage, which in turn will affect the ongoing operation and maintenance of the Corps' navigation project. If the 905(b) assessment recommends proceeding with a feasibility study, these affects on the port will be included in the future study. Due to the large tides and complex tidal currents in Cook Inlet, a detailed hydrodynamic mathematical and physical model would be needed to identify the most acceptable design for the bridge length, abutments, and pier configuration required to maintain efficient operations at the Port of Anchorage. Other authorities that would enable Corps assistance in future planning studies in Cook Inlet include Section 216 of the Flood Control Act of 1970 (Public Law 91–611) which authorizes the Corps to assess modification of existing projects due to changed physical or economic conditions. The Section 216 language is as follows.

"The Secretary of the Army, acting through the Chief of Engineers, is authorized to review the operation of projects the construction of which has been completed and which were constructed by the Corps of Engineers in the interest of navigation, flood control, water supply, and related purposes, when found advisable due to significantly changed physical or economic conditions, and to report thereon to Congress with recommendations on the advisability of modifying the structures or their operation, and for improving the quality of the environment in the overall public interest."

We have also met with members of the Knik Arm Bridge Authority to discuss future Corps assistance. There was some interest expressed in using our physical model capabilities, engineering services such as surveying and drilling, and gathering data, developing, and performing portions of the EIS. Unless other specific Congressional instructions and funding are provided, these services could be provided under such programs as Planning Assistance to States and cost shared 50/50 with the Sponsor.

CONCLUSION OF HEARINGS

Senator DOMENICI. Okay, we're in recess until the call of the Chair. Thank you.

[Whereupon, at 12:15 p.m., Tuesday, April 20, the hearings were concluded, and the subcommittee was recessed, to reconvene subject to the call of the Chair.]

ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 2005

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

NONDEPARTMENTAL WITNESSES

[CLERK'S NOTE.—At the direction of the subcommittee chairman, the following statements received by the subcommittee are made part of the hearing record on the Fiscal Year 2005 Energy and Water Development Appropriations Act.]

DEPARTMENT OF DEFENSE—CIVIL

DEPARTMENT OF THE ARMY

CORPS OF ENGINEERS

PREPARED STATEMENT OF THE CITY OF LOS ANGELES BOARD OF HARBOR COMMISSIONERS AND PORT OF LOS ANGELES

Mr. Chairman and members of the subcommittee, thank you for the opportunity to submit testimony in support of the Channel Deepening Project at the Port of Los Angeles, the largest container seaport in the United States. Our testimony speaks in support of an fiscal year 2005 appropriation of $35 million for the Federal share of continued construction of the Channel Deepening Project at the Port of Los Angeles. This critical Federal navigation improvement project underpins the United States' decisive role in international trade. Consistent with the goals and priorities of the administration and Congress, the Channel Deepening Project will provide immediate and significant economic return to the Nation, fulfill the commitment to environmental stewardship, and foster positive international relations. We respectfully request the subcommittee to fully fund our fiscal year 2005 appropriation request of $35 million.

The Corps of Engineers recently revised the cost of the Channel Deepening Project, and the Federal share, to account for credits for in-kind services provided by the Port and other project modifications. The Corps issued these credits before the Port and Corps' execution of the Project Cooperation Agreement. The modifications include adjustments to the disposal costs for dredged material, adjustments for construction contract changes, and project administration costs. The Corps' revised cost is now $222,000,000, representing a Federal share of $72,000,000 and a local share of $150,000,000. Furthermore, in fiscal year 2003, we experienced a funding shortfall challenging the Port to meet construction contract earnings. As such, under authority provided by Section 11 of the Rivers and Harbors Act of 1929, the Port of Los Angeles advanced more than $13,000,000 to the Corps of Engineers to cover the shortfall, and avoid costly construction shutdown or debt service due to interest accruals. Similarly, fiscal year 2004 funding shortfalls may also prove to be insufficient to meet construction contract earnings and could significantly slow the current construction schedule for this year. Mr. Chairman, while we are so grateful that the President's fiscal year 2005 budget includes $23 million for the Channel Deepening Project, the previous funding shortfalls and the increased project costs compel us to request the higher funding level. As you may be aware, the Corps of Engineers reprogrammed $23 million from the South Pacific Division last year without allocating

any portion of those dollars to the Channel Deepening project that is performing well.

Dramatic increases in Pacific Rim and Latin American trade volumes have made infrastructure development at the Port of Los Angeles more critical than ever, with more than 42 percent of containerized cargo entering the United States through the San Pedro Bay port complex. The Port of Los Angeles, alone, handled more than 7.2 million 20-foot equivalent units of containers (TEUs) in calendar year 2003 (a 20 percent increase over 2002), representing ongoing unprecedented growth for any American seaport. This burgeoning trade has resulted in the manufacture of larger state-of-the-art container ships. As such, the Port embarked upon the Channel Deepening Project—along with its Federal partner, the Army Corps of Engineers—to deepen its Federal channel from –45 feet to –53 feet. Currently, more than 50 of these state-of-the-art container ships are on order to serve the United States West Coast container fleet. The first of these deeper-draft ships is scheduled to call at the Port of Los Angeles in August of this year, carrying 8,000 TEUs and drafting at –50 feet.

As we have testified before, cargo throughput for the San Pedro Bay—and the Port of Los Angeles in particular—has a tremendous impact on the United States economy. We at the Port of Los Angeles cannot over emphasize this fact. The ability of the Port to meet the spiraling demands of this phenomenal growth in international trade is dependent upon the speedy construction of sufficiently deep navigation channels to accommodate the new container ships. These new ships provide greater efficiencies in cargo transportation, carrying more than 8,000 TEUs and one-third more cargo and making available to the American consumers more product inventory at lower prices on imported goods. In addition, exports from the United States become more competitive in foreign markets. However, for American seaports to keep up, they must, immediately, make the necessary infrastructure improvements that will enable them to participate in this rapidly changing global trading arena.

Mr. Chairman, these state-of-the-art container ships represent the new competitive requirements for international container shipping efficiencies in the 21st Century, as evidenced by the increased volume of international commerce and the new deeper-draft container ships now on order for service at ports across the United States within the next few years. It is imperative that Congress appropriates the requested funding that will enable the Channel Deepening Project to continue on schedule through the project's anticipated completion in 2006 to meet these new efficiencies.

The Channel Deepening Project is clearly a commercial navigation project of national economic significance and one that will yield exponential economic and environmental returns to the United States well into the future. The national economic benefits are evidenced by the creation of more than 1 million permanent well-paying jobs across the United States; more than $1 billion in wages and salaries, as well as local, State and Federal sales and income tax revenues deposited into the Federal treasury. As an aside, the 7.2 million TEUs handled by the Port of Los Angeles in 2003 had a commercial value of more than $300 billion in container cargo, with significant tax revenues accruing to the Federal Government. Similarly, according to the U.S. Customs Service, users of the Port pay approximately $12 million a day in Customs duties, with the Los Angeles Customs District leading the Nation in total duties collected for maritime activities. As you can see, the return on the Federal investment at the Port of Los Angeles is real and quantifiable, and we expect it to surpass the cost-benefit ratio as determined by the Corps of Engineers' project Feasibility Study many times over. The Federal investment in the Channel Deepening Project will ensure that the Port of Los Angeles, the Nation's largest container seaport, remains at the forefront of the new international trade network well into the 21st Century. The Channel Deepening Project marks the second phase of the 2020 Infrastructure Development Plan that begun with the Pier 400 Deep-Draft Navigation and Landfill Project. The Port of Los Angeles is moving forward with the 2020 Plan designed to meet the extraordinary infrastructure demands placed on it in the face of the continued explosion in international trade. Mr. Chairman, the Port of Los Angeles respectfully urges your subcommittee to include an earmark of $35 million for fiscal year 2005 to support the U.S. Army Corps of Engineers' continued construction of the Channel Deepening navigation project on behalf of the Port of Los Angeles.

Thank you, Mr. Chairman, for the opportunity to submit this testimony in support of continued Congressional support of the Channel Deepening Project at the Port of Los Angeles. The Port has long valued the support of your subcommittee and its appreciation of the port industry's importance to the economic vitality of the United

States, and, in particular, the role of the Port of Los Angeles in contributing to this country's economic strength.

PREPARED STATEMENT OF THE CITY OF STILLWATER

Chairman Domenici and members of the Energy and Water Development Subcommittee, I thank you for the opportunity to submit this testimony requesting the $1.8 million needed to construct Stage 3 of the Stillwater, Minnesota flood control project. In 2001, the City experienced its seventeenth flood since 1941, immediately after the Corps completed construction work on Lock and Dam No. 3 20 miles South of the convergence of the Mississippi River and the St. Croix River.

The first two stages of the project have been completed, and Congress appropriated $2.3 million in the fiscal year 2002 Appropriations Bill to begin construction the critical Stage 3 of the project. The $1.5 million in Federal funds requested this year, plus State appropriated, and local funds should be sufficient to complete the $13.2 million project.

The project is divided into three stages. Stage 1 included the repair and reconstruction of the existing retaining wall which extends 1,000 feet from Nelson Street on the South to the gazebo on the North end of the levee wall system. Stage 2 consists of the extension of the levee wall about 900 feet from the gazebo North around Mulberry Point.

The completion of Stage 2 was delayed by floods of 1997, costing the City and the Federal Government nearly a half million dollars. After the waters subsided, it was discovered that the soil beneath the planned levee extension was very unstable, requiring a revision of plans, and the addition of another stage in the construction process.

The flood waters of the St. Croix River did not recede until August of 1997. The construction area remained under water preventing construction work to proceed as scheduled. Lowell Park, which extends the full length of the levee wall system, several structures, and the emergency roadway which is used to provide emergency medical assistance for those using the recreational St. Croix River, and as a water source for local fire departments, were all either under water or inaccessible.

Phase I, the repair and reconstruction of the original levee wall, was completed in the Summer of 1998. Work on Stage 1 was completed in late Summer of 1997, and additional soil borings were taken for Stage 2. The soil was found to be very unstable, and unable to support the levee system designed for Stage 2 of the project. The construction of Stage 2 required remedial action, and was been designated as Stage 2S. A contract was awarded for Phase 2S in November, 1998, and was completed in 1999. Phase 2 was begun in the late Fall of 1999, and the major construction work was completed at the end of the year 2000. Only some landscaping, and finishing work on the levee wall system remains to be done. The Design Memorandum schedule calls for the construction of Stage 3 in fiscal year 2002, and to be completed in fiscal year 2003, according to the Corps schedule.

Stage 3 expands the flood protection system by constructing a 3 foot flood wall, and driving sheet piling below the surface to reduce seepage and to provide a base for the wall. The flood wall will be constructed about 125 feet inland from the riverbank. Stages 1 and 2 were critical to the protection of the fragile waterfront, and also, to prevent minor flooding on the North end of the riverfront. Stage 3 is the component that provides the flood protection for the City. The rising elevation of the terrain, the flood wall, and minimal emergency measures are designed to provide the City with up to 100 year flood protection.

The Mayor, City Council Members, and Engineering staff all understand that Stage 3 of the flood control project is essential for the protection of life and property of the citizens, that the Stage 3 flood wall is a critical phase of the project, and that the project must be completed at the earliest possible date. The Corps acknowledged the necessity for all three stages of the project when the Design Memorandum included plans for all three stages.

The U.S. Congress directed the Secretary of the Army acting through the Chief of Engineers to proceed with the design and construction to complete the Stillwater Levee and Flood Control Project under Section 124 of the Omnibus Appropriations Act for fiscal year 2005. The City and the State of Minnesota have allocated matching funds for this work, and it is in an escrow account for that purpose. The Corps of Engineers have said the monies appropriated to begin this work on Stage 3 have been redirected, and Federal funds are not available.

This fact is born out by the support of the Minnesota Department of Natural Resources, the Governor of Minnesota, and the State Legislature. The Minnesota Department of Natural Resources made funds available based on this premise. The

State has appropriated half of the Non-Federal matching funds needed to complete Stage 3 of the project, as well as for Stages 1 and 2. The City has provided the remainder of the required matching funds, consequently, only the Federal share is missing to complete the project.

STILLWATER—A NATIONAL HISTORIC SITE

The City of Stillwater is recognized for the 66 historic sites on the National Register of the U.S. Department of Interior, as well as other historic structures. Many of these sites are located in the flood plain of the St. Croix River. Designated the "Birthplace of Minnesota," the City of Stillwater was founded in 1843.

When Wisconsin became a State in 1848, a portion of land West of the St. Croix and Mississippi Rivers, including much of what is now the Twin Cities of Minneapolis and St. Paul, was excluded. The prominent citizens of the excluded area convened in Stillwater on August 26, 1848, passed a resolution to be presented to Congress asking that a "new territory be formed," and that the territory be named "Minnesota." Henry Sibley carried the petition to Washington, DC, and in March, 1849, Minnesota Territory was established. Stillwater then became the only city in the Nation to become the county seat of two different territories, St. Croix County in Wisconsin, and Washington County, Minnesota. The Stillwater Convention firmly established Stillwater as the "Birthplace of Minnesota."

Stillwater grew and prospered as the Lumber Capitol of the Midwest. Billions of feet of timber was cut, and floated down the St. Croix to the nine sawmills that were located on the riverbank of the St. Croix at Stillwater between 1848 and 1914. More logs were carried through the boom site North of Stillwater than any other place in the United States. Three billion feet of lumber was produced by the nine lumber mills in the 1880's alone. All nine lumber mills wee located on the riverfront The lumber from the Stillwater mills were the primary source of wood-constructed buildings throughout the Midwest.

Much of the lumber was carried down the St. Croix to the Mississippi River, and on to St. Louis, the "jumping off" point for the Westward movement. Sawdust and wood debris from these mills helped created the fragile riverbank that the levee wall system protects today.

Later in the 19th Century, five railroads carried lumber from Stillwater Westward to Nebraska, North and South Dakota, and points West, as the Nation expanded beyond the Mississippi River into the plains States. Many of the Midwest's oldest buildings still carry the mark of the Stillwater mills.

As a result of Stillwater's place in the history of the Midwest, the lumber industry, the unique homes built by Minnesota's first millionaires, and the birthplace of both Minnesota Territory and the State of Minnesota, 66 sites are included on the National Register of Historic Places. All of the downtown area, which is located in the 100-year flood plain, is included in this recognition.

THE IMPACT OF LOCK AND DAM NO. 3 ON FLOODS—STILLWATER

The Lock and Dam No. 3 was constructed in 1937–38 on the Mississippi River at Red Wing, Minnesota. The Lock and Dam construction raised the level of the St. Croix at Stillwater by 8 to 10 feet. It has made the City of Stillwater vulnerable during periods of high water and flooding of the St. Croix since that time. Records prove that the lock and dam construction, raising the water levels of both the Mississippi and the St. Croix River, has markedly increased the incidence of flooding at Stillwater. The culpability of the Corps is clearly evident.

The Mississippi and the St. Croix Rivers merge about 14 miles South of Stillwater. When constructing the Lock and Dam at Red Wing in 1938, the Federal officials recognized that detaining the flow of the Mississippi would back up the water in the St. Croix at Stillwater. A 1,000 foot levee wall system was constructed at Stillwater by the WPA under the supervision of the Corps to protect the fragile waterfront.

From 1850 to 1938, the 88 years prior to the construction of Lock and Dam No. 3, only four floods were reported by historians. None were the result of Spring snow melts. The 1852 flood was the result of a cloudburst, the destruction of a dam built on McKusick Lake above the City, and was not the result of the flooding of the St. Croix River. The floods of June 14, 1885, and May 9, 1894, as well as the 1852 flood, were all the result of cloudbursts in or above Stillwater. These floods resulted in both loss of life and significant property losses in the City.

Since the completion of the Lock and Dam 60 years ago, the St. Croix has flooded on 17 occasions, and only four times in the 90 years preceding the construction of the Lock and Dam. None of the four were the result of high water on the St. Croix River. Four floods were recorded in the 1940's, immediately after the completion of

the lock and dam at Red Wing. The 1952, 1965, and 1969 floods were record-breaking floods, the result of a heavy snow fall, and early Springs rainfall, coupled with warm weather. Record flooding was avoided in 1997, by the early planning of City officials, the construction of a huge emergency levee requiring thousands of truck loads of clay and sand, the work of hundreds of volunteers, and luck in the avoidance of a severe rainstorm in or around the flood event.

The 2001 flood was second worst flood in the 160 year history of the City. It was only topped only by the flood of 1965. The careful planning and preparation by the City, hundreds of volunteer workers included high school students and younger, local citizens from Minnesota and Wisconsin, and dozens of inmates from the nearby State prison were given credit for preventing a major catastrophe for the City. The water pump rental, thousands of yards of sand and fill, and a "round the clock" line up of trucks, cost the Federal, State, and local governments nearly $1.3 million.

The planning and preparation of City officials, and adequate lead time have allowed the construction of levees high enough to avoid massive flooding in the historic section of the City during most of the floods, and to prevent further loss of life. However, a 4–5 inch rainfall during high water levels would be devastating to the City. Such rainfalls are not infrequent in the St. Croix Valley, and can not be anticipated. A major concern is the safety of the volunteers. Working around heavy equipment and massive trucks, day and night, and on top of 20 foot emergency levees over swirling flood waters, it is only a matter time until we have serious injuries or loss of life.

A wet Fall that saturates the soil, heavy snows during the Winter, extended warm spells in the Spring, coupled with persistent Spring rains, and cloudbursts as experienced in the past, will all come together in the same year at some point in time. At that point, the City's emergency responses to flood control will not be sufficient to cope with the flood waters.

History bears out the City's contention that the raising of the river levels by ten feet in 1938, when Lock and Dam No. 3 was constructed, greatly increases the flooding potential faced by the City during the past 60 years. On this basis alone, the Federal Government must share in the responsibility for providing a remedy. The construction of the Stage 3 flood wall at Stillwater will provide this safety.

ENVIRONMENT THREATENED DURING FLOOD EVENTS

The St. Croix River was designated as one of the first Wild and Scenic Rivers by Congress and is protected under both Federal and State laws, as well as by local ordinances. The St. Croix River is carefully monitored by the Federal Government, an Interstate Commission, and the DNR's by both the States of Wisconsin and Minnesota.

The City's concern is the trunk sanitary sewer line and pumping stations for the City of Stillwater. The sewer line runs adjacent to the riverfront and is frequently under water during major flood events. More than 2 million gallons of raw sewage is handled daily by the sewer line and pumping stations that follow the riverfront. Engineers have advised the City that extended flooding of the flood plain could result in the rupturing of the trunk line or the surcharging of the pumping stations.

Either of these event would result in the direct flow of raw sewage into the St. Croix River. It would be impossible to repair the system during the high water of a flood event. During the 1997 floods, one pumping station and a portion of the trunk sewer line remained under water for 95 days, and required careful monitoring by the City workers.

The protection of the river is not only the dominant theme of the State and Federal governments, but also by the counties and municipalities that line the riverbanks of the St. Croix. However, the greatest protectors of the river are the citizens themselves who take advantage of the crystal blue waters of the St. Croix for fishing, boating, and other recreational and scenic purposes.

The topography of the City of Stillwater requires the location of the trunk sanitary sewer line and pumping stations at the base of the City's hub, adjacent to the riverfront. The City is built on two hills that slope toward the river, abruptly interrupted by sandstone bluffs extending 50–75 feet high above the river level. The sanitary sewer system serving the 16,000 Stillwater residents flows into the trunk sewer line that runs parallel to the riverfront. It can not be moved. The 2 million gallons of raw sewage handled by the system each day, is gathered in the trunk sewer line and pumped Southward to the water treatment plant.

According to engineering studies, the trunk line and the pumping stations are both susceptible to rupture or surcharging during periods of flooding. Little could be done to stop the flow of raw sewage into the St. Croix until the water receded. During recent floods, it is not unusual for high water levels to persist for as much

as 2–5 months. Such an event could release 120 million gallons of raw sewage into one of America's most pristine rivers over that period of time. If for no other reason than the protection of the river, the City believes the Stage 3 flood wall must be constructed with no delay.

LEGISLATIVE BACKGROUND

The Stillwater Flood Control and Retaining Wall project first was authorized in section 363 of the Water Resources Development Act (WRDA) of 1992. An allocation of $2.4 million was made in the Energy and Water Development Appropriations Act of 1994.

A Committee Report described the project in three parts—to repair, extend, and expand the levee wall system on the St. Croix River at Stillwater, Minnesota:

—"To repair" (Stage 1) the original existing levee wall system constructed in 1936;
—"To extend" (Stage 2) the original wall by approximately 900 feet to prevent the annual flooding that occurs at that location; and
—"To expand" (Stage 3) the system by constructing the flood wall about 125 feet inland from the levee wall system to protect the downtown and residential section in the flood plain.

In 1995, the Design Memorandum confirmed the cost estimate for the project was much too low, and the project was reauthorized for $11.6 million by Congress in the 1996 WRDA legislation. In 2001, the Corps estimated the Federal cost at $9.86 million, the non-Federal cost at $3.29 million, and the total cost of the project to be $13.15 million. Congress appropriated $2 million in fiscal year 2002 for the construction of the Stage 3 flood wall. The Corps chose not to use these funds for that purpose, and were redirected to other projects. Congress then directed the Corps to design and construct the Stage 3 flood wall in Section 124 of the Omnibus Appropriations Act for fiscal year 2005. While the Corps has now met with the City, and appears willing to move ahead as Congress as instructed, we are awaiting Corps action to prepare a Project Cooperation Agreement for all to sign.

Since the reauthorization of the project 5 years ago, and the completion of the feasibility study, both Stage 1 and 2 have been completed. Only the completion of Stage 3 will provide the City with the flood protection that is critically needed. The reconstruction of the existing levee wall system, the extension of the levee wall, and the construction of the flood wall are all critical to the safety of the citizens, the protection of property, and the preservation of historic sites that contributed to the growth and expansion of the Midwest in the last half of the 19th Century.

SUMMARY

The Mayor and Council for the City of Stillwater, Washington County Officials, the Governor and Minnesota State Legislature, and bipartisan support of Minnesota Representatives and Senators in Congress, all recognize the significant importance of completing this project by constructing the Stage 3 flood wall on the St. Croix River at Stillwater. They are committed to the completion of the Flood Wall Project at Stillwater. It is critical to the protection of property, the preservation of our history, the respect of historic Indian sites, and the safety of our citizens and their homes and business.

We respectfully urge the Energy and Water Development Subcommittee for Appropriations to allocate the $1.8 million needed to begin construction of the Stage 3 flood wall in the fiscal year 2005 Appropriations Bill. If you have questions or would like additional information regarding this project, please call on us.

PREPARED STATEMENT OF THE CITY OF GRANITE FALLS, MINNESOTA

Chairman Domenici and members of the Appropriations Subcommittee, I appreciate the opportunity to submit this testimony on behalf of the City Council and the citizens of Granite Falls, Minnesota. We are requesting $1.2 million in Federal funds for the development of the Detailed Design Report (DDR) plans and specifications, and critical preventative measures to protect the city from future flooding of the Minnesota River.

This request is based on the "Supplement to the Locally Preferred Plan for Flood Damage Reduction, January, 2002" prepared on behalf of FEMA, the City, and information from the U.S. Army Corps of Engineers, Section 205 study not yet completed. This project was authorized in the Transportation and Infrastructure Committee bill, the Water Resources Development Act of 2003. The project has now been authorized for $8 million in Federal funds in H. Res. 2557, Sec. 3061 as a Section

205 project, in accordance with the Water Resources Development Act of 1986 (100 Stat. 4184) as needed.

The problems confronting the City require a carefully planned project. The geological features of the terrain discourages the construction of diversion channels due to the granite subsurface of the soil. Homes and businesses are being relocated using FEMA, State and local resources. The existing uncertified and inadequate levee system will be improved to provide adequate protection for the communities, and the Municipal Power Plant adjacent to the Minnesota River will require relocation.

THE CITY OF GRANITE FALLS

The City of Granite Falls is a community of slightly more than 3,000 citizens, is located in West Central Minnesota about 122 miles west of St. Paul. The Minnesota River runs through the northern and eastern portions of the City, and is directly adjacent to the downtown area. The majority of the City's residential and commercial properties are located on the west bank of the Minnesota River in Yellow Medicine County. Low-lying residential areas on the north end of the City, structures in the commercial business district along the river, and residences located next to the secondary river channels in the southwest part of the City are especially vulnerable to flooding.

RECENT DISASTERS

While the river represents a valuable resource to the community, it has taken a severe toll on residents and businesses during Spring floods. The 1997 floods which devastated much of Western Minnesota and North Dakota did not spare Granite Falls. The Flood drove many from their homes and their downtown businesses, and resulted in millions of dollars in damages. Virtually every downtown business was flooded. More than $850,000 was spent by the city, and another $175,000 by the Corps of Engineers to fight the flood.

Hundreds of volunteers from Granite Falls area and the State prevented further devastation as the Minnesota River has a peak discharge of 53,000 cubic feet per second. That's more than 3 million cubic feet of flood water per minute. The rushing water was within inches of the top of the temporary dike as volunteers continued to stack sand bags. If the water had topped the dike, literally dozens of the workers' lives would have been severely endangered. Total costs and damages exceeded $5 million.

In July of 2000, the city was hit by an F–4 tornado. An F–5 tornado is the top of the scale. One person was killed, 14 badly injured, and 325 homes were either totally destroyed or severely damaged. The tornado caused more than $26 million in damages in the community.

The following year, 2001, the City was again hit by another record flood event. Though not as severe as the 1997 flooding, damage was reduced significantly by careful City planning and preparation with Federal and State governmental units. Even so, the costs to fight the flood exceeded half a million dollars for the City and the Corps of Engineers, and much of the downtown commercial area was evacuated.

Other significant floods have occurred in 1951, 1952, 1965, 1969, and 1994. While floods have cost the community millions of dollars in extensive property damage and economic hardship, the primary concern is the significant risk to the hundreds of volunteers whose work is required building levees during flood events to protect the homes and business.

Preparation for fighting disaster costs have reached nearly $4 million in the past 4 years. That amounts to thousands of dollars to every property owner in the City. Other significant flood events have occurred in 1951, 1962, 1965, 1969, and 1994.

While floods have cost the community millions of dollars in extensive property damage and economic hardship, the primary concern is the significant risk to the hundreds of volunteers whose work is required building levees during flood events to protect the homes and businesses. Total flood damages and costs are more than $30 million from 1997 through 2001.

Granite Falls has received financial support from FEMA, the Corps of Engineers, and the State of Minnesota to clean up after the disasters and to repair damages. Funds have been received to repair streets, housing rehabilitation and construction, economic development, and special services. All the help has been directed toward restoration after the floods and tornado event, but no funds have been available to prevent future flooding.

CORPS OF ENGINEERS SECTION 205 STUDY

Following the 1997 flood, the Corps of Engineers initiated a Section 205 study in May, 1998, to evaluate the extent of the flooding problem in Granite Falls, and to explore possible remedies. The study is essentially complete, but has not been released to date. The major problems of cost and funding level addressed in the 205 study have been resolved in the project authorization in H. Res. 2557.

STUDIES CONDUCTED

The City, through a FEMA project grant under the direction of the Minnesota Department of Natural Resources MN/DNR, conducted a study of the flood problems confronting Granite Falls. The overall objective of the study was to evaluate hazards for the Granite Falls area, and to develop preliminary evaluation and prioritization for those hazards.

The Report states, "Because of the tremendous impacts of flooding on the Granite Falls community, and the relative frequency of flooding events, the report begins with an all hazard evaluation, but then focuses on flood hazards, and presents mitigation options and preliminary costs for implementing those options."

The Report evaluated each area of the community, determined the risk factors, and suggested options available to protect the area against flooding. In the conclusion of the Report, it was recommended the most economical solution to provide the necessary protection was buy out many of the properties and move them to a location outside the flood plain. This work is currently in progress.

The elevation of other areas would have to be raised, pump stations would need to be installed, some levees constructed, and the sanitary lift station and the water plant would need to be relocated. It is estimated the cost of this work would be approximately $12 million.

The Supplement to the Locally Preferred Plan (SLPP) provides a level of flood protection for flood events up to the 500-year event. The 1998 Corps of Engineers 205 study indicates the 500-year level of protection is about the same as the 100-year flood plus 3 feet of freeboard. This level of protection is necessary as the result of a reevaluation by FEMA which indicated that the current level of protection for Granite Falls was violated in both the 1997 and the 2001 flood events.

The SLPP identifies seven areas severely impacted by flooding, suggests the remedial action needed, and the cost of such work. Relocation costs are not included in this report. The City believes that with the financial assistance received from FEMA to relocate many of the structures in low lying areas, the remaining project needs are appropriately addressed under flood protection programs administered by the Corps of Engineers.

The Locally Preferred Plan includes the removal of about 41 structures in the lower areas of the City, including several in the commercial district. FEMA has provided the funds for 25 structure moves, leaving only 15 additional structures to be moved as a part of the project.

APPROPRIATION REQUEST

The city requests $1.2 million from the committee for the purpose of the development of the Detailed Design Report, preparation of plans and specifications, and the placement of pumps stations at two of three critical locations in the city. These pump stations will provide some immediate flood relief during an emergency, but are also needed permanently as a part of the total project.

Thank you for your consideration of this request. And may I also take this opportunity to express our appreciation to the St. Paul District Office of the Army Corps of Engineers for their help and assistance during the crisis we have experienced in recent years. We will be happy to respond to any questions you may have regarding the needs of the city, and the flood protection project.

PREPARED STATEMENT OF THE CITY OF CROOKSTON, MINNESOTA

Chairman and members of the Appropriations Subcommittee, I appreciate the opportunity to submit this testimony on behalf of the City Council and the citizens of Crookston, Minnesota. We are requesting $1.2 million in Federal funds for the development of the supplement to the environmental assessment study, to prepare the design, and to initiate construction work in the fiscal year 2004 Appropriations Bill. The purpose of this request is to provide flood protection for the Chase/Loring and Sampson neighborhoods in the City. This request is based on the Feasibility Report Supplement: Local Flood Control completed on April 30, 2002.

First, we would like to thank you and the members of this committee for the $2.202 million appropriation you provided for the Crookston Flood Control Project in the fiscal year 2003 Appropriation Conference Report. These funds made it possible to complete the work on Stage 2 of the project.

Stages 1 and 2 of the project has provided 100-year flood protection for Thorndale, Woods, and Downtown/Riverside neighborhoods. This is a tremendous step forward, and we are very appreciative of the support given us by this committee and the Army Corps of Engineers. However, the project still leaves two of our most vulnerable neighborhoods, Sampson and Chase/Loring, fully susceptible to future flooding when the Red Lake River again leaves its banks.

The City of Crookston is located in the Red River Valley of Western Minnesota, in Polk County, 25 miles East of Grand Forks, North Dakota. The Red Lake River winds its way through the City from its source at the Upper and Lower Red Lakes, and flows into the Red River at Grand Forks. The early settlers in Crookston built their homes in the crooks of the river to be close to the water supply vital to their existence. As a result, five neighborhoods were established that became the City of Crookston. The population of the City has remained constant over the past decade at about 8,200 citizens.

The community was settled in 1872, when the first railroad route was announced crossing the Red Lake River where Crookston now stands, and later, extending to Canada. The economy of Crookston is based primarily on agriculture. It is the home of the University of Minnesota Crookston, a technology oriented school with a full academic program enrolling approximately 2,500 students.

The City of Crookston has two recent major flood events—1997 and again in 2001. The flood of record was at a stage of 27.3 feet in 1969, and the 1997 flood exceeded it with a stage of 28.6. The 2001 flood on the Red Lake River at Crookston was 26.38 feet or 11 feet above flood stage. For both flood events, the city was able with the help of the Corps of Engineers and the State of Minnesota to take extreme emergency actions to prevent catastrophic losses throughout the community.

The 1997 flood came within inches of inundating the community with huge potential for loss of life. This flood further emphasized the need for a long-term flood damage reduction project to protect the citizens and the community.

These floods also demonstrated that flood damage reduction must be at a 100-year level, consistent with the authorized project, and needs to be looked at from a total community perspective. "Piecemealing" a project, by protecting only certain areas, will not eliminate the need for significant federally subsidized flood emergency reimbursements in the future. Not including State and local expenditures, use of resources, and purchase of materials, the Federal costs alone incurred in 1997, totaled nearly $1.5 million. State and local costs were estimated at a similar amount, whereby, the 1997 flood costs totaled nearly $3 million.

Both floods contributed to the progressive deterioration of the emergency levee system. The reliability of this system is now much worse than what was reported in the pre-flood 1997 feasibility report. The recent flood and the documented and visual impact of the 1997 flood at Grand Forks, ND, and East Grand Forks, MN demonstrated that failure of the emergency system would be catastrophic. Not only would many structures incur irreparable damage, the social and economic impact from the loss of property value/tax base and cohesion would devastate the community, potentially threatening the long-term viability and survival of Crookston.

Due to recent flood events, the views of the City and its residents, the emphasis of the State of Minnesota Department of Natural Resources through the flood mitigation program, an efforts of the Minnesota Flood Relief Task Force, there is a renewed commitment to provide long-term flood damage reduction for the three remaining neighborhoods.

The reason that these areas were not included in the 1997 feasibility study was because these areas were incorrectly considered independent, and concern that the overall benefits may not cover the costs to provide protection. The primary reason was a low cost-to-benefit ratio was real estate costs. There were too many structures that needed to be relocated or purchased.

Reassessing earlier alternative flood damage reduction plans, there are further justifications for protecting a larger portion of Crookston, and ways to reduce costs, while continuing to maintain the necessary degree of flood damage reduction. Likewise, the benefits in some of these areas increased, based on new benefit categories identified in the Grand Forks, ND, and East Grand Forks, MN December 1997 feasibility study. The State of Minnesota has already committed to full protection for all of the six neighborhoods in the City of Crookston.

The cost/benefit ratio for the three stages of the project is 1.03. Evaluation by the Corps of Engineers determined a cost benefit ratio for the Chase/Loring and Sampson authorized in the House WRDA at 1.25. Continuing assessment of the project

plans will increase the project benefits even further. The City believes that the project should not be assessed incrementally, but as a total project as were other communities severely affected by the 1997 and 2001 floods in the Red River Valley.

All of the property owners in Crookston have assessed themselves flood protection fees for the past 11 years to provide the local funds needed to make their families safe during flood events. Without providing the protection needed for the Sampson and Chase/Loring Neighborhoods, the work is only half done. Since all of the citizens have been paying these assessments, it is not right that the Crookston Flood Control Project would protect only half the community.

CONDITIONS CHANGE SINCE 1997

Since the completion of the feasibility report in early 1997, events have greatly impacted flood damage reduction for the city. The floods of 1997 and 2001 have been a wake up call regarding the vulnerability of the City and its residents. There is no way that the 1997 feasibility study could have predicted these events. They demonstrated the extent of the deterioration of the existing emergency system, and new thinking on how to more cost effectively reduce flood damages in unprotected areas. The replacement of the city dam is now underway.

The revised engineering assessment of the trunk sanitary sewer system located in the Sampson addition, and the electrical distribution substation located in the Chase/Loring addition. Although, not a change, the revised engineering assessment of the sanitary sewer system found conditions that were slightly different from the analysis in the 1997 feasibility report. Several key essential features of the sanitary sewer system for the entire community are located in the Sampson neighborhood. Losses to these features would certainly cause the system to fail, including the system located in areas protected by the Federal project.

Similarly, the electrical distribution substation located in the Chase/Loring neighborhood services those areas protected by Stages 1 and 2 of the project. The loss of the substation would at least affect most of the neighborhoods, including those protected by the original authorized project. It would at least temporarily result in a loss of power, and the loss of critical flood damage reduction measures (i.e. pump stations) of the permanent project and to the sanitary sewer system.

FLOODING EVENTS AND THEIR CAUSES

Floods occurring over the past 40 years have created significant damage to homes and businesses, and have resulted in the loss of lives as well. They include the flood events of 1965, 1966, 1967, 1969, 1978, 1979, 1996, and 1997. Floods have been documented at Crookston as early as 1887. The 1950 flood, though not the maximum flood of record, created the most damage to the City and resulted in the deaths of two citizens from the community.

Between 1950 and 1965, clay levees were constructed through local efforts in an attempt to ameliorate the damages from the flooding of the Red Lake River. The floods of 1965, however, demonstrated these efforts were not adequate to hold back the torrents of water during significant flood events. While certain areas of the City received some flood protection, severe damages occurred in the South Main Street area. This section of the City has since been totally cleared.

The 1969 flood established new high water marks, and again, it was necessary to carry out extreme emergency measures. These efforts were successful in protecting the community from severe damages. Recognizing the need for more protection, another locally financed project was initiated, extending, enlarging, and raising the height of the levee wall system.

The flood of 1997, was the "grandaddy" of all floods. It established the highest water mark in recorded history when the Red Lake River crested at 28.6 feet above flood stage, the equivalent of a three-story building. It is described as a 500-year flood event.

Only the careful planning and preparation by City officials in cooperation with the Corps of Engineers, the State of Minnesota, FEMA, the National Guard, and many private citizens, were damages reduced, and fortunately, no lives were lost. Prior to the crest of the flood, the City of Crookston completed the work of adding two feet of clay and sandbags to the entire levee system throughout the town. The Corps of Engineers constructed clay dikes as a second line of defense, sacrificing a few homes for the good of many others. As a precautionary measure, 400 residents evacuated from their homes during the height of the flood. These efforts spared Crookston from the devastation experienced by neighboring towns, allowing the City to provide for 8,000 persons evacuated from their homes in nearby communities, But this disaster and the potential devastation that such floods can bring, emphasized

the critical importance of replacing the temporary earthen and clay dikes with a well-planned, permanent flood control system.

There are several causative factors that have created flood conditions for the Red River Valley and the City of Crookston. The Red River of the North did not carve out the valley, it merely meanders back and forth through the lowest parts of the floor of the ancient Glacial Lake Agassiz.

With no definitive flood plain to channel flood torrents, the slow-moving flood waters quickly overrun the shallow river banks and spread out over the flat floor of the former glacial lake bed. The small river's gradient is on one-half foot per mile, as opposed to areas in Southwestern Minnesota where in one instance, the gradient establishes a 19 foot drop in one mile. Both extremes have created problems.

The Red Lake River flows into Crookston from the Northeast, winds it way through the City, and flows out of the City, turning in a Northwesterly direction toward its confluence with the Red River at Grand Forks, North Dakota. The merged rivers then flow due North into Winnipeg, Manitoba, Canada. As the snow melts in the Southern portion of the valley, ice often remains in the channel to the North. Ice and other debris flowing North pile up against the river ice creating ice dams. These barriers back up the water and increase the flood crest upstream.

The extremely level terrain also creates a phenomenon during the Spring thaw which is called "overland flooding." As the snow melts, the huge volume of water can overwhelm the network of shallow ditches and creeks. Unable to enter the choked stream channels, the water travels overland until it meets small terrain barriers such as railroad beds and road grades, creating huge bodies of water.

In addition to the topography of the area, a combination of factors such as agricultural drainage, the loss of wetlands, the Federal governments work in the Red River Basin, and the construction of the county ditch systems, all these factors have contributed to the vulnerability of the area.

KEY POINTS OF PROJECT DEVELOPMENT

1992—Feasibility Cost Share Agreement signed.

1997—Feasibility Report and Environmental Assessment completed.

1997—National Economic Development optimizational analysis waived to provide the entire project with 100-year flood protection.

1998—Preconstruction engineering and design efforts begun.

1999—Project authorized for construction in the Water Resource Development Act of 1999.

2000—Plans, specifications, and design work for Stage 1 completed.

2000—Congress appropriates $1 million for Stage 1 construction.

2000—Plans and Specifications for Stage 2 commenced.

2001—Corps of Engineers total cost estimates for the project to be $10.8 million.

2001—Congress provides $2 million for the construction of Stage 2 of the Crookston Flood Control Project in the fiscal year 2002 Energy and Water Appropriations Bill.

2002—Bids were accepted and construction contract awarded for Stage 2 work.

2002—Congress provides $3.202 million to complete Stage 2 construction work.

2002—The Feasibility Report Supplement was completed.

2003—Construction work continues on Stage 2.

2003—House Transportation and Infrastructure Committee reauthorizes Crookston Flood Control Project to include Sampson and Chase/Loring neighborhoods.

2003—Request made to Congress for $1.2 million to provide flood protection for the Sampson and Chase/Loring neighborhoods.

2003—Senate delays passage of the Water Resources Development Act until 2004.

2004—Senate Environment and Public Works schedule WRDA mark-up for Spring, 2004.

NON-FEDERAL CONTRIBUTIONS TO THE PROJECT

The citizens of Crookston have demonstrated their commitment to the project each year since 1997. Every year for since 1997, they have voted to assess themselves a flood control project fee, over and above their property taxes. This action by the community has resulted in raising about $1.4 million up to the present time. One third of these local funds were used to meet part of the 50 percent match for the $1.2 million feasibility study, and the remainder will be used as a part of the non-Federal match for the construction Stages of the flood control project.

The State of Minnesota has also made a significant contribution to the project. They have appropriated $3.3 million for the dual purpose of providing funds to match the Federal contribution, and to buy out homes that have been lost in the

construction of the flood control measures. Nineteen families were required to lose their homes to the project, including one farm. The State funds were used both for the purchase of the homesteads, and the relocation of the affected families.

For these reasons, we respectfully request this subcommittee to appropriate $1.2 million of Federal funds in the fiscal year 2004 Appropriations Act to be used for the environmental assessment, preconstruction costs, and immediate work on the protection of the electrical substation and the pumping stations to avoid severe personal, ecological and environmental disasters in the Community. The committee's favorable response to this request will prevent any delays affecting the completion of the project, and avoid cost overruns that inevitably occur when construction is delayed.

In closing, I would like to say there is nothing more important to me as Mayor, and to each Member of the Crookston City Council, than the safety of our citizens, and the protection of their homes and property. We can not give them this assurance until we have completed this flood control project. May I also say that our association with the St. Paul District of the Army Corps of Engineers throughout this process has been outstanding. They are an extraordinary organization, working on the scene during flood conditions, and assisting us as we attempt to resolve this problem that threatens our citizens. We could not ask for a better partner in this project.

Thank you for the opportunity to bring this important matter to your attention through this statement. I will be delighted to respond to any questions you may have about the project.

PREPARED STATEMENT OF THE SOUTHEASTERN FEDERAL POWER CUSTOMERS, INC.

Mr. Chairman and members of the subcommittee, on behalf of the Southeastern Federal Power Customers, Inc. ("SeFPC"), I am pleased to provide testimony in reference to the administration's fiscal year 2005 budget request for the Army Corps of Engineers ("Corps"). My testimony will focus primarily on the budget request for the Corps' South Atlantic Division ("SAD") and the Nashville District of the Great Lakes and Ohio River Division ("LRD"). In addition, the SeFPC customers would like to express our interests related to proposed legislation that would authorize direct funding for Corps' Operations and Maintenance ("O&M") activities at Federal hydropower projects.

The SeFPC has enjoyed a long and successful relationship with the Corps' SAD and LRD offices that has greatly benefited the approximately 5.8 million customers of the SeFPC members. As the subcommittee is aware, the Corps is responsible for operating and maintaining Federal hydropower generating facilities. The Southeastern Power Administration ("SEPA") then markets the energy and capacity that is generated from the Federal projects in the Southeast. The SeFPC represents some 238 rural cooperatives and municipally owned electric systems in the States of Alabama, Georgia, Mississippi, Kentucky, North Carolina, South Carolina, Florida, and Virginia, which purchase power from SEPA. In some cases, SEPA supplies as much as 25 percent of the power and 10 percent of the energy needs of SeFPC customers, who greatly rely on this power.

DRASTIC CUTS IN THE CORPS' BUDGET

The SeFPC membership is dedicated to providing reliable and economic power for its consumers. We therefore are concerned that the President has proposed a 13 percent reduction in the Corps' budget for fiscal year 2005. With these reductions in funding, the Corps will not be able to undertake the O&M and Renewals and Replacements ("R&R") work necessary to ensure the long-term reliability of the Southeastern Federal hydropower facilities. We are particularly concerned about the effects of the proposed budget cuts on ongoing O&M work on infrastructure of hydropower projects whose output is marketed by SEPA. The proposed reductions will particularly impede the Corps' work in the following SEPA projects: Walter F. George, J. Strom Thurmond, John H. Kerr, Allatoona, and Carters.

We also are concerned the President's budget request has zeroed out funds for construction at many of the projects operated by the Corps. We remain especially troubled by the badly needed rehabilitation of generating facilities in the Cumberland River System operated and maintained by LRD, as well as other Federal hydropower generating facilities throughout the Southeast. The age of many of the hydroelectric generating facilities in SEPA's service area is nearing the 50-year mark, when major rehabilitations are critical if the projects are to continue. Regrettably, the fiscal year 2005 budget request does not place a high priority on these critical needs.

When a generating unit becomes inoperable, SEPA may be forced to pursue the purchase of expensive replacement power; this could result in a reduction of energy and capacity, forcing the SeFPC members to purchase expensive capacity elsewhere. This has occurred so frequently in the last several years that the new SEPA rate design now includes a charge by customers to cover this replacement power. Such a result is inappropriate because preference customers already have contributed to the Corps' O&M and R&R expenses, in essence double-charging the customers and their consumers. In fact, revenue from the rates paid by the preference customers has enabled SEPA to repay on time the original investment incurred to construct these projects. However, when generating units deteriorate, reliability decreases, and O&M expenses greatly increase.

We are working on a long-term customer funding proposal that would facilitate this badly needed R&R work at hydroelectric facilities in the LRD. We anticipate, however, that this long-term initiative will not be finalized for a number of years. In the meantime, some of these facilities will not be able to continue generating without Federal funds.

ADMINISTRATION'S PROPOSAL FOR DIRECT FUNDING OF O&M

It is important to note that the relationship of the Corps, SEPA, and the SeFPC, forged pursuant to the Federal Power Marketing Program, is separate and distinct from other Corps' activities. The Federal Power Marketing Program is designed to pay for itself—consumers are responsible for repaying the Federal taxpayer investment in the Corps' multi-purpose hydroelectric facilities. In the rates charged by SEPA to preference customers, a portion of each rate is devoted to future O&M and R&R activities at these facilities. In turn, these revenues are deposited in the U.S. Treasury and used to reimburse Congressionally appropriated funds for O&M and R&R expenses at the Corps' hydropower facilities. Funds collected from consumers may also be used for the hydropower share of joint costs of dam activities that also benefit recreation, navigation and flood control. To date, preference customers have paid in SEPA rates over $114 million in excess of amounts spent by the Corps on O&M and R&R.

The administration's fiscal year 2005 budget request proposes to alter this funding arrangement. This year's budget includes a provision from the President's fiscal year 2003 and fiscal year 2004 requests calling for direct funding of routine O&M for hydropower facilities marketed by SEPA and the other Federal PMAs. While we support the concept of direct funding for O&M expenses, we want to ensure that any direct funding legislation would include safeguards to prevent the Corps from utilizing an alternative source of funding that could lead to significant rate increases. Specifically, we believe the PMAs must have the final say in determining the amount of funding available for the Corps each year. In this regard, funds provided for Corps' O&M should under this new mechanism have a neutral effect on rate levels. Also, the Corps and the PMAs must consult with the PMA customers regarding amounts the PMAs will collect for O&M activities. Finally, the Corps must be prohibited statutorily from reprogramming funds provided by the PMAs under this direct funding mechanism.

In advancing the direct funding proposal, the administration has reduced funds in the Corps' O&M budget by $150 million. Therefore, in the event the proposed legislation is not enacted, this funding should be restored to the Corps' O&M budget.

Thank you in advance for your consideration of our comments on the administration's fiscal year 2005 budget request for the Corps.

PREPARED STATEMENT OF THE CITY OF FLAGSTAFF, ARIZONA

Chairman Domenici, Ranking Member Reid, and distinguished members of the subcommittee, thank you for allowing me to testify on behalf of the City of Flagstaff, Arizona in support of $10 million in the Army Corps of Engineers budget for the Rio de Flag flood control project in fiscal year 2005. I believe this project is critically important to the City, to northern Arizona, and, ultimately, to the Nation.

As you may know, Mr. Chairman, with this subcommittee's help last year, Rio de Flag received $3.5 million to continue construction on this important project. We are extremely grateful that the subcommittee boosted this project well above the president's request, and we would appreciate your continued support for this project in fiscal year 2005.

Like many other projects under the Army Corps' jurisdiction, Rio de Flag received no funding in the president's fiscal year 2005 budget, although the Corps has expressed capability of $10 million to continue construction on the project. We are

hopeful that the subcommittee will fund the Rio de Flag project at $10 million when drafting its bill in order to keep the project on an optimal schedule.

Flooding along the Rio de Flag dates back as far as 1888. The Army Corps has identified a Federal interest in solving this long-standing flooding problem through the Rio de Flag, Flagstaff, Arizona—Feasibility Report and Environmental Impact Study (EIS). The recommended plan contained in this feasibility report was developed based on the following opportunities: (1) flood control and flood damage reduction; (2) environmental mitigation and enhancement; (3) water resource management; (4) public recreation; and (5) redevelopment opportunities. This plan will result in benefits to not only the local community, but to the region and the Nation.

The feasibility study by the Corps of Engineers has revealed that a 500-year flood could cause serious economic hardship to the City. In fact, a devastating 500-year flood could damage or destroy approximately 1,500 structures valued at more than $395 million. Similarly, a 100-year flood would cause an estimated $95 million in damages. In the event of a catastrophic flood, over half of Flagstaff's population of 57,000 would be directly impacted or affected.

In addition, a wide range of residential, commercial, downtown business and tourism, and industrial properties are at risk. Damages could also occur to numerous historic structures and historic Route 66. The Burlington Northern & Santa Fe Railway (BNSF), one of the primary east-west corridors for rail freight, could be destroyed, as well as U.S. Interstate 40, one of the country's most important east-west interstate links. Additionally, a significant portion of Northern Arizona University (NAU) could incur catastrophic physical damages, disruptions, and closings. Public infrastructure (e.g., streets, bridges, water, and sewer facilities), and franchised utilities (e.g., power and telecommunications) could be affected or destroyed. Transportation disruptions could make large areas of the City inaccessible for days.

Mr. Chairman, the intense wildfires that have devastated the West during the last several years have only exacerbated the flood potential and hazard in Flagstaff. An intense wildfire near Flagstaff could strip the soil of ground cover and vegetation, which could, in turn, increase runoff and pose an even greater threat of a catastrophic flood.

In short, a large flood could cripple Flagstaff for years. This is why the City believes it is important to ensure that this project remains on schedule and that the Corps is able to maximize its capability of $10 million in fiscal year 2005 for construction of this flood control project.

In the City's discussions with the Corps, both the central office in Washington and its Los Angeles District Office also believe that the Rio de Flag project is of the utmost importance and both offices believe the project should be placed high on the subcommittee's priority list. We are hopeful that the subcommittee will consider this advice and also place the project high on its priority list and fully fund the project at $10 million for fiscal year 2005.

As you may know, project construction and implementation of Rio de Flag was authorized in the Water Resources Development Act (WRDA) of 2000. The total project cost is estimated to be $30,000,000 in and above the reconnaissance study or the feasibility study. The Non-Federal share is currently $10,500,000 and the Federal share is currently $19,500,000. Final project costs must be adjusted based on Value Engineering and final design features. It is important to note the City of Flagstaff has already committed more than $10,500,000 to this project, and an additional $2,000,000 in excess of its cost share agreement. This clearly demonstrates the City's commitment to completing this important project.

The City of Flagstaff, as the non-Federal sponsor, is responsible for all costs related to required Lands, Easements, Rights-of-Way, Relocations, and Disposals (LERRD's). The City has already secured the necessary property rights to begin construction in 2004. Implementation of the City's Downtown and Southside Redevelopment Initiatives ($100,000,000 in private funds) are entirely dependent on the success of the Rio de Flag project. The Rio de Flag project will also provide a critical missing bike/pedestrian connection under Route 66 and the BNSF Railroad to replace the existing hazardous at grade crossings.

Both design and construction are divided into two phases. Phase I construction will commence in 2004. Phase II of the project is scheduled to commence in April of 2005.

Mr. Chairman, the Rio de Flag project is exactly the kind of project that was envisioned when the Corps was created because it will avert catastrophic floods, it will save lives and property, and it will promote economic growth. In short, this project is a win-win for the Federal Government, the City, and the surrounding communities.

Furthermore, the amount of money invested in this project by the Federal Government—approximately $19 million—will be saved exponentially in costs to the Fed-

eral Government in the case of a large and catastrophic flood, which could be more than $395 million. It will also promote economic growth and redevelopment along areas that are currently underserved because of the flood potential.

In conclusion, the Rio de Flag project should be considered a high priority for this subcommittee, and I encourage you to support full funding of $10 million for this project in the fiscal year 2005 Energy and Water Development Appropriations bill. Thank you in advance for your consideration.

PREPARED STATEMENT OF THE FIFTH LOUISIANA LEVEE DISTRICT

In order to continue the essential level of construction on the Mississippi River and Tributaries Project (MR&T), and to provide proper maintenance of the completed portions, it is crucial that the $450 million, as requested by the Mississippi Valley Flood Control Association for fiscal year 2005 (copy attached), be appropriated for the MR&T Project.

Less than $10 billion has been invested in the MR&T Project since its authorization following the great flood of 1927, but even in its incomplete stage, the MR&T project has prevented over $180 billion in flood damages and makes possible about $900 million in navigation benefits each year.

Levee enlargements have been completed along most of the Mississippi River Levee, with one exception being portions of the system in Louisiana where people and property remain vulnerable to a Levee that is the lowest in the MR&T system, even though it conducts to the Gulf 41 percent of the total water runoff of the Nation. It is imperative that construction of these Levees remain a top priority for the administration and U.S. Army Corps of Engineers and that adequate funding be provided.

We urge Congress to increase the $4.21 billion contained in the President's Budget Request for the entire Corps of Engineers' Works Program. At least $6.00 billion is required in order that the Corps not halt or delay contracts, shut down facilities, or otherwise disrupt the economic well-being of this Nation. Failure to provide this much needed additional funding will have a serious detrimental effect on the economic conditions in our already depressed area.

We continue to emphasize our objection to dividing the U.S. Army Corps of Engineers into separate, smaller entities and transferring to the administration of other established departments. It is vital to the people of Louisiana and to the Nation that the Mississippi River and Tributaries Project be completed as designed and as quickly as possible. To transfer any part of the Civil Works mission, or to "outsource" or contract-out positions in the Corps' Civil Works organization, as proposed by the Secretary of The Army, will wreck the current construction and maintenance time table and eliminate approximately 32,000 current employees.

We urge your support for protection of the structure of the U.S. Army Corps of Engineers as it currently exists.

We respectfully request that funds be increased for the Corps of Engineers' Works Program and $450 million be appropriated for the MR&T Project for the coming fiscal year.

MISSISSIPPI VALLEY FLOOD CONTROL ASSOCIATION—FISCAL YEAR 2005 CIVIL WORKS REQUESTED BUDGET—MISSISSIPPI RIVER AND TRIBUTARIES PROJECT—MAINTENANCE

Project	President's Budget	MVFCA Request
Wappapello Lake, MO	$4,046,000	$6,352,000
Mississippi River Levees	7,665,000	14,915,000
Dredging	20,515,000	20,515,000
Revetment and Dikes	48,760,000	48,760,000
Memphis Harbor, TN	1,205,000	2,010,000
Helena Harbor, TN	385,000	510,000
Greenville Harbor, MS	29,000	412,000
Vicksburg Harbor, MS	32,000	345,000
St. Francis River & Tribs, AR	6,080,000	8,805,000
White River Backwater, AR	1,316,000	2,260,000
North Bank, Arkansas River, AR	146,000	146,000
South Bank, Arkansas River, AR	122,000	122,000
Boeuf & Tensas Rivers, LA	2,160,000	2,160,000
Red River Backwater, LA	3,083,000	7,390,000
Yazoo Basin, Sardis Lake, MS	7,046,000	19,322,000

MISSISSIPPI VALLEY FLOOD CONTROL ASSOCIATION—FISCAL YEAR 2005 CIVIL WORKS REQUESTED BUDGET—MISSISSIPPI RIVER AND TRIBUTARIES PROJECT—MAINTENANCE—Continued

Project	President's Budget	MVFCA Request
Yazoo Basin, Arkabutla Lake, MS	5,710,000	12,900,000
Yazoo Basin, Enid Lake, MS	4,954,000	13,679,000
Yazoo Basin, Grenada Lake, MS	5,553,000	10,101,000
Yazoo Basin, Greenwood, MS	585,000	2,035,000
Yazoo Basin, Yazoo City, MS	729,000	729,000
Yazoo Basin, Main Stem, MS	1,013,000	3,966,000
Yazoo Basin, Tributaries, MS	923,000	923,000
Yazoo Basin, Whittington Aux Channel, MS	400,000	400,000
Yazoo Basin, Big Sunflower, MS	139,000	2,139,000
Yazoo Basin, Yazoo Backwater, MS	440,000	926,000
Lower Red River, South Bank, LA	105,000	105,000
Bonnet Carre, LA	2,310,000	3,100,000
Old River, LA	7,350,000	29,900,000
Atchafalaya Basin, LA	13,000,000	25,000,000
Atchafalaya Basin Floodway, LA	2,775,000	4,200,000
Baton Rouge Harbor Devil's Swamp, LA	14,000	300,000
Miss Delta Region, LA	588,000	588,000
Bayou Cocodrie & Tribs, LA	65,000	65,000
Inspection of Completed Works	1,500,000	1,700,000
Mapping	1,112,000	1,325,000
Total MR&T Maintenance	151,855,000	248,105,000

MISSISSIPPI VALLEY FLOOD CONTROL ASSOCIATION—FISCAL YEAR 2005 CIVIL WORKS REQUESTED BUDGET—MISSISSIPPI RIVER AND TRIBUTARIES APPROPRIATIONS

Project and State	President's Budget	MVFCA Request
Surveys, Continuation of Planning and Engineering & Advance Engineering & Design:		
Memphis Harbor, TN	.....	.....
Germantown, TN	$27,000	$27,000
Millington, TN	100,000	100,000
Fletcher Creek, TN	93,000	93,000
Memphis Metro Storm Water Management, TN	.....	100,000
Bayou Meto, AR	.....	2,447,000
Germantown, TN	.....	200,000
Southeast Arkansas	.....	600,000
Coldwater Basin Below Arkabutla Lake, MS	203,000	750,000
Quiver River, MS	.....	100,000
Spring Bayou, LA	500,000	600,000
Point Coupee to St. Mary Parish, LA	.....	100,000
Atchafalaya Basin Floodway System, LA*	100,000	100,000
Alexandria, LA to the Gulf of Mexico	435,000	435,000
Morganza, LA to the Gulf of Mexico	1,500,000	10,000,000
Donaldsonville, LA to the Gulf of Mexico	800,000	1,200,000
Tensas River, LA	.....	500,000
Donaldsonville Port Development, LA	.....	100,000
Collection & Study of Basic Data	700,000	700,000
Subtotal, Surveys, Continuation of Planning & Engineering & Advance Engineering & Design	4,458,000	18,152,000
Construction:		
St. John's Bayou-New Madrid Floodway, MO	8,300,000	8,300,000
Eight Mile Creek, AR	1,357,000	3,293,000
Helena & Vicinity, AR	.....	.....
Grand Prairie Region, AR	.....	20,000,000
Bayou Meto, AR	.....	18,000,000
West Tennessee Tributaries, TN	.....	700,000
Nonconnah Creek, TN	2,153,000	2,753,000

MISSISSIPPI VALLEY FLOOD CONTROL ASSOCIATION—FISCAL YEAR 2005 CIVIL WORKS REQUESTED BUDGET—MISSISSIPPI RIVER AND TRIBUTARIES APPROPRIATIONS—Continued

Project and State	President's Budget	MVFCA Request
Wolf River, Memphis, TN		2,400,000
August to Clarendon Levee, Lower White River, AR		2,000,000
St. Francis Basin, MO & AR	3,000,000	9,500,000
Yazoo Basin, MS	5,850,000	62,775,000
Atchafalaya Basin, LA	22,495,000	32,500,000
Atchafalaya Basin Floodway, LA	7,200,000	10,000,000
MS Delta Region, LA	1,800,000	4,700,000
Horn Lake Creek, MS		203,000
MS & LA Estaurine Area, MS & LA		50,000
Channel Improvements, IL, KY, MO, AR, TN, MS & LA	36,882,000	44,082,000
Mississippi River Levees, IL, KY, MO, AR, TN, MS & LA	38,960,000	54,800,000
Subtotal, Construction	127,997,000	276,056,000
Subtotal, Maintenance	151,855,000	248,105,000
Subtotal, Mississippi River & Tributaries	284,310,000	542,313,000
Less Reduction for Savings & Slippage	−14,310,000	92,313,000
Grand Total, Mississippi River & Tributaries	270,000,000	450,000,000

PREPARED STATEMENT OF THE LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

On behalf of the State of Louisiana and its twenty levee boards, we present recommendations for fiscal year 2005 appropriations for U.S. Army Corps of Engineers Civil Works Projects in Louisiana.

Louisiana contains the terminus of the Mississippi River, third largest drainage basin in the world, draining 41 percent, or 1¼ million square miles, of the contiguous United States and parts of two Canadian provinces. When combined with the other interstate rivers flowing through the State, almost 50 percent of the contiguous land mass of this Nation drains through Louisiana. This same river drainage system forms the backbone of the federally constructed Inland Waterway System that provides our heartland cost effective access to the global marketplace via the 230 mile deepwater channel of the lower Mississippi River from Baton Rouge to the Gulf. This strategic gateway to international markets is the largest port complex in the world ranking Louisiana first in the Nation in volume of waterborne traffic. We are distressed that the Administration's budget proposals in recent years indicate a lack of concern for the preservation and efficient operation of this system. The Inland Waterway System—the whole system—allowed industrial facilities scattered throughout the central portion of the Nation to obtain raw materials and fuel from distant locations and to reach worldwide markets. These industries, and most of the agricultural industries in mid-America, are heavily dependent on the federally maintained navigable waterways to remain globally competitive in transporting their products. To consider maintenance of only the main-stem portion of the waterway system at the expense of the connector branches will wreak havoc on the economies of all the communities located on these so-called low-use branch waterways.

A comprehensive and extensive flood control system is required to protect the landside facilities and related industries supporting that waterborne commerce. In Louisiana there are almost 3,000 miles of levees (1,500 in the MR&T system) constructed jointly by Federal, State and local entities that provide protection from riverine and tidal flooding. Louisiana's 20 levee boards are responsible for the maintenance and upkeep of these levees which allow one-third of Louisiana to be habitable year-round. The petrochemical, oil and gas industries in Louisiana that contribute to the economic well being of the Nation are almost totally dependent on the federally constructed flood control system to protect their facilities. But these same levees and channel improvements that benefit the entire Nation have been blamed for the rapid deterioration of our coastal wetlands. The loss of these wetlands is adversely impacting both the area's natural resources and the effectiveness of our hurricane protection system. These wetlands are not Louisiana's alone; they constitute 40 percent of the Nation's wetlands and their restoration must be considered a national priority.

The Mississippi River and Tributaries Project (MR&T) has been underway since 1928 and isn't scheduled for completion until beyond 2031. The Administration's proposed budget of $270 Million for fiscal year 2005 is totally unacceptable. We strongly support the Mississippi Valley Flood Control Association's request for $450 Million for the MR&T Project. We urge support of this requested level of funding.

In making the following funding recommendations for Louisiana projects regarding specific construction, studies, and operation and maintenance items, the State of Louisiana would hope that Congress and the Administration will honor their prior commitments to infrastructure development and continue to fund our requests. It is appropriate that the Federal Government has committed to providing combined flood control and navigation measures that benefit the economy of both Louisiana and the rest of the Nation. We believe these types of water resources projects are the most cost effective projects in the Federal budget, having to meet stringent economic criteria not required by other programs.

We wish to express our thanks to the Appropriations Subcommittees on Energy and Water Development of the House and Senate for allowing us to present this brief on the needs of Louisiana for fiscal year 2005. We solicit your favorable consideration and request this statement be included in the formal hearing record.

The State of Louisiana requests funding for the following projects that differs from what is in the fiscal year 2005 Administration Budget or is a project of particular importance for the State. Those items that the State of Louisiana believes have been appropriately funded have not been included.

FLOOD CONTROL, NAVIGATION, HURRICANE PROTECTION & WATER RESOURCES PROJECTS
SUMMARY OF RECOMMENDED APPROPRIATIONS FISCAL YEAR 2005 FOR LOUSIANA

Louisiana	Administrative Budget	Louisiana Request
GENERAL INVESTIGATIONS:		
STUDIES:		
Amite River-Ecosystem Restoration, LA	$250,000	$250,000
Amite River & Tributaries, LA—Bayou Manchac	100,000	1,000,000
Atchafalaya River, Bayous Chene, Boeuf & Black, LA	350,000	800,000
Calcasieu Lock, LA	200,000	1,000,000
Calcasieu River Basin, LA	350,000	350,000
Calcasieu River Pass Ship Channel Enlargement, LA	50,000	500,000
Hurricane Protection, LA		200,000
LCA—Ecosystem Restoration, LA	8,000,000	12,000,000
Mississippi River Gulf Outlet, LA	225,000	225,000
Plaquemines Parish, LA	300,000	500,000
Port of Iberia, LA	350,000	730,000
St. Bernard Parish Urban Flood Control, LA	300,000	550,000
St. Charles Parish Urban Flood Control, LA	300,000	800,000
St. John the Baptist Parish, LA		600,000
Southwest, AR (AR, LA)		427,000
Bossier Parish Levee & FC		385,000
Cross Lake Water Supply		500,000
JBJWW		100,000
Pearl River, MS & LA		100,000
Pearl River, Bogalusa (MS)		100,000
PED:		
Bayou Sorrel Lock, LA	550,000	550,000
Lafayette Parish, LA		327,000
West Shore—Lake Pontchartrain, LA		400,000
West Baton Rouge Parish, LA		500,000
NEW STUDIES:		
Bayou Nezpique Watershed, LA		100,000
Millennium Port, LA		100,000
Port Fourchon Enlargement, LA		100,000
Port of West St. Mary		100,000
Southwest La Multi-Purpose Water Resources, LA		100,000
Tangipahoa River Ecosystem Restoration, LA		100,000
CONSTRUCTION GENERAL:		
Comite River, LA	1,500,000	9,900,000
East Baton Rouge Parish, LA		8,000,000
Grand Isle, LA		1,900,000
Inner Harbor Navigation Canal Lock, LA (IWWTF & CG)	10,000,000	24,000,000

FLOOD CONTROL, NAVIGATION, HURRICANE PROTECTION & WATER RESOURCES PROJECTS SUMMARY OF RECOMMENDED APPROPRIATIONS FISCAL YEAR 2005 FOR LOUSIANA—Continued

Louisiana	Administrative Budget	Louisiana Request
Lake Pontchartrain, LA	3,937,000	22,500,000
Larose to Golden Meadow, LA	583,000	1,500,000
New Orleans to Venice, LA	2,965,000	6,600,000
Southeast, LA	30,000,000	78,000,000
West Bank and Vicinity, New Orleans, LA	37,000,000	59,800,000
Red River Below Den Dam (AR, LA)		7,000,000
Red River Emergency (AR, LA)		10,000,000
J Bennett Johnston Waterway, MS River to Shreveport	4,000,000	20,000,000
Ouachita River Levees		3,800,000
OPERATIONS & MAINTENANCE GENERAL:		
Atchafalaya River, Bayous Chene, Boeuf & Black	13,813,000	26,600,000
Barataria Bay Waterway		4,600,000
Bayou Lacombe		860,000
Bayou Lafourche		1,100,000
Bayou Segnette		1,400,000
Bayou Teche		300,000
Calcasieu River & Pass	13,285,000	21,800,000
(T) Chefuncte River		800,000
Freshwater Bayou	1,678,000	3,700,000
Grand Isle, LA & Vicinity		800,000
Gulf Intracoastal Waterway	17,476,000	27,300,000
Houma Navigation Canal	3,070,000	3,300,000
Mermentau River	4,410,000	6,500,000
Mississippi River, Baton Rouge to the Gulf	59,125,000	74,400,000
Mississippi River—Gulf Outlet	13,004,000	45,000,000
Mississippi River, Outlets at Venice	424,000	3,700,000
Tangipahoa River		800,000
Waterway Empire to the Gulf		240,000
Waterway Intracoastal Waterway to Bayou Dulace		200,000
Ouachita & Black Rivers (AR, LA)	1,974,000	18,123,000
Bayou Bodcau	776,000	776,000
Caddo Lake	182,000	182,000
Wallace Lake	290,000	290,000
Bayou Pierre	28,000	28,000
J Bennett Johnston Waterway	10,600,000	18,098,000
Lake Providence Harbor	38,000	451,000
Madison Parish Port	20,000	120,000

Note.—The projects listed above are only those in Louisiana (except where noted) and directly affect the State.

MISSISSIPPI RIVER AND TRIBUTARIES SUMMARY OF RECOMMENDED APPROPRIATIONS FISCAL YEAR 2005 FOR LOUISIANA

Louisiana	Administrative Budget	Louisiana Request
FC, MR&T GENERAL INVESTIGATIONS:		
Alexandria to the Gulf	$435,000	$435,000
Donaldsonville to the Gulf	800,000	1,200,000
Morganza to the Gulf, PED	1,500,000	10,000,000
Collection & Study Data	200,000	200,000
Collect & Study of Basic Data (AR, LA, MS)	300,000	300,000
Spring Bayou Area, LA	500,000	600,000
Tensas River Basin, LA	0	500,000
NEW STUDIES: Atchafalaya Basin Floodway System Land Study, LA	0	100,000
FC, MR&T CONSTRUCTION:		
Atchafalaya Basin	22,495,000	32,500,000
Atchafalaya Basin Floodway System	7,200,000	10,000,000
Channel Improvement	10,105,000	10,105,000
Mississippi Delta Region (FED)	1,800,000	4,700,000
Mississippi River Levees, LA	2,680,000	2,680,000
MS—LA Estuarine Area	0	50,000
Mississippi River Levees (AR, LA, MS)	20,850,000	30,850,000

MISSISSIPPI RIVER AND TRIBUTARIES SUMMARY OF RECOMMENDED APPROPRIATIONS FISCAL YEAR 2005 FOR LOUISIANA—Continued

Louisiana	Administrative Budget	Louisiana Request
Channel Improvement (AR, LA, MS)	13,582,000	16,782,000
FC, MR&T MAINTENANCE:		
Atchafalaya Basin	13,000,000	25,000,000
Atchafalaya Basin Floodway System	2,775,000	4,200,000
Baton Rouge Harbor (Devil's Swamp)	14,000	300,000
Bayou Cocodrie and Tributaries	65,000	65,000
Bonnet Carre Spillway	2,310,000	3,100,000
Channel Improvement	15,675,000	15,675,000
Dredging	700,000	700,000
Inspection of Completed Works	383,000	383,000
Mapping	396,000	396,000
MS Delta Region	588,000	588,000
Mississippi River Levees, LA	790,000	5,200,000
Old River	7,350,000	29,900,000
Mississippi River Levees (AR, LA, MS)	2,670,000	3,270,000
Revetments & Dikes (AR, LA, MS)	13,400,000	13,400,000
Dredging (AR, LA, MS)	6,265,000	6,265,000
Mapping (AR, LA, MS)	329,000	329,000
Inspection of Completed Works (AR, LA, MS)	338,000	338,000
Boeuf & Tensas Rivers	2,160,000	2,160,000
Red River Backwater	3,083,000	7,390,000
Lower Red River	105,000	105,000

Note.—The projects listed above are only those in Louisiana (except when noted) and directly affect the State. We realize that there are other projects in the Valley. We endorse the recommendations of the Mississippi Valley Flood Control Association.

PREPARED STATEMENT OF THE ASSOCIATION OF STATE DAM SAFETY OFFICIALS

Chairman Domenici and members of the subcommittee, the Association of State Dam Safety Officials is pleased to offer this testimony on the President's proposed budget for the U.S. Army Corps of Engineers (USACOE) fiscal year 2005. The Association's testimony includes issues related to the safety and security of the dams owned or operated by the USACOE and in support of the National Inventory of Dams (NID) authorized by the Dam Safety and Security Act of 2002.

The Association of State Dam Safety Officials is a national non-profit organization of more than 2000 State, Federal and local dam safety professionals and private sector individuals dedicated to improving dam safety through research, education and communications. Our goal simply is to save lives, prevent damage to property and to maintain the benefits of dams by preventing dam failures. Several dramatic dam failures in the United States called attention to the catastrophic consequences of failures. The failure of the federally-owned Teton Dam in 1976 caused 14 deaths and over $1 billion in damages, and is a constant reminder of the potential consequences associated with dams and the obligations to assure that dams are properly constructed, operated and maintained.

NATIONAL INVENTORY OF DAMS

The National Inventory of Dams is a computer database, maintained by the USACOE, that houses vital information of Federal and non-Federal dams across the United States. The database tracks information about the dam's location, size, use, type, proximity to nearest town, hazard classification, age, height and many other technical data fields. The database can be used for States or Federal agencies to access comprehensive information for planning, security alerts or to use within a Graphic Information System (GIS) vital in tracking lifeline systems and responding to emergency events through using the geographic and mapping abilities along with the engineering information within the NID database.

The NID can be used by policy makers as a tool when evaluating national or local dam safety issues. For example, it is extremely useful in establishing the average age of the dams in the United States, or identifying the number and location of a particular type of dam construction (i.e. the number and location of "thin arch" dams greater than 100 feet in height). In addition, the Federal Emergency Agency uses this data to compute State grant assistance funds, in accordance with the Na-

tional Dam Safety Program and to assess the status of Federal and non-Federal dams.

There are over 78,000 dams on the National Inventory of Dams in the country. It is essential that this data be current and accurate in order to have access to this critical data when needed and to be able to track trends in assessing dam safety improvements. The NID can meet this need, but it is only as accurate as the last update. The NID has not been updated since 2000. The database must be continually updated as the dam information is constantly changing (i.e. new ownership, major repairs, removal of dams, increasing the height and storage, additional downstream development or changes to the dam's hazard classification). This data is now even more important as the intelligence community and Federal law enforcement agencies have identified dams as a specific target of potential terrorists attacks. The data can also be of tremendous benefit to Federal agencies such as FEMA, NWS, USGS and the new Department of Homeland Security for locating large dams, for watershed planning, flood control planning or emergency response to failures or extreme storm events.

Correct and timely data is vital to the national effort to assess and protect our critical infrastructure, including dams, from intentional acts of terrorists. The Homeland Security Presidential Directive No. 7 requires the Federal Government to "protect critical infrastructure and key resources" and includes a "strategy to identify, prioritize and coordinate the protection of critical infrastructure." This cannot be accomplished without an accurate NID.

Continuing updates and improvements to this database resource should be a higher priority. Federal agencies that own dams as well as State dam safety programs provide updated information and corrections to the data fields, which provides for accurate and current data. The NID is also an integral part of the biennial report to Congress which evaluates the performance of the National Dam Safety Program and status of the safety of the Nation's dams.

The Association respectfully requests that the subcommittee recognize the importance of this national dam database and increase the appropriation amount from the proposed funding level in the President's budget of $222,000 to the full authorized funding amount of $500,000.

DAM SAFETY, SECURITY, AND OPERATION AND MAINTENANCE

The USACOE is recognized as a national leader in dam construction and dam safety. The USACOE currently owns or operates 700 dams in the United States, and these dams, like other critical components of the national infrastructure are aging and the require vigilant inspection as well as routine maintenance. In addition, the security of our Nation's infrastructure is a major concern. Dams, especially the large federally-owned dams are a potential target for terrorists attacks.

The USACOE dams are typically very large, provide flood protection, water supply, hydropower, recreation and many are critical to the waterway navigation on the Nation's major rivers. The consequences of a failure or misoperation of one of these dams can cause enormous loss of life and property damage, as well as the loss of the benefits provided by the dam. Therefore, the Association strongly supports appropriations necessary to make needed repairs, to conduct security assessments and improvements wherever necessary. The Association believes that operation and maintenance are critical to the continued safe performance of the dams. Too often deferred maintenance causes a small problem to become larger and more costly; and if left unattended, may cause the dam to become more susceptible to failure.

The Association applauds the administration's recognition of the importance and value of the USACOE's Dam Safety Program and the need to fund dam maintenance of USACOE dams. ASDSO respectfully asks that the subcommittee recognize that inspections, safety repairs, security and routine maintenance are all essential to assure the safety and the continuing benefits of USACOE dams.

The Association specifically requests that the subcommittee:

—Support the administration's increase in appropriations for the USACOE Dam Safety Program non-project management funds at $250,000;

—Increase in appropriations for the USACOE Dam Security Program non-project management funds to $100,000 from the proposed $30,000 to include assistance to the State dam safety programs in conducting security vulnerability assessments and for training in the dam security assessment tools such as RAM–D;

—Restore the USACOE "Planning Assistance to States Program" to the $6,500,000 of fiscal year 2004 from the proposed $4,650,000 to provide much needed assistance to the States to cost-share dambreak modeling, flood studies, developing emergency evacuation plans and to jointly conduct security vulnerability assessments; and

—Support the administration's fiscal year 2005 budget for $35,000,000 for emergency maintenance/repairs.

Finally, while the security of the USACOE dams is currently a major priority, the continued safety, repair and maintenance of the USCOE dams should also continue as a major appropriations priority and not be diminished. Improved security on an unsafe dam may deter an attack, but it still leaves the lives and property downstream at an unnecessary risk.

Mr. Chairman and members of the subcommittee, thank you for this opportunity to provide this testimony in support of safe dams. We look forward to working with the subcommittee and staff on this important national issue.

PREPARED STATEMENT OF THE ARKANSAS RIVER BASIN INTERSTATE COMMITTEE

Mr. Chairman and members of this distinguished committee, my name is Lew Meibergen. I am Chairman of the Board of Johnston Enterprises headquartered in Enid, Oklahoma. It is my honor to serve as Chairman of the Arkansas River Basin Interstate Committee, members of which are appointed by the governors of the great States of Arkansas, Colorado, Kansas, Missouri, and Oklahoma.

In these times of war on terrorism, homeland defense and needed economic recovery, our thanks go to each of you, your staff members and the Congress. Your efforts to protect our Nation's infrastructure and stimulate economic growth in a time of budget constraints are both needed and appreciated.

Our Nation's growing dependence on others for energy, and the need to protect and improve our environment, make your efforts especially important. Greater use and development of one of our Nation's most important transportation modes—our navigable inland waterways—will help remedy these problems. At the same time, these fuel-efficient and cost-effective waterways keep us competitive in international markets. In this regard, we must maintain our inland waterway transportation system. We ask that the Congress restore adequate funding to the Corps of Engineers budget—$5.5 billion in fiscal year 2005—to keep the Nation's navigation system from further deterioration. If this catastrophic problem is not addressed immediately, we are in real danger of losing the use of this most important transportation mode.

As Chairman of the Interstate Committee, I present this summary testimony as a compilation of the most important projects from each of the member States. Each of the States unanimously supports these projects without reservation. I request that the copies of each State's individual statement be made a part of the record, along with this testimony.

Backlog of Channel Structure Maintenance McClellan-Kerr Arkansas River Navigation System

A $10 million Congressional add to the fiscal year 2005 Operation and Maintenance budget is urgently needed for critical repairs to damaged and deteriorated dikes and revetments to maintain channel alignment and provide original channel configuration while reducing the need for dredging.

Equus Beds Aquifer—Kansas

Equus Beds Aquifer Storage and Recovery Project.—Continuation of a City of Wichita, Groundwater Management District No. 2 and State of Kansas project to construct storage and recovery facilities for a major groundwater resource supplying water to more than 20 percent of Kansas municipal, industrial and irrigation users. The project will capture and recharge in excess of 100 million gallons per day and will also reduce on-going degradation of the existing groundwater by minimizing migration of saline water. Federal authorization of the project and continued Federal funding is requested in the minimum amount of $1.5 million for fiscal year 2005.

Arkansas River System Operations Feasibility Study, Arkansas and Oklahoma

This study will evaluate how to optimize the reservoirs in Oklahoma and Arkansas that provide flows into the river with a view toward improving the number of days per year that the navigation system will accommodate tows. It will also investigate the impacts of deepening and widening the navigation channel. We request funding in the amount of $1.253 million to complete the study in fiscal year 2005. This is $735,000 above the President's budget request of $500,000.

The testimony we present reveals our firm belief that our inland waterways and the Corps of Engineers' efforts are especially important to our Nation in this time of trial. Transportation infrastructure like the inland waterways, need to be operated and maintained for the benefit of the populace. Without adequate annual budgets, this is impossible.

Mr. Chairman, members of this committee, we respectfully request that you and members of your staff review and respond in a positive way to the attached individual statements from each of our States which set forth specific requests pertaining to those States.

We sincerely appreciate your consideration and assistance.

ARKANSAS

PREPARED STATEMENT OF PAUL LATTURE, II, CHAIRMAN FOR ARKANSAS

Mr. Chairman and members of the committee, thank you for the opportunity to present testimony to this most important committee. I serve as Executive Director for the Little Rock Port Authority and as Arkansas Chairman for the Interstate Committee. Other committee members representing Arkansas, in whose behalf this statement is made, are Messrs. Wally Gieringer of Hot Springs Village, retired Executive Director of the Pine Bluff-Jefferson County Port Authority; Scott McGeorge, President, Pine Bluff Sand and Gravel Company, Pine Bluff; Barry McKuin of Morrilton, President of the Conway County Economic Development Corporation; and N.M. "Buck" Shell, CEO, Five Rivers Distribution in Van Buren and Fort Smith, Arkansas.

We call to your attention three projects on the McClellan-Kerr Arkansas River Navigation System (the "System") that are especially important to navigation and the economy of this multi-State area: Backlog of Channel Structure Maintenance, Maintenance Dredging, and Ark-White Cutoff as related to the Arkansas River.

Backlog of Channel Structure Maintenance

—A $10 million Congressional Add to the fiscal year 2005 Operation and Maintenance Budget is urgently needed for critical repairs to damaged and deteriorated dikes and revetments to maintain channel alignment and provide original channel configuration while reducing the need for dredging.

—More than a decade of neglect to our navigation structures while funding the construction of Montgomery Point Lock & Dam has created a critical backlog of channel structure work that threatens the viability of the McClellan-Kerr Arkansas River Navigation System.

—Current grain prices offer a rare potential for our farming mid-section of the Nation yet a failure to deliver these commodities to market due to neglect of our transportation system would have serious economic impacts rippling through the entire Arkansas River Basin.

Maintenance Dredging

—A $3 million Congressional Add is needed for Maintenance Dredging in known problem areas with siltation capable of restricting or closing the navigation channel.

—A closure of the System for even a short period would create transportation problems with devastating economic impacts on Arkansas and our Nation at a time when commodity shipments are at record levels.

—These funds will help ensure the System remains open and allow users to maximize tonnage by preventing the need for light loading.

Ark-White Cutoff

—A cutoff is developing between the Arkansas and White Rivers which, if not corrected, could have dramatic adverse effects on the navigation system as well as significant bottomland hardwoods and pristine environment that provides unique wildlife habitat in southeast Arkansas.

—Unless corrected, it is inevitable that a major cutoff will occur negatively impacting navigation on the river, significantly increasing siltation and dredging requirements and, at worst, cutting off the lower end of the Navigation System from the Mississippi River.

—Therefore, a $2 million Congressional Add is needed to further the study of this area and lead to a solution, which will prevent erosion, cutoffs, and detrimental siltation.

In addition to these three vital requests, we urge you to continue to support funding for the Construction, and Operation and Maintenance of the McClellan-Kerr Arkansas River Navigation System which provides low-cost and dependable transportation for farm products, construction aggregates, raw materials and finished products important to our Nation's economic recovery.

It is also most important that you continue construction authority of the McClellan-Kerr Project until remaining channel stabilization problems identified by the Little Rock District Corps of Engineers have been resolved. The Corps needs to de-

velop a permanent solution to the threat of cutoffs developing in the lower reaches of the navigation system and to use environmentally sustainable methods under the existing construction authority.

Mr. Chairman, we appreciate the work of this essential committee and thank you for your efforts that contribute so much to the social and economic well-being of the United States of America.

We fully endorse the statement presented to you today by the Chairman of the Arkansas River Basin Interstate Committee and urge you to favorably consider these requests that are so important to the economic recovery of our region and Nation.

COLORADO

PREPARED STATEMENT OF JAMES BRODERICK, CHAIRMAN FOR COLORADO

Mr. Chairman and members of the committee, we greatly appreciate the opportunity to present testimony before this committee. My name is James Broderick, I am the Executive Director of the Southeastern Colorado Water Conservancy District and serve as Colorado Chairman for the Interstate Committee.

The critical water resource projects in the Colorado portion of the Arkansas River Basin are summarized below. The projects are environmental and conservation oriented and have regional and multi-State impact. We are grateful for your leadership and your past commitment to our area.

This request is for two projects $554,000 to provide for:

—*Design, installation, and operation of weighing lysimeters at the Colorado State University Agricultural Experiment Station at Rocky Ford, Colorado ($422,000).*—Install and operate a set of three monolithic continuous weighing (direct load cell) lysimeters to accurately measure evapotranspiration of a reference crop and of production crops under a variety of field conditions typical of the lower Arkansas River Valley in Colorado.

—*Enhancement of the CoAgMet Electronic Weather Station Network in the Lower Arkansas River Basin ($132,000).*—Enhance and improve the existing and new Colorado Agriculture Meteorological (CoAgMet) weather in the Lower Arkansas River Basin and provide for its adequate operation and maintenance in order to provide accurate data for predicting evapotranspiration using the Penman-Monteith method.

In recent litigation the Penman Monteith method has been recognized as the preferred procedure for calculating crop water use, replacing the Blaney-Criddle method historically used in Colorado. The importance of this change is that the Penman Monteith method, requires more data and information than Blaney-Criddle in order to be used properly. The Penman-Monteith method will increasingly be used to calculate crop consumptive use to determine the transferable consumptive use for changes of agricultural water rights to municipal use in the Arkansas River Basin and elsewhere in the State.

We fully endorse the statement presented to you today by the Chairman of the Arkansas River Basin Interstate Committee. We appreciate the opportunity to provide testimony to your most important subcommittee and urge you to favorably consider our request for needed infrastructure investments in the natural and transportation resources of our Nation.

KANSAS

PREPARED STATEMENT OF GERALD H. HOLMAN, CHAIRMAN FOR KANSAS

Mr. Chairman and members of the committee, I am Gerald H. Holman, Senior Vice President of the Wichita Area Chamber of Commerce, Wichita, Kansas and Chairman of the Kansas Interstate Committee for the Arkansas Basin Development Association (ABDA). I also serve as Chairman of ABDA.

The Kansas ABDA representatives join with our colleagues from the other Arkansas River Basin States to form the multi-State Arkansas Basin Development Association. We fully endorse the summary statement presented to you by the Chairman of the Arkansas River Basin Interstate Committee.

We are pleased to report that the Montgomery Point Lock and Dam Project will be operational by July 2004 and that a formal dedication ceremony is scheduled for July 16, 2004. Completion of this critical project through your support will maintain viable navigation for commerce on the McClellan-Kerr Navigation System. This inland waterway is vital to the economic health of our multi-State area. The Federal Government invested $1.3 billion in the project. Other public and private investment totals in excess of $4.2 billion and over 50,000 jobs have been created. Increasing the depth of the navigation channel to 12 feet will increase the performance of

the navigation system by allowing shippers to move one-third more cargo per barge. We request funding in the amount of $1.235 million to complete Phase II of the Arkansas River System Operations Feasibility Study which will examine the feasibility of increasing the channel depth.

The critical water resources projects in the Kansas portion of the Arkansas River Basin are identified below. The projects are safety, environmental and conservation oriented and all have regional and/or multi-State impact. We are grateful for your past commitment to critical needs in Kansas.

We ask for your continued support for this important Bureau of Reclamation project on behalf of the Wichita/South Central Kansas area:

Equus Beds Aquifer Storage and Recovery Project.—This is the continuation of a Bureau of Reclamation project jointly endorsed by the City of Wichita, Groundwater Management District No. 2 and the State of Kansas. This model technology has proven the feasibility of recharging a major groundwater aquifer supplying water to nearly 600,000 irrigation, municipal and industrial users. The demonstration project has successfully recharged more than one billion gallons of water from the Little Arkansas River. The project is essential to help protect the aquifer from on-going degradation caused by the migration of saline water.

The State of Kansas supports this much-needed project in order to secure the quality of life and economic future for more than 20 percent of the State's population. The project is included within the Kansas Water Plan. All interested parties fully support the project as the needed cornerstone for the area agricultural economy and for the economy of the Wichita metropolitan area.

The demonstration project has confirmed earlier engineering models that the full scale aquifer storage and recovery project is feasible and capable of meeting the increasing water resource needs of the area to the mid-21st century. Presently, the Equus Beds provide approximately half of the Wichita regional municipal water supply. The Equus Beds are also vital to the surrounding agricultural economy. Environmental protection of the aquifer, which this strategic project provides, has increasing importance to ensure quality water for the future since south central Kansas will rely to an even greater extent on the Equus Beds aquifer for water resources.

The aquifer storage and recovery project is a vital component of Wichita's comprehensive and integrated water supply strategy. The full scale design concept for the aquifer storage and recovery project calls for a multi-year construction program. Phase One is estimated to cost $17.1 million. The total project involving the capture and recharge of more than 100 million gallons of water per day is estimated to cost $110 million over 10 years. This is substantially less costly, both environmentally and economically, when compared with reservoir construction or other alternatives.

We are grateful for your previous cost share funding during the demonstration phase, as a compliment to funds provided by the City of Wichita. As we enter the construction phase, we request continued Congressional support:

—by authorizing as a Federal project, the Aquifer Storage and Recovery Project and directing the Bureau of Reclamation to participate in its final design and construction to completion; and

—through continued cost share funding of the full-scale Aquifer Storage and Recovery Project in the minimum amount of $1,500,000 for fiscal year 2005.

Many of our agricultural communities have historically experienced major flood disasters, some of which have resulted in multi-State hardships involving portions of the State of Oklahoma. The flood of 1998 emphasized again the need to rapidly move needed projects to completion. Major losses also took place in the Wichita metropolitan area. Projects in addition to local protection are also important. Our small communities lack the necessary funds and engineering expertise and Federal assistance is needed. This committee has given its previous support to Corps of Engineers projects in Kansas and we request your continued support for the following:

—*Arkansas City, Kansas Flood Protection.*—Unfortunately, this project was not completed prior to the flood of 1998. The flood demonstrated again the critical need to protect the environment, homes and businesses from catastrophic damages from either Walnut River or Arkansas River flooding. When the project is complete, damage in a multi-county area will be eliminated and benefits to the State of Oklahoma just a few miles south will also result. The Secretary of the Army was authorized to construct the project in fiscal year 1997. The project is slated for completion in fiscal year 2005 but the funding is not adequate in the President's budget. We request your continued support in the amount of $3.619 million, which is $2.619 million above the President's budget request so the Corps of Engineers can complete this project.

—*Walnut River Basin, Kansas Feasibility Study.*—This basin including the Whitewater and Little Walnut Rivers is located in south central Kansas. The feasi-

bility study will identify ecosystem resources, evaluate the system qualities, determine past losses and current needs, and evaluate potential restoration and preservation measures. The non-Federal sponsor is the Kansas Water Office who believes that environmental restoration is a primary need in the basin. Environmental restoration features may also stabilize and protect streambanks from erosion and improve the water quality in the basin. The need for fiscal year 2005 is $305,000 which is $86,000 more than the President's budget request.

—*Silver-Grouse Creek Reconnaissance Study.*—The Silver-Grouse Creek area in south central Kansas is a location of natural geologic, archaeological and biologic attributes of the watershed. Periodic flooding downstream of the reconnaissance area impacts neighboring Oklahoma. Smaller Kansas communities without technical, financial and managerial capacities are all investigating future sources of water supply which potentially could be satisfied through impoundment of water. A reconnaissance study will identify water resource, flooding and ecosystem restoration issues and will also establish whether there is Federal interest in feasibility level studies. The Cowley County Commission has requested a feasibility study be conducted by the Corps. The Lt. Governor of Kansas has requested an evaluation through the State Water Planning Process and the Kansas Water Authority has supported this request. Funding is requested in the amount of $100,000 for fiscal year 2005.

—*Grand Lake Feasibility Study.*—A need exists to complete evaluation of water resource problems in the Grand-Neosho River basin in Kansas and Oklahoma to evaluate solutions to upstream flooding problems associated with the adequacy of existing real estate easements necessary for flood control operations of Grand Lake, Oklahoma. A study authorized by the Water Resources Development Act of 1996 was completed in September of 1998 and determined that if the project were constructed based on current criteria, additional easements would be required. Section 449 of WRDA 2000 directed the Secretary to evaluate backwater effects specifically due to flood control operations on land around Grand Lake. That study indicated that Federal actions have been a significant cause of the backwater effects and according to WRDA 2000, the feasibility study should be 100 percent federally funded. A Feasibility study is necessary to determine the most cost-effective solution to the real estate inadequacies. Changes in the operations of the project or other upstream changes could have a significant impact on flood control, hydropower, and navigation operations in the Grand (Neosho) River system and on the Arkansas River basin system, as well. We request funding in the amount of $450,000 in fiscal year 2005 to fully fund Feasibility studies evaluating solutions to upstream flooding associated with existing easements necessary for flood control operations of Grand Lake. Although this has been a Congressional add for the past 2 years, no money was made available in the fiscal year 2005 President's budget request.

—*Grand (Neosho) Basin Reconnaissance Study.*—A need exists for a basin-wide water resource planning effort in the Grand-Neosho River basin, apart from the issues associated with Grand Lake, Oklahoma. A federal interest has been determined from the reconnaissance study as a result from a Congressional add in fiscal year 2003 and another add appropriated in fiscal year 2004. Additional funds are needed to continue the feasibility stage of the project. The study would focus on the evaluation of institutional measures needed to improve the quality of the aquatic and terrestrial habitat in the basin and to assist communities, landowners, and other interests in southeastern Kansas and northeastern Oklahoma in the development of non-structural measures to reduce flood damages. We request funding in the amount of $225,000 in fiscal year 2005.

—*Continuing Authorities Programs.*—We support funding of needed programs including the Small Flood Control Projects Program (Section 205 of the 1948 Flood Control Act, as amended), Aquatic Ecosystem Restoration (Section 206 of the 1996 Water Resources Development Act, as amended), Ecosystem Restoration (Section 1135 of the 1986 Water Resources Development Act, as amended) as well as the Emergency Streambank Stabilization Program (Section 14 of the 1946 Flood Control Act, as amended). Smaller communities in Kansas (Iola, Liberal, McPherson, Augusta, Parsons, Altoona, Kinsley, Newton, Arkansas City, Coffeyville and Medicine Lodge) have previously requested assistance from the Corps of Engineers under the Section 205 and Section 14 programs. The City of Wichita is also requesting funding through these programs to address flooding problems. We urge you to support an increase of these programs to a $65 million programmatic limit for the Small Flood Control Projects Program, $35 million for Aquatic Ecosystem Restoration, $35 million for the Ecosystem Res-

toration Program and $25 million for the Emergency Streambank Stabilization Program.

The Ecosystem Restoration Programs are relatively new programs which offer the Corps of Engineers a unique opportunity to work to restore valuable habitat, wetlands, and other important environmental features which previously could not be considered. Preliminary Restoration Plan studies are underway at Newton, Garden City and Neosho County.

The Planning Assistance to States Program under section 22 of the Water Resources Development Act of 1974, as amended, provides federal funding to assist the States in water resource planning. The State of Kansas is grateful for previous funding under this program which has assisted small Kansas communities in cost sharing needed resource planning as called for and approved in the Kansas State Water Plan. We request continued funding of this program at the $10 million programmatic limit which will allow the State of Kansas to receive the $500,000 limit.

Finally, we are very grateful that both the Corps of Engineers and Bureau of Reclamation have the expertise needed for the development and protection of water resources infrastructure. It is essential to have the integrity and continuity these agencies provide on major public projects. Your continued support of these vital agencies, including funding, will be appreciated. Our infrastructure must be maintained and where needed, enhanced for the future.

Mr. Chairman and members of these committees, we thank you for the dedicated manner in which you have dealt with the Water Resources Programs and for allowing us to present our funding requests.

Thank you very much.

OKLAHOMA

PREPARED STATEMENT OF JAMES M. HEWGLEY, JR., CHAIRMAN FOR OKLAHOMA

Mr. Chairman and members of the committee, I am James M. Hewgley, Jr., Oklahoma Chairman of the Arkansas River Basin Interstate Committee, from Tulsa, Oklahoma.

It is my privilege to present this statement on behalf of the Oklahoma Members of our committee in support of adequate funding for water resource development projects in our area of the Arkansas River Basin. Other members of the committee are: Mr. Ted Coombes, Tulsa; Mr. A. Earnest Gilder, Muskogee; Mr. Terry McDonald, Tulsa; and Mr. Lew Meibergen, Enid, who also serves as Chairman of the combined Arkansas River Basin Interstate Committee.

Together with representatives of the other Arkansas River Basin States, we fully endorse the statement presented to you by the Chairman of the Arkansas River Basin Interstate Committee. We appreciate the opportunity to present our views of the special needs of our States concerning several studies and projects.

Montgomery Point Lock and Dam—Montgomery Point, Arkansas.—We have come to you with requests for funding for this much-needed project for many years now. We are pleased to tell you this year we will not ask for additional funds for this project as it is due to be operational by July. We will have a formal dedication on July 16, 2004 at the site. We are very grateful for your help and support to see this project through to its completion.

There may well be some funds needed for final cleanup and additional maintenance and operational equipment. In that event the Corps of Engineers should be able to schedule those funds from their regular appropriations.

Mr. Chairman, it is my pleasure to point out to this distinguished committee that this navigation system has brought low cost water transportation to Oklahoma, Arkansas and the surrounding States. There has been over $5.5 billion invested in the construction and development of the McClellan-Kerr Arkansas River Navigation system by the Federal Government ($1.3 billion) and the public and private ($4.2 billion+) sector, resulting in the creation of over 50,000 jobs in this partnered project.

Maintenance of the navigation system.—We request additional funding in the amount of $2 million, over and above normal funding, for deferred channel maintenance. These funds would be used for such things as repair of bank stabilization work, needed advance maintenance dredging, and other repairs needed on the system's components that have deteriorated over the past three decades.

In addition to the system-wide needed maintenance items mentioned above, the budget for the Corps of Engineers for the past several years has been insufficient to allow proper maintenance of the McClellan-Kerr Arkansas River Navigation System—Oklahoma portion. As a result, the backlog of maintenance items has continued to increase. If these important maintenance issues are not addressed soon, the reliability of the system will be jeopardized. The portion of the system in Oklahoma

alone is responsible for returning $2.6 billion in annual benefits to the regional economy. We therefore request that $3.8 million be added to the budget to accomplish the critical infrastructure maintenance items following: Repair weir at L&D 14; repair tainter gates at L&D 17; upgrade gate motor controls at L&D 14; dewater, inspect, repair Locks 14, 15, & 16; repair tainter gates at L&D 18; L&D 14–18—remote control tainter gates; R.S. Kerr—repair miter gates; R.S. Kerr—repair Lock 15 support cell; replace pole lighting—Locks 14–18; replace tainter gate limit switches—R.S. Kerr. These are the very worst of the needed repairs of the many awaiting proper preventive maintenance and repair.

Tow Haulage Equipment—Oklahoma.—We also request funding of $2.5 million to initiate the installation of tow haulage equipment on the locks located along the Arkansas River Portion of the McClellan-Kerr Arkansas River Navigation System. Total cost for these three locks is $4.7 million. This project will involve installation of tow haulage equipment on W.D. Mayo Lock and Dam No. 14, Robert S. Kerr Lock and Dam No. 15, and Webbers Falls Lock and Dam No. 16, on the Oklahoma portion of the waterway. The tow haulage equipment is needed to make transportation of barges more efficient and economical by allowing less time for tows to pass through the various locks.

Arkansas River System Operations Feasibility Study, Arkansas and Oklahoma.—We are especially pleased that the budget includes funds to continue the Arkansas River Navigation Study, a feasibility study which is examining opportunities to optimize the Arkansas River system. The system of multipurpose lakes in Arkansas and Oklahoma on the Arkansas River and its tributaries supports the McClellan-Kerr Arkansas River Navigation System, which was opened for navigation to the Port of Catoosa near Tulsa, Oklahoma, in 1970. The navigation system consists of 445 miles of waterway that passes through the States of Oklahoma and Arkansas. This study would optimize the reservoirs in Oklahoma and Arkansas that provide flows into the river, with a view toward improving the number of days per year that the navigation system would accommodate tows. Phase II of this study will also examine the feasibility of increasing the depth of the navigation channel to 12′. This will allow the shippers to move one-third more cargo per barge drafting 11½′ at near the current rate for 8½′ draft barges. This study could have significant impact on the economic development opportunities in the States of Oklahoma, Arkansas and the surrounding States. Due to the critical need for this study, we request funding of $1.235 million, which is greater than shown in the budget, to complete feasibility studies in fiscal year 2005.

The Power Plant at Webbers Falls Lock and Dam on the Arkansas River has suffered from greatly reduced reliability due to turbine design problems. Because this is a run-of-the-river facility with no storage, energy spilled due to off-line units is energy that is lost forever. A feasibility study recommending major rehabilitation of this unit has been approved by the office of the Chief of Engineers.

Similar problems have been experienced at Ozark-Jeta Taylor Lock and Dam on the Arkansas River in Arkansas. Congress approved a new start and funding to begin the major rehabilitation of the Ozark powerhouse in fiscal year 2003. The administration's fiscal year 2005 budget request includes $5 million in Construction General funding to continue this major rehabilitation.

The turbines at the Ozark project are identical to the slant-shaft turbines employed at Webbers Falls. The major rehabilitation plans for both projects call for bidders to submit plans for new turbine designs, with the two best bidders selected to proceed to model testing of their designs before choosing the best and winning bid. By combining the design selection for both projects into a single bid selection process the Corps estimated that millions of dollars could be saved. To achieve these savings, Congress would have to approve a new construction start and initial funding for the major rehabilitation of the Webbers Falls powerhouse. We respectfully urge the committee to approve the new start and provide $4 million in initial Construction, General funding for the appropriations bill. Please know that every dollar appropriated to this project, plus interest, will be repaid to the U.S. Treasury through the rates charged for the sale of this hydroelectricity.

Miami, Oklahoma and Vicinity Feasibility Study.—We request funding of $750,000 to move into the feasibility stage for the vicinity in Ottawa County including and surrounding Miami, Oklahoma in the Grand (Neosho) Basin. Water resource planning-related concerns include chronic flooding, ecosystem impairment, poor water quality, subsidence, chat piles, mine shafts, health effects, and Native American issues. The State of Oklahoma's desire is to address the watershed issues in a holistic fashion and restore the watershed to acceptable levels. Study alternatives could include structural and non-structural flood damage measures, creation of riverine corridors for habitat and flood storage, development of wetlands to im-

prove aquatic habitat and other measures to enhance the quality and availability of habitat and reduce flood damages.

Oologah Lake Watershed Feasibility Study.—We request funding of $326,000 which is $129,000 more than the President's budget request for ongoing feasibility studies at Oologah Lake and in the upstream watershed. The lake is an important water supply source for the City of Tulsa and protection of the lake and maintaining and enhancing the quality of the water is important for the economic development of the City. Recent concerns have been expressed by the City of Tulsa and others regarding potential water quality issues that impact water users, as well as important aquatic and terrestrial habitat. Concerns are related to sediment loading and turbidity, oilfield-related contaminants and nutrient loading.

Illinois River Watershed Reconnaissance Study.—We request funding in the amount of $100,000 to conduct a reconnaissance study of the water resource problems of the Illinois River Basin. The Illinois River watershed is experiencing continued water resource development needs and is the focus of ongoing Corps and other agency investigations. However, additional flows are sought downstream of the Lake Tenkiller Dam and there are increasing watershed influences upstream of Lake Tenkiller which impact on the quality of water available for fish and wildlife, municipal and industrial water supply users, and recreation users of the Lake Tenkiller and Illinois River waters.

Grand (Neosho) Basin Reconnaissance Study.—We request funding in the amount of $225,000 to conduct a feasibility study of the water resource problems in the Grand (Neosho) Basin in Oklahoma and Kansas. There is a need for a basin-wide water resource planning effort in the Grand-Neosho River basin, apart from the issues associated with Grand Lake, Oklahoma. The reconnaissance study indicated that there is a Federal interest in this project and the feasibility will focus on the evaluation of institutional measures which could assist communities, landowners, and other interests in northeastern Oklahoma and southeastern Kansas in the development of non-structural measures to reduce flood damages in the basin. The reconnaissance study was a Congressional add new start, but no funding was put into the fiscal year 2005 President's budget request to continue into the feasibility stage.

Grand Lake Feasibility Study.—A need exists to evaluate water resource problems in the Grand-Neosho River basin in Kansas and Oklahoma to evaluate solutions to upstream flooding problems associated with the adequacy of existing real estate easements necessary for flood control operations of Grand Lake, Oklahoma. A study authorized by the Water Resources Development Act of 1996 was completed in September of 1998 and determined that if the project were constructed based on current criteria, additional easements would be required. Section 449 of WRDA 2000 directed the Secretary to evaluate backwater effects specifically due to flood control operations on land around Grand Lake. That study indicated that Federal actions have been a significant cause of the backwater effects and according to WRDA 2000, the feasibility study should be 100 percent federally funded. A Feasibility study is necessary to determine the most cost-effective solution to the real estate inadequacies. Changes in the operations of the project or other upstream changes could have a significant impact on flood control, hydropower and navigation operations in the Grand (Neosho) River system and on the Arkansas River Basin system, as well. We urge you to provide $450,000 to fund feasibility studies for this important project in fiscal year 2004 and to direct the Corps of Engineers to execute the study at full Federal expense. This project has been a Congressional add for the past 2 years, but there are no funds in the fiscal year 2005 President's budget request to continue this project.

Tenkiller Dam Safety Project.—We are pleased that the President's budget includes funds to advance work for Flood Control and other water resource needs in Oklahoma. Of special interest to our committee is funding for the Tenkiller Ferry Lakes Dam Safety Assurance Project in Oklahoma. This project is slated to be complete in fiscal year 2006 and continued funding is necessary for safety purposes and economic efficiencies. We would like to see Tenkiller funded at the $4.4 million level, which is the Corps' capability for fiscal year 2005.

Canton Dam Safety.—We request that funding in the amount of $5.0 million be provided to continue the Canton Lake Dam Safety Project. The stability of the existing spillway requires restrictions on the flood control pool. The flood pool can only be held to a 17-year flood event. Installation of steel anchors is required to stabilize the existing spillway so that the project can be operated as originally designed. Funds were provided by Congress in the fiscal year 2004 Appropriations Bill to work on this important project, but the administration has not included any funds in the fiscal year 2005 President's budget.

Section 205.—Although the Small Flood Control Projects Program addresses flood problems which generally impact smaller communities and rural areas and would

appear to benefit only those communities, the impact of those projects on economic development crosses county, regional and sometimes State boundaries. The communities served by the program frequently do not have the funds or engineering expertise necessary to provide adequate flood damage reduction measures for their citizens. Continued flooding can have a devastating impact on community development and regional economic stability. The program is extremely beneficial and has been recognized nationwide as a vital part of community development, so much so in fact that there is currently a backlog of requests from communities who have requested assistance under this program. There is limited funding available for these projects and we urge this program be increased to an annual limit of $65 million.

We also request your continued support of the Flood Plain Management Services Program (Section 206 of the 1960 Flood Control Act) which authorizes the Corps of Engineers to use its technical expertise to provide guidance in flood plain management matters to all private, local, State and Federal entities. The objective of the program is to support comprehensive flood plain management planning. The program is one of the most beneficial programs available for reducing flood losses and provides assistance to officials from cities, counties, States and Indian Tribes to ensure that new facilities are not built in areas prone to floods. Assistance includes flood warning, flood proofing, and other flood damage reduction measures, and critical flood plain information is provided on a cost-reimbursable basis to home owners, mortgage companies, realtors and others for use in flood plain awareness and flood insurance requirements.

We also request your support of the Planning Assistance to States Program (Section 22 of the 1974 Water Resources Development Act) which authorizes the Corps of Engineers to use its technical expertise in water and related land resource management to help States and Indian Tribes solve their water resource problems. The program is used by many States to support their State Water Plans. As natural resources diminish, the need to manage those resources becomes more urgent. We urge your continued support of this program as it supports States and Native American Tribes in developing resource management plans which will benefit citizens for years to come. The program is very valuable and effective, matching Federal and non-Federal funds to provide cost-effective engineering expertise and support to assist communities, States and tribes in the development of plans for the management, optimization and preservation of basin, watershed and ecosystem resources. The Water Resources Development Act of 1996 increased the annual program limit from $6 million to $10 million and we urge this program be fully funded to the programmatic limit of $10 million.

We strongly urge the Appropriations Committee to raise the Corps of Engineers' budget to $5 billion to help get delayed construction projects back on schedule and to reduce the deferred maintenance backlog which is out of control. This will help the Corps of Engineers meet the obligations of the Federal Government to people of this great country.

Concerning another related matter, we have deep concerns about the attempt to re-authorize the Endangered Species Act without significant beneficial reforms. If a bill is passed through without reforms, it will be devastating to industry and the country as a whole. We strongly urge you to take a hard look at any bill concerning this re-authorization and insure that it contains reasonable and meaningful reforms. We urge the re-authorization of the act with reforms at the earliest possible time.

Mr. Chairman, we appreciate this opportunity to present our view on these subjects.

PREPARED STATEMENT OF THE TENNESSEE-TOMBIGBEE WATERWAY DEVELOPMENT AUTHORITY

Mr. Chairman, I am Donald G. Waldon, Administrator of the Tennessee-Tombigbee Waterway Development Authority. I am honored to submit the authority's recommendations to you and your committee concerning fiscal year 2005 funding needs for the operation and maintenance of the Tenn-Tom Waterway and the Tennessee River system as well as construction of new locks at Kentucky and Chickamauga Dams. This is the 44th consecutive year the waterway compact has provided its recommendations to the U.S. Congress.

The Tennessee-Tombigbee Waterway Development Authority is a Federal interstate compact ratified in 1958 by the Congress to promote the development of the Tenn-Tom and its economic and commerce potential. It is comprised of the States of Alabama, Kentucky, Mississippi, and Tennessee.

We, like most other water resources development interests, are most concerned if not alarmed about the Office of Management and Budget's continued indifference

to ports and waterways as a national budget priority. The proposed budget for fiscal year 2005 for these and other programs of the U.S. Army Corps of Engineers is no exception. While the proposed budget adequately funds construction of some new locks it woefully under funds others, such as Kentucky and Chickamauga Locks on the Tennessee River. However, the proposed budget's most serious deficiency is its inability to adequately fund the operation and maintenance of completed projects. More Federal investments in the Nation's infrastructure, including its ports and waterways, will help stimulate our economy and create more job opportunities. Yet the administration's budget if approved will result in further deterioration of locks and other waterway structures, many that were built over 50 years ago, resulting in more closures and disruption of commercial shipments and less economic growth. Given the importance of these projects for helping the Nation to achieve full economic recovery, we recommend that the Congress increase the Corps' total funding next year to $5.5 billion or about $600 million more than that available this year.

TENNESSEE-TOMBIGBEE WATERWAY, AL AND MS

[In millions of dollars]

	Fiscal Year 2003 Approp.	Fiscal Year 2004 Approp.	Fiscal Year 2005	
			Bud. Req.	Recomm.
Operation & Maintenance	24.0	22.5	22.254	25.6
Wildlife Mitigation Payments To Alabama and Mississippi	2.0	1.5	2.0	2.0

We greatly appreciate the support your committee and the Congress have given to the Tenn-Tom in the past. The waterway saves shippers some $90 million in transportation costs each year. It has helped attract over $5 billion in new private investments since its completion, creating over 50,000 new jobs in the waterway region. Its attractive recreational facilities draw nearly 3 million visitors annually. Your continued strong support is critically important in fiscal year 2005 if the waterway is to continue to generate economic benefits at this level.

The proposed budget will not provide sufficient funds for the Corps to adequately maintain the navigation channel. Three locks are scheduled for closure and repairs this fall that will cost over $1.5 million. With no increase in funding provided, this extraordinary expense will preclude other important maintenance activities such as dredging and resource management.

We are pleased that $2 million has been budgeted to reimburse the States of Alabama and Mississippi to manage nearly 126,000 acres of wildlife habitat that is part of the Tenn-Tom Wildlife Mitigation Project. These funds are sufficient for the management of these lands. However, no funds are available for the Corps to manage some 46,000 acres of other Federal lands that are an important part of the mitigation project.

The $25.6 million recommended for the operation and maintenance of the Tenn-Tom will ensure the waterway is adequately maintained during 2005 and generates its expected benefits. While there are other needs, the recommended increase of $3,246,000 is important to keep the waterway channel open to commercial navigation, the Corps' top priority program as shown below:

[In millions of dollars]

	Amount
Provide adequate capacity of upland disposal areas to accept dredged materials	1.0
Additional dredging needed to keep channel open to commerce	1.3
Determine measures to limit shoaling in Aberdeen Lake, the waterway's most costly silting problem	0.5
Initiate corrective measures to eliminate a serious safety problem at Bevill Lock and Dam	0.3
Eradicate noxious aquatic weeds in lakes and channels (the public's No. 1 complaint about the waterway	0.146
Total	3.246

The Corps of Engineers could efficiently use an additional $10 million to begin addressing some of the $12 million of urgently needed but indefinitely deferred repairs to the waterway's facilities that have accumulated due to of severe budget constraints since fiscal year 1997.

Tennessee River, TN, AL, MS, and KY

The administration's budget does not provide sufficient funds to adequately maintain the commercial navigation features of the Tennessee River system. Funds are not available to make scheduled repairs at most all of the nine locks. Maintenance dredging needed at public ports at Florence and Decatur, AL will be deferred as well as replacement of a mobile crane needed at Nickajack Lock, TN.

We recommend that $21,449,000 or an increase of $6,239,000 be appropriated to fund the above activities. This recommended increase includes $350,000 and $200,000 to dredge the public ports at Florence and Decatur, AL, respectively. The Tennessee River is one of the busiest waterways in the Nation.

Kentucky Lock, KY

Completion of a new lock to replace the nearly 60-year-old, outmoded lock at Kentucky Dam will eliminate one of the most costly bottlenecks on the entire waterway system. A commercial tow now waits an average of 4 hours to transit the lock. These delays continue to worsen as commerce grows each year. We are very disappointed the proposed budget effectively mothballs construction of this most important waterway improvement. The proposed budget of $25,000,000 not only precludes award of any new contracts it is $10,000,000 short of that needed to reimburse contractors for work now underway. Such a budget decision is unconscionable.

We recommend that $55,000,000 be appropriated to keep construction of this high priority project on a more reasonable and efficient schedule. This level of funding will maintain a schedule in fiscal year 2005 that will enable the lock to be completed in fiscal year 2013 compared to 2023 or 10 years later based on a schedule anticipated by the administration budget. This is unacceptable, especially when the commercial users are paying for one-half of the new lock's cost.

Chickamauga Lock, TN

We greatly appreciate the Congress authorizing construction of a new lock to replace the old and deteriorating chamber at Chickamauga Dam in last year's bill. The $5,400,000 appropriated this year will permit the Corps of Engineers to initiate construction and continue the detailed design needed for the new 110′ × 600′ lock. Regrettably, the proposed budget does not provide any funds for construction in 2005, effectively delaying start of construction until at least 2006. Unless work begins soon, the new lock will not be available when the old structure is taken out of operation during the next decade because of safety concerns. This closure would land lock 175 miles of the Tennessee River, crippling industries, including defense-related, and other shippers, located in east Tennessee.

We respectfully urge the committee to provide $17,000,000 to continue construction of this much needed lock replacement. It is also recommended that $1,480,000 be provided to allow the Corps to continue repairs to the existing lock to ensure its continued operation until the new lock is completed.

Thank you again for allowing the Tennessee-Tombigbee Waterway Development Authority to submit these recommendations to you for your consideration.

PREPARED STATEMENT OF KANSAS CITY, MISSOURI

Mr. Chairman, the City of Kansas City, Missouri, welcomes this opportunity to provide written testimony to the Subcommittee on Energy and Water Development regarding appropriations for fiscal year 2005 and requests that this written testimony be included in the formal hearing record.

The City of Kansas City, Missouri, in cooperation with the Corps of Engineers, presently have six major flood damage reduction projects underway. All of these projects are essential to the sustainment and revitalization of prominent and long-standing commercial, business and industrial communities in this region, and when complete will provide substantially increased levels of flood protection. Some of these projects are located on urban streams subject to severe flash flooding, which run along major roadways, resulting in an extremely hazardous threat to public safety.

Blue River Channel, Kansas City, Missouri—$8,000,000; Continue Construction

The Blue River Channel project, currently under construction, represents our most pressing need and for fiscal year 2005 we are requesting that this project be appropriated $8,000,000. This will allow the Corps to complete work that is already under construction, and to make some progress on the next phase of the Blue River project, which includes a grade control structure. That structure is necessary to drop the flow line of the existing channel bed to that of the newly deepened channel

downstream, which prevents the flow in the stream from eroding the channel bed upstream.

The Blue River Channel project when complete will significantly reduce the flood threat to inhabitants of the Blue Valley. Additionally, the river winds through a long-standing business district that, after much severe flooding, has now been partially abandoned. The channel improvement will bring many of these sites out of the floodplain and will reduce flooding depths by 6 to 8 feet. This will serve as a means to help reclaim Brownfield sites in the valley for redevelopment and help to rebuild a once thriving Blue Valley community.

Turkey Creek Basin, Kansas and Missouri—$2,500,000; Continue Construction

Another very important project in the Kansas City region is the Turkey Creek Basin, Kansas and Missouri. As mentioned above this area suffered a devastating flood in 1998, which is typical every 3 to 5 years. Providing flood protection for this highly traveled business corridor has proven to be very complex and that problem had been studied for nearly 35 years. Finally in 2003 the project received reauthorization at a total cost of $74,000,000, with a defined cost share of $46,000,000 Federal and $28,000,000 local. Major features of the Federal project include channel widening, a levee, hillside interceptors, and modifications to the Turkey Creek tunnel.

Funding is requested in the amount of $2,500,000 to continue construction of a flood damage reduction project that will serve to protect the community along Southwest Blvd. in the Kansas City metropolitan area of both Kansas and Missouri. In the alternative, if an amount less than that requested can be appropriated, language is requested such that "The non-Federal Interest shall receive credit toward the non-Federal share of project costs for construction work performed by the non-Federal interest before execution of the project cooperation agreement if the Secretary finds that the work performed by the non-Federal interest is integral to the project."

This language will allow for the Unified Government of Kansas City, Kansas and Wyandotte County, and the City of Kansas City, Missouri to proceed with the Turkey Creek Tunnel modifications identified in the Final Report of the Chief of Engineers. These modifications are necessary to insure that the increased flow carried to the tunnel by the widened channel upstream can be safely passed through the tunnel to the Kansas River. This channel widening was designed by the Corps of Engineers and included in the Chief's report, and is currently under construction by the Kansas Department of Transportation.

Blue River Basin, Kansas City, Missouri—$4,000,000; Continue Construction

The Blue River Basin, Kansas City, Missouri project, commonly known as the Dodson Industrial District Levee, is also located along the Blue River. Construction is currently underway on the floodwall portion and associated work, which is scheduled to be complete in 2005. Funding is required to pay for this work already under contract. The project requires modification of two major 96-inch diameter sewer structures in order for the levee-floodwall to function properly. The work on these elements needs to proceed in such a manner to assure that these facilities are protected during construction, are able to continue to function properly, and are not unnecessarily exposed to damage during an extended construction schedule.

The City has been working aggressively to honor our commitments to this project, and supports it moving forward in the most expeditious manner possible in order that this flood protection, which is essential to our having safe emergency access to a large portion of the City south of the Missouri River during flooding situations, can be maintained via access from the newly completed midtown expressway known as Bruce R. Watkins Drive. The City has programmed $5 million over 3 years to meet our local sponsor cost share. The project consists of a $17 million levee that will protect $240 million in property investment from the 500-year flood.

Kansas Citys, Kansas and Missouri—$650,000; Continue Feasibility Study

Study area encompasses two major rivers and seven levee units, and has four local sponsors. The levees are located along the Missouri and Kansas Rivers through the heart of the Kansas City metropolitan area, and protect its most densely developed business regions from floods. The 1993 flood came within inches of topping the Central Industrial District Levee, evidencing a need to evaluate how the seven levee units comprising the flood protection system for the Kansas City area functions as a whole, and to determine inadequacies and inconsistencies in the levels of protection. The units are Argentine, Armourdale, and Fairfax-Jersey Creek, all in Kansas; Central Industrial District, in Kansas and Missouri; and North Kansas City, Birmingham and East Bottoms, all in Missouri. Construction of these levees began in the 1940's and was completed in 1980. The Feasibility Study began in September

2000, with an estimated cost of $2,782,323 cost shared 50 percent Federal—50 percent local funds. Funding is requested to continue the Feasibility Study to develop and study possible project alternatives, perform environmental studies, and select the plan recommended for construction. The 1970 Flood Control Act, Section 216, provides a continuing authority to reexamine completed Federal projects.

Brush Creek Basin, Kansas and Missouri—$200,000; Continue Reconnaissance Study

Because this project provides the mechanism by which the region can work cooperatively using a watershed based approach to achieve the allied purposes of flood damage reduction, ecosystem restoration and other purposes, it is important that adequate funding be provided to collect the relevant data, coordinate among the many stakeholders, and establish cost sharing relationships needed to move forward. The City of Kansas City, Missouri and Johnson County, Kansas have committed significant local resources toward the completion of the flood mitigation and stream restoration work along Brush Creek, and are committed to continuing to support this effort and working together with the Mid-America Regional Council, Corps of Engineers, Environmental Protection Agency, Brush Creek Community Partners, and other stakeholders to achieve the goals established and agreed upon as part of the Brush Creek Basin Wide Study. Brush Creek is known as the "Cultural Corridor" in Kansas City and serves as a highly traveled business, residential and recreational corridor. This study effort aligns with the goals established by the residents, corporations, cities and other stakeholders along the creek.

Swope Park Industrial Area, Kansas City, Missouri—$200,000; Continue Design

Development of the 53-acre Industrial Park was substantially completed prior to enactment of the Federal Flood Insurance Act, and the entire area is now located within the 100-year floodplain as currently mapped by FEMA, and is largely within the floodway. The Swope Park Industrial Area has limited access, one-way in and out, with an active railroad track crossing near the entrance to the Park, in any given year there is a 1 in 5 chance that flooding will interrupt roadway access to the Park, and an approximately 1 in 7 chance that buildings will be flooded. Especially hazard flood conditions, and a threat to public safety, exist as people and businesses must decide whether to evacuate the Park during the initial stages of flooding, or risk being stuck with no surface means of egress if the water continues to rise.

Main Street Sewer Outfall/Riverfront Heritage Trail/Missouri River Bank Stabilization—$7,000,000; Continue Construction

We are also seeking funding for these projects to provide a safe and viable Kansas City Riverfront. This Missouri Riverfront project is comprised of five components being accomplished through a coordinated effort by public, private and non-profit organizations including Kansas City River Trails, Inc., the Port Authority of Kansas City, United States Corps of Engineers and the City of Kansas City, Missouri. Funding to complete this essential link between development both East and West of the project site is being sought from a variety of public and private sources to create a revitalized riverfront.

The bank of the Missouri River collapsed in May of 2003 causing significant damage to the Main Street Sewer Outfall that drains a large portion of the downtown Kansas City basin. The City is in the process of constructing repairs for the sewer outfall and some slope stabilization. This East/West trail connector is a vital segment of the Kansas City Riverfront Heritage Trail system within the Riverfront West area, and when constructed it will complete a bi-State bicycle, pedestrian and green space trail system stretching from the Richard L. Berkley Riverfront Park and Isle of Capri Casino at the east to the original settlement of the Town of Kansas and the Indian Cemetery in Kansas City, Kansas at the west. The Trail includes a series of interpretive artworks, kiosks and signs commemorating Lewis and Clark's Corps of Discovery journey and Kansas City's relationship to its rivers. The Habitat Restoration will be constructed by the U.S. Corps of Engineers in corporation with the Port Authority of Kansas City Missouri. Project estimates and funding availabilities are shown in the table below.

Project Component	Estimate	Funding Available	Funding Sought
Main Street Sewer Outfall	$3,500,000	$220,000	$3,280,000
Slope Stabilization	2,400,000	380,000	2,020,000
East-West Trail Connection	1,750,000	30,000	1,720,000
Interpretive Center	1,600,000	200,000	1,400,000

Project Component	Estimate	Funding Available	Funding Sought
Habitat Restoration	2,500,000	500,000	2,000,000
Total	11,750,000	1,330,000	10,420,000

The City of Kansas City, Missouri appreciates the past assistance we have received with local water resource projects. We are prepared to provide our share of funding in the future, and respectfully request that Federal funding adequate to keep these very important projects moving toward the soonest possible completion be appropriated in the upcoming year.

Prepared Statement of the Upper Mississippi River Basin Association

[In millions of dollars]

	President's Request	UMRBA Recommendation
Construction General:		
Upper Miss. River System Environmental Mgt. Program	28.000	33.250
Major Rehabilitation of Locks and Dams 19 and 24	13.600	13.600
Major Rehabilitation of Locks and Dams 3, 11, and 27	.....	21.700
Continuing Authorities (Section 1135)	13.500	25.000
Continuing Authorities (Section 206)	10.000	25.000
Operation and Maintenance:		
O&M of the Upper Mississippi Navigation System	167.733	231.759
General Investigations:		
Upper Mississippi and Illinois Waterway Navigation and Ecosystem Improvements PED	.....	18.000
Upper Mississippi River Comprehensive Plan	.994	1.400
Research and Development	20.800	20.800
Stream Gaging (U.S. Geological Survey)	.600	.600

The Upper Mississippi River Basin Association (UMRBA) is the organization created in 1981 by the Governors of Illinois, Iowa, Minnesota, Missouri, and Wisconsin to serve as a forum for coordinating river-related State programs and policies and for collaborating with Federal agencies on regional issues. As such, the UMRBA works closely with the Corps of Engineers on a variety of programs for which the Corps has responsibility. Of particular interest to the basin States are the following:

CONSTRUCTION GENERAL

Environmental Management Program

For the past 17 years, the Upper Mississippi River System Environmental Management Program (EMP) has been the premier program for restoring the river's habitat and monitoring the river's ecological health. As such, the EMP is key to achieving Congress' vision of the Upper Mississippi as a "nationally significant ecosystem and a nationally significant commercial navigation system." Congress reaffirmed its support for this program in the 1999 Water Resources Development Act by reauthorizing the EMP as a continuing authority and increasing the annual authorized appropriation to $33.52 million. The UMRBA is pleased that the administration has requested $28 million for the EMP in fiscal year 2005. The fact that the administration has identified the EMP as one of eight Corps projects "that are the highest priorities in the Nation," is tribute to the EMP's success. Yet annual appropriations for the EMP have fallen short of the authorized funding levels for the past 8 years and the program is still suffering from the dramatic 40 percent cut it suffered in fiscal year 2003. Thus, the UMRBA strongly urges Congress to appropriate full funding of $33.52 million for the EMP in fiscal year 2005.

EMP habitat restoration projects include activities such as building and stabilizing islands, controlling water levels and side channel flows, constructing dikes, and dredging backwaters and side channels. At the administration's funding level of $28 million, approximately $17.7 million would be allocated to the planning, design, and construction of such habitat projects. In particular, this level of investment will support planning and design for 20 projects and construction work on 18 projects, bringing construction to completion on 5 of these projects. Approximately $8.7 million would be devoted to the EMP Long Term Resource Monitoring program (LTRMP) under an EMP budget of $28 million. This funding is critical to the future

viability of the EMP's monitoring component, which has suffered from funding shortfalls in recent years. Data collection related to water quality, sediment, fish, invertebrates, and vegetation has been reduced or suspended; bathymetric surveys have been eliminated; laboratory analysis has been cut back; data analyses and science planning has been curtailed; and land cover mapping has been postponed. Planning is currently underway to restructure and redesign the program to enhance its ability to meet increasing demands for information with decreasing resources. But it is essential that funding be increased in fiscal year 2005 to revive many of the essential functions that have been eliminated or deferred.

Meeting the ecological restoration and monitoring needs on the Upper Mississippi River with renewed commitment and enhanced investment is critical. Within the next few months, the Corps is expected to release the draft feasibility report from its Navigation Study on the Upper Mississippi River and Illinois Waterway System, including a recommended plan for improving both the navigation infrastructure and ecosystem. Yet, without a strong EMP program as one of the tools to meet river environmental needs, it is unlikely that the plan can be successfully implemented. The UMRBA thus strongly urges that the EMP be fully funded at $33.52 million in fiscal year 2005.

Major Rehabilitation of Locks and Dams

Given that most of the locks and dams on the Upper Mississippi River System are over 60 years old, they are in serious need of repair and rehabilitation. For the past 18 years, the Corps has been undertaking major rehabilitation of individual facilities throughout the navigation system in an effort to extend their useful life. This work is critical to ensuring the system's reliability and safety.

The UMRBA supports the Corps' fiscal year 2005 budget request for major rehabilitation work at Lock and Dam 19 ($4.8 million) and Lock and Dam 24 ($8.8 million). Lock and Dam 19, at Keokuk, Iowa, is in particular need of rehabilitation given the deterioration of its gates, resulting in dangerous conditions. Lock and Dam 24, located near Clarksville, Missouri, is nearing completion of the first phase of its $87 million rehabilitation. Lock wall concrete repairs are underway and expected to be completed in fiscal year 2005. In addition, fiscal year 2005 funding will support continued dam tainter gate rehabilitation.

The UMRBA also supports funding for major rehabilitation of Lock and Dam 3 ($5 million), Lock and Dam 11 ($10.9 million), and Locks 27 ($5.8 million), none of which are currently funded in the administration's fiscal year 2005 budget request. In the case of Lock and Dam 11, the lack of funding is particularly problematic because work is already underway. Continued funding is needed in fiscal year 2005 to proceed with bulkhead construction and installation and lock repair. With regard to Lock and Dam 3, funds are needed in fiscal year 2005 to complete the reevaluation report and begin plans and specifications for correcting safety problems at this facility. Lock and Dam 3, near Red Wing, Minnesota is located on a bend in the river, which causes an outdraft current that tends to sweep down-bound tows toward the gated dam. A related problem is maintaining the structural integrity of a set of three earthen embankments connecting the gated dam to high ground on the Wisconsin side. Rehabilitation of Locks 27 is also critical, given its location at a critical juncture in the inland waterway system, through which traffic on the Mississippi, Illinois, and Missouri Rivers passes. The rehabilitation plan calls for rehabilitation of various structural, electrical, and mechanical components of this structure, which is over 50 years old.

Continuing Authorities (Section 1135 and 206)

The Corps of Engineers' Section 1135 and Section 206 continuing authorities provide an important tool for addressing ecosystem restoration needs, particularly in riverine environments. The three Corps Districts in the Upper Mississippi River Basin have undertaken many such projects over the past few years. While some projects are on the Mississippi River, others are located on tributaries, wetlands, and watersheds throughout the basin. There are currently more projects than can be supported with the limited funding proposed in fiscal year 2005. While the Section 1135 and Section 206 programs are each authorized to be funded at $25 million annually, the President's fiscal year 2005 budget requests only $13.5 million for Section 1135 and $10.0 million for Section 206. Given that this relatively small amount is intended to support projects nationwide, it is not surprising that many projects in the 5 States of the Upper Mississippi River Basin remain unfunded. For example, in the Rock Island District alone, there are 5 new and 15 on-going Section 206 projects and 2 on-going Section 1135 projects that could utilize funding in fiscal year 2005. The total costs of the Section 206 projects in this one district far exceed the funding for Section 206 nationwide. Thus, the UMRBA supports funding for both

the Section 1135 and Section 206 programs at their fully authorized amount of $25 million.

OPERATION AND MAINTENANCE

Operation and Maintenance (O&M) of the Upper Mississippi River Navigation System

The Corps of Engineers is responsible for operating and maintaining the Upper Mississippi River System for navigation. This includes channel maintenance dredging, placement and repair of channel training structures, water level regulation, and the routine operation of 29 locks and dams on the Mississippi River and 7 locks and dams on the Illinois River. The fiscal year 2005 budget totals approximately $169 million for O&M of this river system, which includes $111.410 million for the Mississippi River between Minneapolis and the Missouri River, $21.236 million for the Mississippi River between the Missouri River and Ohio River, and $35.087 million for the Illinois Waterway.

These funds are critical to the Corps' ability to maintain a safe and reliable commercial navigation system. In addition, these funds support a variety of activities that ensure the navigation system is maintained while protecting and enhancing the river's environmental values. For example, O&M funds support innovative environmental engineering techniques in the open river reaches such as bendway weirs, chevrons, and notched dikes that maintain the navigation channel in an environmentally sensitive manner. In addition, water level management options for a number of pools in the impounded portion of the river are being evaluated under the O&M program. Pool level management, such as that being tested in Pool 8 and evaluated other upper river pools, is a promising new approach for enhancing aquatic plant growth and overwintering conditions for fish, without adversely affecting navigation.

The UMRBA is pleased that the President's fiscal year 2005 funding request for O&M of the Upper Mississippi River System is above fiscal year 2004 appropriations for some of the river reaches. Unfortunately, the request is well below what is needed. In particular, there is a growing backlog of maintenance needs as a result of historically flat line budgets. In addition, as a result of unusual funding constraints in the St. Paul District in fiscal year 2004, that District is deferring contractor payments and all new contract awards.

Unmet needs include such items as major maintenance at Lock and Dam 5, land acquisition for dredged material disposal sites, replacement of dam gates and lift gates, repair of operating components, and lockwall resurfacing.

[In millions of dollars]

Upper Mississippi River System O&M Accounts	Fiscal Year 2004 Appropriations	Fiscal Year 2005 Request	Fiscal Year 2005 Full Capability
Mississippi River Between MO River and Minneapolis:			
St. Paul District (MVP)	36.056	51.030	61.340
Rock Island District (MVR)	45.000	42.473	53.287
St. Louis District (MVS)	18.000	17.907	25.916
Mississippi River Between Ohio and MO Rivers	18.099	21.236	31.793
Illinois Waterway:			
Rock Island District (MVR)	25.726	33.273	57.274
St. Louis District (MVS)	1.889	1.814	2.149

The UMRBA supports increased funding for O&M of the Upper Mississippi and Illinois River System to meet routine on-going operations and maintenance needs, and to begin to address the growing unfunded maintenance backlog. Full capability funding in fiscal year 2004 for all three Upper Mississippi River districts totals $231.7 million.

GENERAL INVESTIGATIONS

Upper Mississippi River System Navigation and Ecosystem PED

The Upper Mississippi River and Illinois Waterway Navigation Study, which began in 1993 is nearing completion. The draft feasibility report is scheduled for release April 30, 2004 and the final Chief's Report is expected in November 2004. Since the study was restructured in 2001, it is designed to yield an integrated plan, incorporating both navigation improvements and ecosystem restoration. It has also been a truly collaborative process involving five Federal agencies, five States, and representatives from a broad spectrum of stakeholder groups. The recommendations resulting from this extraordinarily complex planning process promise to be the most

important investment for the future of the Upper Mississippi River that this region has had in decades.

The President's fiscal year 2005 budget request includes no funding for this critically important planning effort. While the feasibility study phase will be essentially complete by fiscal year 2005, there will be on-going planning and design needs. Thus, the UMRBA supports funding of $18 million, which we understand is the Corps' capability, to advance the planning and initiate design. Such funding would enable significant progress to be made on both the navigation and ecosystem improvements, including planning and design work for switch boats, mooring cells, locks, system mitigation, and ecosystem restoration projects.

Upper Mississippi River Comprehensive Plan (Flood Damage Reduction)

Section 459 of the Water Resources Development Act of 1999 authorized the Corps to develop what is termed the "Upper Mississippi River Comprehensive Plan," the primary focus of which is systemic flood damage reduction and flood protection. Since planning began in December 2001, funding shortfalls have been significant and the study has been suspended a number of times. In addition, only $944,000 has been requested in fiscal year 2005. It is thus doubtful that the study will be completed within the 3-year time frame Congress directed when the study was first authorized in WRDA 1999, and later reaffirmed in WRDA 2000.

Although the assessment of alternative plans is underway, substantial work remains to be done, including completing that alternatives evaluation and conducting public meetings. Of particular interest to the States, is development and evaluation of an "Emergency Action Scenario" that will help the Corps and State agencies understand the implications of decisions they may be faced with making when fighting a flood such as the one in 1993. Such "what if" analysis, in combination with the evaluation of structural and nonstructural systemic flood damage reduction options, is critical. Thus, the UMRBA supports funding of $1.4 million for the Upper Mississippi River Comprehensive Plan in fiscal year 2005.

Research and Development

The President's fiscal year 2005 budget request for Research and Development includes funding to support the Navigation Economic Technologies (NETS) research program. NETS is working to develop a standardized and defensible suite of economic tools to evaluate navigation improvements. The goal is to develop simulation models and data gathering techniques that are reasonably transparent and computationally accurate, yield nationally consistent results, and are acceptable to outside peer review. The need for such research has become increasingly obvious over the past few years, as the Corps has struggled to address the economic complexities and uncertainties associated with navigation improvements on the Upper Mississippi and Illinois Rivers. Significant advances in economic modeling have been made as part of that feasibility study. Yet additional work is needed to help inform future decisions. Thus, the UMRBA strongly supports funding for the NETS program, which is programmed for $2.5 million in fiscal year 2005 under the Corps' Research and Development budget.

Stream Gaging

The Corps of Engineers, in cooperation with the USGS, operates approximately 150 stream gages in the Upper Mississippi River Basin. In fiscal year 2004, the Corps' share of the cost of these gages is $1.946 million. Most of these stream gages are funded through the Corps' O&M account for the specific projects to which the gages are related. However, there are a number of gages that are not associated with a particular project. Thus, UMRBA supports the $600,000 requested under General Investigations to support the Corps' share of non-project USGS stream gages, many of which are located in the five States of the Upper Mississippi River Basin. In fiscal year 2004, approximately $108,000 was provided by these "General Coverage Funds" for gages in the St. Paul and Rock Island Districts.

PREPARED STATEMENT OF THE VENTURA PORT DISTRICT

The Ventura Port District respectfully requests that the Congress:

—Support the administration's request for $2,910,000 to be included in the fiscal year 2005 Energy and Water Development Appropriations Bill for the U.S. Army Corps of Engineers maintenance dredging of the Ventura Harbor Federal channel and sand traps.

—Include $300,000 in the fiscal year 2005 Energy and Water Development Appropriations Bill to complete a cost shared Feasibility Study to determine the ad-

visability of modifying the existing Federal navigation project at Ventura Harbor to include a sand bypass system.

BACKGROUND

Ventura Harbor, homeport to 1,500 vessels, is located along the Southern California coastline in the City of San Buenaventura, approximately 60 miles northwest of the City of Los Angeles. The harbor opened in 1963. Annual dredging of the harbor entrance area is usually necessary in order to assure a navigationally adequate channel. In 1968, the 90th Congress made the harbor a Federal project and committed the U.S. Army Corps of Engineers to provide for the maintenance of the entrance structures and the dredging of the entrance channel and sand traps.

The harbor presently generates more than $40 million in gross receipts annually. That, of course, translates into thousands of both direct and indirect jobs. A significant portion of those jobs are associated with the commercial fishing industry (the harbor is consistently amongst the top ten commercial fishing ports in the United States), and with vessels serving the offshore oil industry. Additionally, the headquarters for the Channel Islands National Park is located within the harbor, and the commercial vessels transporting the nearly 100,000 visitors per year to and from the Park islands offshore, operate out of the harbor. All of the operations of the harbor, particularly those related to commercial fishing, the support boats for the oil industry, and the visitor transport vessels for the Channel Islands National Park are highly dependent upon a navigationally adequate entrance to the harbor.

OPERATIONS & MAINTENANCE NEEDS

Maintenance Dredging

It is estimated that $2,910,000 will be required to perform routine maintenance dredging of the harbor's entrance channel and sand traps during fiscal year 2005. This dredging work is absolutely essential to the continued operation of the harbor.

STUDY NEEDS

It is estimated that $300,000 will be required during fiscal year 2005 to complete a cost shared Feasibility Study to determine the advisability of modifying the existing Federal navigation project at Ventura Harbor to include a sand bypass system. Given the continuing need for maintenance dredging, it is appropriate to determine if a sand bypass system or other measures can accomplish the maintenance of the harbor in a manner that is more efficient and cost effective than the current contract dredging approach.

PREPARED STATEMENT OF THE PORT OF GARIBALDI

Mr. Chairman and members of the subcommittee, my name is William Schrieber. I am an elected Commissioner of the Port of Garibaldi, Oregon, located on Tillamook Bay on the Oregon Coast. We are thankful for the support provided by the committee for fiscal year 2002, 2003 and 2004, and we also appreciate the opportunity to present our views on fiscal year 2005 appropriations issues.

APPROPRIATIONS REQUEST

The Port of Garibaldi requests a $2,600,000 appropriation for operations and maintenance (O&M) of Tillamook Bay and Bar, Oregon. These funds will allow the U.S. Army Corps of Engineers' (Corps) Portland District continue the protection, restoration and repair of the Tillamook Bay North and South Jetties. Specifically, the funds will allow the Corps to build a revetment near the North jetty root, and perform additional restoration and repair work on the South jetty.

The Committee provided an additional $200,000 for a Major Maintenance Report in fiscal year 2002, $300,000 for Plans and Specifications in fiscal year 2003, and $300,000 to begin construction of the revetment in fiscal year 2004. The final amount provided by Congress for fiscal year 2004 was $400,000. These appropriations were made above the administration's budget requests for the project. The Major Maintenance Report was completed in December 2003. The total cost to build the revetment and 100 ft. caps at the North and South Jetty heads will be approximately $16,700,000. These have been identified by the Portland District of the U.S. Army Corps of Engineers as among the minimum and necessary repairs to achieve a stable project. To undertake all necessary repairs would cost approximately $41,300,000. The administration did not request funding for this project for fiscal year 2005.

REPORT ON THE TILLAMOOK BAY JETTY SYSTEM

There are serious problems with both jetties. The Corps' ongoing engineering analysis demonstrates that erosion on the north side of the North Jetty continues at a highly accelerated rate. Frequently, the U.S. Coast Guard (USCG) pulls its crew members out of the tower located near the root of the North Jetty because of the threat of a jetty breach at that site during periods of high seas. Should the breach occur, shellfish beds, a county park and a State highway would sustain severe damage. The USCG has also determined that deterioration of the South Jetty has created a dangerous threat to navigation safety.

A functional Tillamook Bay Jetty System is key to maintaining navigation safety, protecting both public and private property and the environment, and preserving the economic vitality of the Oregon Coast.

In December 2003, the Corps completed a Major Maintenance Report for the Tillamook North and South Jetties. The following paragraphs are included in the executive summary of the report.

"The north and south jetties at the entrance to Tillamook Bay have experienced damage to both jetty heads, trunks, and north jetty root. A recent apparent increase in the Pacific Ocean wave climate has exposed both jetties to more extreme storm waves, especially the south jetty which is more exposed to southwesterly storm events. In addition to the increases concern regarding jetty stability, there is concern that further recession of the jetty heads will contribute to already hazardous navigation conditions over the ebb tital shoal or bar.

"Erosion of the shoreline along the north jetty is a major concern in terms of a potential breach at the jetty root. The jetty root has a smaller cross-section and the proximity of the deep channel (40 ft. in depth) to this section of jetty is of increasing concern. The increasingly severe shore erosion at the north jetty root appears to be related to the north jetty head recession.

"The north jetty has lost 384 ft. of jetty from the seaward end of its 5,700 ft. authorized length. The south jetty has lost 666 ft. from the seaward end of its 8,025 ft. authorized length. By 2006, at historical jetty head recession rates, the north jetty will be 480 ft. shorter than the authorized length. The south jetty will be 890 ft. shorter than the authorized length. The south jetty has never been repaired since its construction in 1969 to 1979 (25 to 35 years). The north jetty damage reach includes 1,050 ft. that has not been repaired since construction in 1918 (86 years)."

Background.—Since settlement in the 1800's, Tillamook County's primary industries have been dairy, water and timber oriented. Tillamook Bay and the five rivers which feed it have historically furnished an abundance of shellfish, salmon and other species of fresh-water and ocean food fish. Over the past century the area has become renowned as one of the West's premier sport fishing locations.

Tillamook County's economy has always depended on prime conditions in Tillamook Bay, its estuary and watershed for cultivation and use of these natural resources. However, human activities including forestry, agriculture and urban development have adversely impacted the entire Bay area by increasing erosion rates and landslide potential in the forest slopes and significantly reducing wetland and riparian habitat. All five rivers entering Tillamook Bay now exceed temperature and/or bacteria standards established by the Oregon Department of Environmental Quality. The installation of a north jetty on Tillamook Bay begun in 1912 caused increased erosion of the Bay's westerly land border, Bayocean Spit, on the ocean side. The Spit breached in 1950. This allowed the Bay to fill with ocean sands on its southern and western perimeters and caused a major reduction in shellfish habitat, sport-fishing area, and an increase in the cross-section of the bar. A south jetty begun in 1969 helped stabilize the Spit and created the navigation channel presently in use.

ECONOMIC CHARACTERISTICS

The following was also included in the Corps December 2003 Major Maintenance Report.

"Entrance and Port Usage.—The Tillamook entrance is one of the most heavily used on the Oregon Coast and recent surveys indicate than the Port of Garibaldi is the third busiest recreational port in Oregon, behind the Port of Brookings and the Port of Umpqua. Total visitation to the Port of Garibaldi was 64,350 (Party Days) in 2002. Visitors in the area spent $6,747,000 on trip related expenditures to the port. Sixty-nine percent of this spending was captured by local economy yielding $4,666,000 in direct sales to tourism related firms. These sales generated $1,847,000 in direct personal income and supported 118 direct jobs. With multiplier

effects, visitor spending resulted in $6,446,000 total sales, $2,543,000 in total personal income, and supported 143 jobs.

"Port Fleet Considerations.—Total number of boats associated with the Port of Garibaldi was 619 in 2002. Boat owners in this area spent $1,127,000 on boat related annual and fixed expenditures in the region. Thirty-nine percent of this spending was captured by local economy yielding $434,000 in direct sales to related industries. These sales generated $168,000 in direct personal income and supported 08 direct jobs. With multiplier effects, visitor spending resulted in $589,000 total sales, $223,000 in total personal income, and supported 11 jobs. The Port of Garibaldi is also an active commercial fishing port. Garibaldi's total landing volume and value in the year 2000 was 1.7 million pounds and $2.0 million. The share of landing volume for groundfish was 16 percent. There were a total of 1,548 fishing trips made by 92 different vessels in the year 2000. There were nine different processors, buyers, restaurants, etc. issuing more than $10,000 in fish tickets.

"Marine Facilities.—The Port of Garibaldi has over 300 slips available, with 60 slips available for vessels over 40 feet in length. The port also has 300 feet of dock available for transient vessels. The Coast Guard Tillamook Bay Station reports search and rescue cases annually. From 1995 to 2001, the station reported an average of 215 cases each year, with a high of 282 cases in 1999 and, a low of 152 cases in 2000."

CONCLUSION

On behalf of the Port of Garibaldi and Tillamook County, I thank the committee for giving me this opportunity to provide testimony on the Tillamook Bay Jetty System.

PREPARED STATEMENT OF THE LOUISIANA GOVERNOR'S TASK FORCE ON MARITIME INDUSTRY

THE LOWER MISSISSIPPI RIVER AND CONNECTING WATERWAYS AND THE J. BENNETT JOHNSTON WATERWAY

Mississippi River Ship Channel, Gulf to Baton Rouge, LA.—Recommend the Corps be funded $537,000 (Construction General) to perform required work on the saltwater intrusion Phase 1 mitigation plan and to prepare a report on deepening the river to its authorized depth of 55-foot depth.

Mississippi River, Baton Rouge to the Gulf—Maintenance Dredging.—The President's Fiscal Year 2005 Budget is $59,125,000 under O&M General. Recommend that the Corps be funded $74,400,000 to construct foreshore rock dike, repair South Pass jetties, and to repair Southwest Pass pile dike and tie-in.

Mississippi River Gulf Outlet (MRGO), LA—Maintenance Dredging.—The President's Fiscal Year 2005 Budget is $13,004,000 under O&M General. Recommend that the Corps be funded $38,400,000 for maintenance dredging and bank stabilization.

Inner Harbor Navigation Canal (IHNC) Lock, LA.—The President's Fiscal Year 2005 Budget is $10,000,000 in Construction General funds. Recommend that the Corps be funded $24,000,000 to continue construction, design and mitigation for the IHNC Lock replacement.

Mississippi River Outlets at Venice, LA.—The President's Fiscal Year 2005 Budget is $424,000 under O&M General. Recommend that the Corps be funded $3,700,000 to perform critical maintenance dredging and to repair jetties.

Bayou Sorrel Lock, LA.—The President's Fiscal Year 2005 Budget is $550,000 under General Investigation Studies to advance pre-engineering design for the replacement of Bayou Sorrel Lock on the Gulf Intracoastal Waterway (GIWW), Morgan City-to-Port Allen alternate route.

Gulf Intracoastal Waterway, LA and TX.—The President's Fiscal Year 2005 Budget is $17,476,000 under O&M General. Recommend that the Corps be funded $27,300,000 to perform critical maintenance at the navigation locks.

MRGO Reevaluation Study, LA.—The President's Fiscal Year 2005 Budget is $225,000 (General Investigation) to initiate an ecosystem restoration study of the MRGO.

J. Bennett Johnston Waterway, Mississippi River to Shreveport, LA.—The President's Fiscal Year 2005 Budget is $4,000,000 (Construction General) and $10,600,000 (O&M General). Recommend that the Corps be funded $20,000,000 (Construction General) and $18,000,000 (O&M, General) to initiate new work and complete work already underway.

As Chairman of the Louisiana Governors Task Force on Maritime Industry, I hereby submit testimony to the Senate Subcommittee on Energy and Water Development on behalf of the ports on the lower Mississippi River and the J. Bennett Johnston Waterway and the maritime interests related thereto of the State of Louisiana relative to congressional appropriations for fiscal year 2005.

The U.S. Army Corps of Engineers reports that in 2002 a total of 421.1 million tons of foreign and domestic waterborne commerce moved through the consolidated deepwater ports of Louisiana situated on the lower Mississippi River between Baton Rouge and the Gulf of Mexico. Deepening of this 232-mile stretch of the River to 45 feet has been a major factor in tonnage growth at these ports. Due in large part to the efforts of Congress and the New Orleans District of the Corps, Louisiana's ports and the domestic markets they serve can compete more productively and effectively in the global marketplace. Ninety-one percent of America's foreign merchandise trade by volume (two-thirds by value) moves in ships, and 20.5 percent of the Nation's foreign waterborne commerce passes through Louisiana's ports. Given the role foreign trade plays in sustaining our Nation's growth, maintaining the levels of productivity and competitiveness of Louisiana's ports is essential to our Nation's continued economic well-being.

In terms of transportation services and global access, Louisiana ports enjoy a distinct competitive advantage. Hundreds of barge lines accommodate America's waterborne commerce on the lower Mississippi River. The high level of barge traffic on the river is indicated by the passage of more than 293,000 barges through the Port of New Orleans annually. In 2002, 1,967 ocean-going vessels operated by more than 100 steamship lines serving U.S. trade with more than 150 countries called at the Port of New Orleans. The Port's trading partners include: Latin America (40.5 percent); Asia (28.7 percent); Europe (20 percent); Africa (9.4 percent) and North America (1.4 percent). During the same year, 5,448 vessels called at Louisiana's lower Mississippi River deepwater ports.

The foreign markets of Louisiana's lower Mississippi River ports are worldwide; however, their primary domestic market is mid-America. This heartland region currently produces 60 percent of the Nation's agricultural products, one half of all of its manufactured goods and 90 percent of its machinery and transportation equipment.

The considerable transportation assets of Louisiana's lower Mississippi River ports enable mid-America's farms and industries to play a vital role in the international commerce of this Nation. In 2002, the region's ports and port facilities handled 227.5 million tons of foreign waterborne commerce. Valued at $39.2 billion, this cargo accounted for 18.1 percent of the Nation's international waterborne trade and 27 percent of all U.S. exports. Bulk cargo, primarily consisting of tremendous grain and animal feed exports and petroleum imports, made up 88.3 percent of this volume. Approximately 50.2 million tons of grain from 17 States, representing 62.4 percent of all U.S. grain exports, accessed the world market via the 10 grain elevators and midstream transfer capabilities on the lower Mississippi River. This same port complex received 91.2 million short tons of petroleum and petroleum products, 15.9 percent of U.S. waterborne imports of petroleum products.

In 2002, public and private facilities located within the jurisdiction of the Board of Commissioners of the Port of New Orleans, the fifth largest port in the United States, handled a total of 85 million tons of international and domestic cargo. International general cargo totaled 9.6 million tons. Although statistically dwarfed by bulk cargo volumes, the movement of general cargo is of special significance to the local economy because it produces greater benefits. On a per ton basis, general cargo generates spending within the community more than three times higher than bulk cargo. Major general cargo commodities handled at the Port include: iron and steel products; coffee; forest products; copper; aluminum products; and natural rubber.

Fostering the continued growth of lower Mississippi River ports is necessary to maintain the competitiveness of our Nation's exports in the global marketplace and, consequently, the health of the Nation's economy. Assuring deep-water access to ports has been a priority of our trading partners around the world. Moreover, an evolving maritime industry seeking greater economies of scale continues to support construction of larger vessels with increased draft requirements. Because it facilitated the provision of deepwater port access, passage of the Water Resources Development Act of 1986, played a most significant role in assuring the competitiveness of ports on the lower Mississippi river and throughout the United States.

By December 1994, the Corps completed dredging of the 45-foot channel from the Gulf of Mexico to Baton Rouge, LA (Mile 233 AHP). Mitigation features associated with the first phase of the channel-deepening project in the vicinity of Southwest Pass of the river, accomplished in 1988, are nearing completion. We urge the continued funding for this work in fiscal year 2005 to complete construction of improve-

ments to the Belle Chasse water treatment plant. This will complete the approximate $15 million in payments to the State of Louisiana for construction of a pipeline and pumping stations to deliver potable fresh water to communities affected by saltwater intrusion. We further urge that the Corps be provided funding to proceed with design studies for Phase III, which will allow deepening of the river to the 55-foot authorized depth.

Along with the Port of New Orleans, the Port of South Louisiana, the Nation's largest port with 216.4 million tons of foreign and domestic cargo in 2002, and the Port of Baton Rouge, the Nation's ninth largest port with 60.6 million tons of foreign and domestic cargo in 2002, and other lower Mississippi River ports are dependent upon timely and adequate dredging of Southwest Pass to provide deep draft access to the Gulf of Mexico. The President's Fiscal Year 2005 Budget is $59,125,000 under O&M General. We, however, strongly recommend that the Corps be funded $74,400,000 to repair and construct foreshore dikes, lateral dikes and jetties.

Maintenance of adequate depths and channel widths in the Mississippi River Gulf Outlet Channel (MRGO) is also of great concern. This channel provides deep draft access to the Port of New Orleans container and cold storage facilities and generates significant economic impact for the region. In 2002, 374 general cargo vessels calling on the Port's MRGO terminals accounted for 31.5 percent of the general cargo tonnage handled over public facilities at the Port and 70 percent of Louisiana's containerized cargo.

Because of the MRGO's demonstrated vulnerability to coastal storm activity, annual channel maintenance dredging and bank stabilization are essential to assure unimpeded vessel operations. The President's Fiscal Year 2005 Budget is $13,004,000 under O&M General. We, however, strongly recommend that the Corps be funded $38,400,000 for maintenance dredging and bank stabilization.

We recognize the need for the Corps to evaluate the feasibility of continuing the maintenance of a deep draft channel in the MRGO because of increased maintenance costs and environmental impacts. We strongly recommend that the Corps complete the MRGO Reevaluation Study. It is important to note that although the Port of New Orleans plans to relocate much of its container terminal capacity to the Mississippi River, a determination to discontinue maintenance of the MRGO's deep draft channel must be preceded by completion of the IHNC Lock replacement project to assure continued deep draft access to the many businesses serviced by the MRGO.

The Inner Harbor Navigation Canal (IHNC) Lock is a critical link in the U.S. Inland Waterway System as well as the Gulf Intracoastal Waterway (GIWW), and provides a connection between the Port of New Orleans Mississippi River and IHNC terminals. In 1998, the Corps approved a plan for replacement of this obsolete facility. The Corps estimates that the lock replacement project will have a cost-benefit ratio of 2.1 to 1 and will provide $110 million annually in transportation cost savings. To minimize adverse impacts to adjacent neighborhoods, the project includes a $37 million Community Impact Mitigation Program. The President's Fiscal Year 2005 Budget of $10,000,000 for the IHNC Lock Replacement will pay for engineering and design work, construction, and the mitigation program, all on a delayed basis. We, therefore, strongly recommend that the Corps be funded $24,000,000 to advance engineering and design, levee contracts, and mitigation measures.

Operation and maintenance of the Mississippi River Outlets at Venice, LA are essential to providing safe offshore support access to energy-related industries. In 2002, these channels accommodated cargo movements exceeding 2.6 million tons. In addition to routine traffic, shallow draft vessels use Baptiste Colette Bayou as an alternate route between the MRGO, GIWW and the Mississippi River. The President's Fiscal Year 2005 Budget is $424,000 under O&M General. We, however, strongly recommend that the Corps be funded $3,700,000 to perform critical maintenance dredging.

More than 72.4 million tons of cargo transverse the GIWW in the New Orleans District annually. The President's Fiscal Year 2005 Budget is $17,476,000 under O&M General. We, however, strongly recommend that the Corps be funded $27,300,000 to perform critical maintenance at the navigation locks.

The President's Fiscal Year 2005 Budget for the Bayou Sorrel Lock, LA project is $500,000 in GI funds. To assure the efficient flow of commerce on the GIWW, we urge that the Corps be funded $500,000 to advance the completion of the pre-engineering design for replacement of the Bayou Sorrel Lock, Morgan City-to-Port Allen alternate route. We further recommend that the Corps be funded $1,000,000 in GI funds to advance the completion of the feasibility phase of the study to replace Calcasieu Lock on the GIWW.

One additional project warrants consideration. The J. Bennett Johnston Waterway, Mississippi River to Shreveport, LA Project provides 236 miles of navigation

improvements, 225 miles of channel stabilization works and various recreational facilities. Project completion will stimulate economic growth along the Red River Basin and increase cargo flows through the deep draft ports on the lower Mississippi River. The President's Fiscal Year 2005 Budget is $4,000,000 (Construction General) and $10,600,000 (O&M General). We, however, strongly recommend that the Corps be funded $20,000,000 (Construction General) and $18,100,000 (O&M, General) to complete work already underway.

The need and impetus to reduce the Federal budget is certainly acknowledged; however, reduced funding on any of the above projects will result in decreased maintenance levels that will escalate deterioration and, ultimately, prevent them from functioning at their full-authorized purpose. Reduction in the serviceability of these projects will cause severe economic impacts not only to this region, but also to the Nation as a whole that will far outweigh savings from reduced maintenance expenditures. Therefore, we reiterate our strong recommendation that the above projects be funded to their full capability.

Supporting statements from Mr. Gary P. LaGrange, Executive Director of the Port of New Orleans; Mr. Joseph Accardo, Jr., Executive Director of the Port of South Louisiana; Mr. Roger Richard, Executive Director of the Greater Baton Rouge Port Commission; Mr. Channing Hayden, President of the Steamship Association of Louisiana; Capt. A. J. Gibbs, President of the Crescent River Port Pilots Association and Capt. Michael R. Lorino, Jr., President, Associated Bar Pilots are attached. Please make these statements along with my statement part of the record. Supplemental graphics relating to my statement have been furnished separately for staff background use. Thank you for the opportunity to comment to the subcommittee on these vital projects.

PRESIDENT'S BUDGET REQUEST & RECOMMENDED FUNDING LEVELS

[In thousands of dollars]

Project	President's Budget Request	Recommended Funding Levels
Mississippi River Ship Channel Gulf to Baton Rouge, LA (Construction General)	.....	537
Mississippi River, Baton Rouge to the Gulf, Maintenance Dredging & Stabilization (O&M General)	59,125	74,400
Mississippi River-Gulf Outlet (MR–GO), LA (O&M General)	13,004	38,400
Inner Harbor Navigation Canal Lock, LA (Construction General)	10,000	24,000
Mississippi River Outlets at Venice, LA (O&M General)	424	3,700
Bayou Sorrel Lock, LA (GI Funds)	550	550
Gulf Intracoastal Waterway LA & TX (O&M General)	17,476	27,300
MRGO Reevaluation Study, LA (General Investigation)	225	225
J. Bennett Johnston Waterway (Construction General)	4,000	20,000
J. Bennett Johnston Waterway (O&M General)	10,600	18,100
TOTAL	115,404	207,212

PREPARED STATEMENT OF THE PORT SAN LUIS HARBOR DISTRICT

On December 22, 2003, a magnitude 6.5 earthquake jolted the central California coast. The epicenter was about 40 miles northeast of the Port San Luis Harbor federally-owned breakwater. This earthquake caused significant damage to the structure, which prior to that date, had been in good condition. Based on its preliminary survey, the U.S. Army Corps of Engineers (USACE) estimated that repairs will cost $4 million. USACE owns and is responsible for maintaining this breakwater. President Bush declared our region a disaster area (DR 1505) on January 13, 2004; however, FEMA does not provide financial assistance to other Federal agencies.

HISTORY

Construction of a breakwater at Port San Luis was authorized by Congress in 1888 and USACE began construction in 1893. The Federal breakwater was completed in 1913. It was destroyed by severe storms in 1923, and redesigned and rebuilt to the current specifications in 1927.

USACE has repaired damages to the breakwater three times:

—In 1935 after storms from earlier years.

—In 1984 after severe 1982 El Niño storms that also sunk 27 vessels and destroyed 2 piers.

—In 1992 after 1991 El Niño storms. (Port San Luis Harbor District was the local sponsor and contributed in-kind services for maintenance and repair.)

NATIONAL SIGNIFICANCE

A small local government, Port San Luis Harbor District has limited funds. We have made the breakwater repair project our highest priority because of its significant regional, State, and national importance for the following reasons.

—Port San Luis Harbor is the nearest safe harbor of refuge to Point Conception, the "Cape Horn of the Pacific."

—Port San Luis Harbor is a U.S. Customs and Border Protection (CBP), Port of Entry station. A Port of Entry is a designated place where a CBP officer is authorized to accept entries of merchandise, collect duties, and enforce the various provisions of the customs and navigation laws (19 CFR 101.1).

—Port San Luis Harbor is the closest port to the Diablo Canyon Nuclear Power Plant. The land entrance to the power plant is at Port San Luis; our Security personnel are on the frontline monitoring threats to homeland security. The harbor is used to receive and transport heavy equipment for the nuclear power plant. Two 120-ton rotors are scheduled for delivery through Port San Luis in 2006 and 2008. Calm water is essential to offload this equipment. There is also the matter of transferring spent nuclear fuel from the power plant to a Federal depository sometime in the future. As currently proposed by the Department of Energy (DOE), this high level nuclear waste will either be barged out of Port San Luis or shipped by road. Either way, without the breakwater, access to the harbor by road or ship will be severely restricted.

—Port San Luis is home to the California Polytechnic State University's Center for Coastal Marine Science (CCMS) Pier located on the former Unocal Oil Pier. This Pier Structure is valued at $23 million. Agencies currently providing funding to the CCMS are: California Department of Health Services, National Air Space Administration, National Oceanic and Atmospheric Administration, National Science Foundation, Office of Naval Research; Naval Surface Warfare Center, The National Oceanographic Partnership Program, California Regional Water Quality Control Board, National Estuary Program/EPA, and Unocal Corporation.

—In 2000 the California legislature designated Port San Luis Harbor one of several ports along the California coast as a harbor of safe refuge. This legislation recognizes the critical role our harbor plays in affording a safety zone for commercial and industrial vessels transiting the California coast. U.S. Coast Guard vessels, scientific research vessels, oil-industry related vessels and other large vessels stop at the Port, especially during storms, to find calm water protected by the Federal breakwater.

—Port San Luis is one of the primary facilities on the central California coast used by fiber optic cable ships to install and repair transpacific fiber optic cables. Several cable landings are in waters near the port and are serviced by large cable-laying ships. This international communication support facility (harbor) is critical to the national security and global commerce. A safe harbor to resupply and moor cable-laying ships and associated watercraft is critical.

—The Port is home to 240 commercial and recreational fishing vessels that contribute to the economy and job markets in central California. The supporting landside businesses are dependent on the local fleet to generate jobs and revenue producing goods and services—including ships chandleries, vessel haul-out and repair facilities, fueling stations, seafood buying stations, and ancillary services.

For these reasons, we request a congressional "add" of $4 million to the fiscal year 2005 Budget to repair the earthquake damage to the Federal breakwater.

PREPARED STATEMENT OF THE COOSA-ALABAMA RIVER IMPROVEMENT ASSOCIATION, INC.

Mr. Chairman and distinguished committee members, I request the President's fiscal year 2005 Budget be adjusted to reflect appropriations to U.S. Army Corps of Engineers civil works projects on the Alabama River as follows:

	Amount
Alabama-Coosa	$4,549,000 (add of $4,000,000).
Millers Ferry L&D	4,863,000 (add of $320,000).

	Amount
Robert F. Henry L&D	4,890,000 (add of $300,000).

I make these requests as President of an Association formed in 1890 to promote commercial navigation on the Coosa and Alabama Rivers. Our members are the cities, counties, businesses, and individuals from Rome, Georgia to Mobile, Alabama. We value our inland waterways and are very distressed that the President's proposed cuts on our projects are being done with no thought as to consequences to the citizens of this river basin.

Alabama-Coosa.—The President's Budget proposal for fiscal year 2005 eliminates funding for dredging the Alabama River navigation channel as well as for maintaining the lock at Claiborne Dam. Not funding these projects will close the Alabama River navigation channel, sever the only waterway link between the capital city of Montgomery and the Port of Mobile, and isolate three-fourths of the river basin from the Gulf of Mexico.

Severing the channel will have major negative economic effects in central Alabama, an area bustling with expansion of new industries and subsidiaries. Hyundai Motor Company located its first American-based automobile manufacturing plant, a $1 billion investment, in the Montgomery area because of the available infrastructure, including the waterway. Hyundai has plans this calendar year and in 2005 to move several pieces of outsized equipment, weighing up to 125,000 pounds each and part of a $20 million stamping press, to its plant via the Alabama River, the only transportation artery capable of safely moving equipment of that size. The channel is essential to Hyundai operations.

The Gulf Logistics and Projects Company of Houston, Texas, which will be a major transporter of raw materials to Hyundai, indicates that closing the navigation channel will cause "painful economic distress if the barge delivery system is denied to foreign manufactures (sic) trying to relocate their factories into the United States, near Montgomery, Alabama . . . Without the Alabama River, quantity raw materials movements may become too expensive and production be curtailed." This is a strong statement from a Korean firm planning to establish an office in Mobile just to support Hyundai, and I believe is a compelling argument to keep the navigation channel fully operational.

Another major industry that will be hard hit is Alabama River Pulp Company of Perdue Hill, Alabama, a $1.4 billion investment and one of the largest paper manufacturing plants in the world. Alabama River Pulp receives fuel oil via barge. If the channel closes, that fuel oil will have to be trucked in at an additional annual cost of $1.5 million while putting 2500 additional trucks of fuel oil on Alabama's highways. Why would we want to do that?

Closing Claiborne Lock has other consequences for ARP, which is located only about three miles downstream of Claiborne Dam and is heavily reliant on predictable and controlled flows and river levels. Not funding the lock operation means the personnel operating that lock and who also control the dam flow control gates would be cut, imperiling the flow control procedures on which ARP relies to provide cooling water to its plant. ARP strongly objects to any cuts that jeopardize that flow management.

Closing the channel is a direct threat to some sand and gravel companies. Two companies that currently move approximately 100,000 tons on the Alabama annually have the resources to move over 300,000 tons, but are stymied because reduced dredging the past 2 years has allowed the river to silt in, causing severe navigation safety problems. Couch Ready Mix USA, which has a $5 million investment on the river near Montgomery, has stated in writing that, if the channel were fully maintained, it alone has an annual capacity of over 300,000 tons to move on the river to the Gulf of Mexico.

One of the major benefits of barge transportation is its contribution to traffic and pollution safety. A May 2001 Latin American Trade and Transportation Study, sponsored by the Southeastern Transportation Alliance, predicts that imports into the Gulf of Mexico from Latin America will triple by 2020. It is reasonable to assume that the Port of Mobile will get its fair share of that increased traffic, much of which will be containers. Those commodities will have to move out of Mobile by rail, road, or waterway. Rail is limited in its capacity to absorb these increases. Truck congestion on the highway system leading out of Mobile will be intolerable, as should be the additional pollution. (Per ton-mile, barges emit only 10 percent of emissions produced by trucks and 25 percent of that produced by rail.) It makes sense, from economic, environmental, and safety views, to move some of that cargo, including containers, onto the waterways, including the Alabama River, an option not available if the waterway is closed.

The proposal to close Claiborne Lock alone has dire consequences beyond the effect on commercial navigation. The Alabama River is the only waterway connecting the capital city of Montgomery to the Gulf of Mexico. Severing the channel will stop ever-increasing recreational traffic from Montgomery to the Gulf. Eighty percent of the vessels locking through Claiborne are recreational craft. There is a strong move within the basin to develop a system of marinas to support recreational vessels from bass boats to 80-foot cruisers. Wilcox County, one of the least developed and highest unemployment (16.4 percent) counties in the State, is planning to construct a full-service marina and lodging facility on the Alabama to attract and serve recreational craft of all sizes, a facility that will provide jobs Closing the navigation channel will kill that project as well as well as projected revenue for this depressed area.

Millers Ferry Lock and Dam and Robert F. Henry Lock and Dam.—The President's Budget also eliminates funding to maintain several of the Corps' recreational areas along the Alabama River. Over 3 million people visited these sites last year and spent over $60 million within 30 miles of the facilities, 66 percent of which was a direct input into the local economy. With proposed cuts in maintenance of $320,000 at Millers Ferry and $300,000 at Robert F. Henry, the Mobile District will be forced to scale back maintenance at all sites, close three of the six campgrounds 6 months out of the year, reassign park rangers, and drop contracted maintenance.

Without maintenance, these facilities will deteriorate. To"save"$620,000, the administration is willing to sacrifice a strong economic multiplier in an economically-depressed area of the country. This kind of "saving" doesn't make economic sense.

Attached is a list of businesses, individuals, and local and State government agencies expressing concern about these proposed cuts in the Alabama River civil works projects. To a person, these citizens view the proposed cuts as "devastating for industrial development in the State of Alabama." Any "savings" from the proposed cuts will be a Pyrrhic victory, dwarfed by staggering losses to the State of Alabama.

In summary, the President's Budget proposal for fiscal year 2005 will be a major economic blow to Central Alabama. For the appearance of "savings", the administration is willing to eliminate an important transportation asset for the State of Alabama and put in jeopardy businesses sorely needed in an economically depressed area with unemployment up to 15 percent. I request funding be placed into the fiscal year 2005 Energy and Water Appropriations Act to allow the Corps of Engineers to maintain the authorized navigation channel on the Alabama River and to keep the recreation areas open year around for the benefit of our citizens.

LETTERS SUPPORTING CARIA STATEMENT—MARCH, 2004

The Honorable Otha Lee Biggs	Monroe County Commission	Monroeville, AL.
The Honorable Jim Byard	Mayor, City of Prattville	Prattville, AL.
Mr. F. Slaton Crawford	Dir, Wilcox County C of C	Camden, AL.
Mr. Elton N. Dean	Montgomery County Commission	Montgomery, AL.
Mr. Ken Fairly	Alabama River Pulp Company	Monroeville, AL.
The Honorable Anne Farish	Mayor, City of Monroeville	Monroeville, AL.
Mr. Trey Glenn	Alabama Office of Water Resources	Montgomery, AL.
The Honorable Sue Glidewell	Mayor, City of Rainbow City	Rainbow City, AL.
Mr. Lynn A. Gowan	Montgomery County Commission	Montgomery, AL.
Mr. Robert F. Henry, Jr.	Robert F. Henry Tile Co.	Montgomery, AL.
Mr. Slade Hooks, Jr.	Waterways Towing & Offshore Svcs	Mobile, AL.
The Honorable John W. Jones, Jr.	Dallas County Probate Judge	Selma, AL.
Mr. Wm. F. Joseph, Jr.	Montgomery County Commission	Montgomery, AL.
Captain Jeong Dae Kim	Gulf Logistics & Projects	Houston, TX.
Mr. James Lyons	Alabama State Docks	Mobile, AL.
Ms. Ellen McNair	Montgomery Area C of C	Montgomery, AL.
Mr. Donald L. Mims	Montgomery County Commission	Montgomery, AL.
The Honorable James Perkins	Mayor, City of Selma	Selma, AL.
Mr. Phillip A. Sanguinetti	The Anniston Star	Anniston, AL.
Mr. Steven D. Shaw	Couch Ready-Mix USA	Dothan, AL.
Ms. Sandy Smith	Monroeville Area C of C	Monroeville, AL.
Mr. J. Craig Stepan	Warrior & Gulf Navigation	Mobile, AL.
Mrs. Anne Henry Tidmore		Montgomery, AL.
Mr. Wayne Vardaman	Selma & Dallas County Cntr. for Co.	Selma, AL.
Mr. Jiles Williams, Jr.	Montgomery County Commission	Montgomery, AL.
Mr. Sam H. Wingard	Montgomery County Commission	Montgomery, AL.

PREPARED STATEMENT OF THE BOARD OF MISSISSIPPI LEVEE COMMISSIONERS

Mr. Chairman and members of the committee, this statement is prepared by James E. Wanamaker, Chief Engineer for the Board of Mississippi Levee Commissioners, Greenville, Mississippi, and submitted on behalf of the Board and the citizens of the Mississippi Levee District. The Board of Mississippi Levee Commissioners is comprised of seven elected commissioners representing the counties of Bolivar, Issaquena, Sharkey, Washington, and parts of Humphreys and Warren counties in the Lower Yazoo Basin in Mississippi. The Board of Mississippi Levee Commissioners is charged with the responsibility of providing protection to the Mississippi Delta from flooding of the Mississippi River and maintaining major drainage outlets for removing the flood waters from the area. These responsibilities are carried out by providing the local sponsor requirements for the Congressionally authorized projects in the Mississippi Levee District.

It is apparent that the administration loses sight of the fact that the Mississippi River & Tributaries Project provides protection to the Lower Mississippi Valley from flood waters generated across 41 percent of the Continental United States. These flood waters flow from 31 States and 2 provinces of Canada and must pass through the Lower Mississippi Valley on its way to the Gulf of Mexico. We will remind you that the Mississippi River & Tributaries Project is one of, if not the most cost effective project ever undertaken by the United States. The foresight used by the Congress and their authorization of the many features of this project is exemplary.

The many projects that are part of the Mississippi River & Tributaries Project not only provides protection from flooding in the area, but the award of construction contracts throughout the Valley provides assistance to the overall economy to this area that is also encompassed by the Delta Regional Authority. The employment of the local workforce and purchases from local venders by the contractors help stabilize the economy in one of the most impoverished areas of our country. The Mississippi Valley Flood Control Association will be submitting a general statement in support of an appropriation of $450 million for fiscal year 2005 for the Mississippi River & Tributaries Project. This is the minimum amount that we consider necessary to allow for an orderly completion for the remaining work in the Valley and to provide for the operation and maintenance as required to prevent further deterioration of the completed flood control and navigation work.

Thanks to the additional funding over and above the administration's budget that has been provided by the Congress over the last several years, work on the Mainline Mississippi River Levee Enlargement Project is continuing. This funding has resulted in having 7.6 miles of work completed and returned to the Levee Board for maintenance, and 24.4 miles are currently under contract. Right of way is being acquired on the next 3.4 miles with the contract being scheduled for award in September of this year. This will result in over half of the deficient 69 miles in our District being completed or under contract. We are requesting $54.8 million for construction on the Mainline Mississippi River Levees in the Mississippi Valley Division which will allow the Vicksburg and Memphis districts to keep existing contracts on schedule and award contracts to avoid any unnecessary delays in completing this vital project. We are all well aware that the Valley some day will have to endure a Project Flood, we just don't know when. We must be prepared.

Three projects in Mississippi are on the list included in the administration's budget targeted for cancellation by the Office of Management and Budget. These are all projects authorized and funded so wisely by the Congress. The administration's proposal includes language to return unobligated funds to the Treasury. This action is especially difficult to understand during a time when our Nation needs an economic boost. All of these projects are encompassed in the footprint of the Delta Regional Authority, an area recognized by the Congress as requiring special economic assistance to keep pace with the rest of our great Nation. We can not lose sight of the fact that all of these projects are required to return more than a dollar in benefits for each dollar spent. No project authorized and funded by the Congress should be indiscriminately terminated without the benefit of having the opportunity to complete with the study process and subsequent construction after complying with the Corps Policy and Guidelines.

One of the projects on this list will provide benefits to parts of six counties in the south part of the Mississippi Delta who continue to patiently wait for the completion of the Yazoo Backwater Project. This work authorized by the Congress to provide protection from higher stages on the Mississippi River resulting from changes made to the Mississippi River and Tributaries Project, must safely pass flood water from 41 percent of the continental United States. Also, the same change in the flow line of the Mississippi River that is requiring the Enlargement of the Mainline Mississippi River Levee will also increase stages in the South Delta. The Corps and

EPA have made an extraordinary effort to resolve differences in wetland impacts resulting from the construction of the Corps recommended plan for this project. This plan has received the support of all six county Boards of Supervisors in the project area. We are requesting this project be funded by the Congress in the amount of $12 million. These funds will allow the Corps to begin acquisition of the reforestation easements and initiate the award of the pump supply contract.

Another project on the administration's hit list is the Big Sunflower River Maintenance Project. The first item of work has been completed and right-of-way has been acquired for the next item of work. Our request for $2.139 million will allow right-of-way acquisition to continue and for the award of the first dredging contract. The residents in South Washington County continue to suffer damages from flooding while they continue to wait for this maintenance project to reach their area.

The third project in Mississippi targeted by the administration for cancellation is the Delta Headwaters Project, formerly the Demonstration Erosion Control Project. Work carried out as part of this project has proven effective in reducing sediments to downstream channels. To discontinue this project will only increase sediment in downstream channels, reducing the level of protection to the citizens of the Delta and increasing required maintenance. We are requesting $25 million to continue this project.

The Upper Yazoo Project is critical to the Delta. The Corps of Engineers operates 4 major flood control reservoirs on the bluff hills overlooking the Mississippi Delta. These reservoirs hold back heavy spring rains and must have adequate channel capacity to pass this excess runoff during the summer and fall months. Without completion of the Upper Yazoo Project, the Corps is forced to hold flood water from the previous spring, thereby reducing the ability to provide protection from the current year's flood water. The administration's budget of $3.85 million will require the Vicksburg District to suspend construction of three ongoing contracts. We urge the Congress to provide additional funds to increase the budget amount to $20 million allowing construction to continue and the award of additional channel items that will extend construction upstream to Glendora, Mississippi.

Maintenance of completed works can not be over looked. The four flood control reservoirs over looking the Delta have been in place for 50 years and have functioned as designed. Required maintenance must be performed to avoid any possibility of failure during a flood event. The recent dam failure in south Mississippi less than 2 weeks ago can only magnify the need to adequately maintain our infrastructure. We are asking for $12.9 million for Arkabutla Lake, $19.322 million for Sardis Lake, $13.679 million for Enid Lake, and $10.101 million for Grenada Lake. Additional funding will be used to replace rip rap at all 4 reservoirs, repair the spillways at Arkabutla and Sardis, and upgrade other infrastructure around all the lakes.

We are requesting $14.915 million for Maintenance of the Mainline Mississippi River Levees which will provide for repair of levee slides, slope repair, and repair of the gravel maintenance roadway which is so vital to access during high water.

Other Mississippi projects that require additional funding to keep on schedule include:

[In thousands of dollars]

Project	Amount
Big Sunflower River (Upper Steele Bayou)	5,000
Yazoo Basin Reformulation Unit	450
Yazoo Basin Main Stem	25
Yazoo Backwater (Greentree Reservoirs)	300

I have reviewed a great deal of information regarding the needs of providing flood protection to our area. Another major feature of the Mississippi River & Tributaries Project relates to navigation interest along the Mississippi River. Several of our ports have been informed that the President's budget does not include funding for Critical Harbor Dredging necessary to keep these harbors opened for navigation. Our port commissioners have been notified that lack of dredging will cause these ports to be shut down and be a hazard to navigation. This will impact the movement of over 4.5 million tons of cargo being shipped on our waterways annually from these ports. This equates to an additional 180,000 truck loads of products on our highways. It is imperative that funding be made available for Critical Harbor Dredging to allow continued operation of these facilities, which are key features to the economic growth of the region.

As members of the Congress representing the citizens of our Nation who live with the Mississippi River everyday, you clearly understand both the benefits provided

by this resource, and the destructive force that must be controlled during a flood. On behalf of the Mississippi Levee Board, I can not express enough, our appreciation for your efforts in providing adequate funding over the last several years that has allowed construction to continue on our much needed projects.

PREPARED STATEMENT OF THE BLUE VALLEY ASSOCIATION

The Blue Valley Association has 164 members representing thousands of employees in the Blue Valley industrial area. These high paying jobs have been put at risk from past flooding in the valley. Since 1920 the association has been dedicated to improving our industrial area and maintaining jobs. Continued funding of the Blue River Project is essential to this goal.

The project, which began in 1983, is located along the Blue River from its mouth at the Missouri River continuing approximately 12 miles upstream to 63rd Street, running through an industrial area of Kansas City, which is a long-standing business district employing 12,000 people, and containing many residential neighborhoods.

The progress made to date has provided significant benefits to those businesses downstream. But much work remains. Delays in funding will increase the risk of flooding as rapid development of the watershed in the State of Kansas increases the run off. Increased flooding has forced many businesses to abandon the valley and relocate to new "Greenfields". The project's completion date has already been delayed from 1998 to 2008.

This is an economically sound project with a benefit to cost ratio of 3 to 1. Therefore, we urge you to provide the $8,000,000 in funding needed to continue this project.

PREPARED STATEMENT OF THE MO-ARK ASSOCIATION

Mr. Chairman, the Mo-Ark Association welcomes this opportunity to provide written testimony to the Subcommittee on Energy and Water Development regarding appropriations for fiscal year 2005 and requests that this written testimony be included in the formal hearing record.

The Mo-Ark Association is a long-standing organization that promotes beneficial use of water and land related resources in the Missouri and portions of the Arkansas River Basins, primarily within the States of Kansas and Missouri. We have advocated for flood damage reduction projects in our region since severe flooding ravaged the Midwest in 1951.

The Mo-Ark Association requests the following General Investigation and Construction General Funding for Corps of Engineers' Water Resource projects underway in our region. Our fiscal year 2005 Federal appropriations request for these projects is presented in the following table, together with the activity to be performed with those funds by the Corps of Engineers. The projects with the highest priority are shown in cap type.

Project	Fiscal Year 2005 Request	Activity
BLUE RIVER CHANNEL	$8,000,000	CONTINUE CONSTRUCTION.
TURKEY CREEK BASIN	2,500,000	CONTINUE CONSTRUCTION.
Brush Creek Basin	200,000	Complete Study Effort.
BLUE RIVER BASIN	4,000,000	CONTINUE CONSTRUCTION.
SWOPE PARK INDUSTRIAL AREA	600,000	COMPLETE DESIGN.
Kansas Citys (7 Levees)	650,000	Continue Feasibility Study.
Upper Turkey Creek	500,000	Continue Feasibility.
St. Joseph Levee	250,000	Complete Feasibility.
Topeka Levee	100,000	Complete Feasibility.
Jefferson City Levee L–142	6,200,000	Begin Construction.
RIVERSIDE LEVEE L–385	12,000,000	COMPLETE CONSTRUCTION.
Missouri River Mitigation	20,000,000	Design & Construction.
Missouri River Bank Stabilization & Navigation Support	5,000,000	Rehabilitation & Construction.
MISSOURI RIVER CHANNEL DEGRADATION STUDY	500,000	BEGIN STUDY.

Mo-Ark also requests that the several key programs which provide Federal assistance for water related projects continue to be made available to local communities and that they are supported with annual appropriations. Among these: Small Flood Control Authority, Section 205 of the 1948 Flood Control Act as amended; Flood

Plain Management Services, Section 206 of the 1960 Flood Control Act; Planning Assistance to States, Public Law 93–251; and Emergency Bank Stabilization, Section 14 of the 1946 Flood Control Act as amended. Communities in our region have made use of these programs in the past and will continue to seek out beneficial uses for them in the future.

PREPARED STATEMENT OF THE KANSAS CITY INDUSTRIAL COUNCIL

The Kansas City Industrial Council (KCIC) supports the U.S. Army Corps of Engineers and local sponsor, Kansas City, Missouri, in the completion of the Feasibility Report on the Swope Park Industrial Area. We encourage the approval of this report as urgently as possible.

The safety of many lives is directly affected by the Blue River as experienced in the May 15, 1990, flooding in the Swope Park Industrial Park. The Feasibility Report accurately defines this unique area by having only one way to enter and exit, land being surrounded by river and railroad tracks. This report also accurately depicts that the business owners and managers of Swope Park Industrial Park have continued to maintain property and employment while keeping flood protection the number one priority for employee safety.

PREPARED STATEMENT OF DECO COMPANIES, INC.

DECO Companies, Inc. has 90 employees currently in the Blue River Valley. Our affiliate companies have ownership of over a million square feet of industrial space leased to small "Started Businesses". To keep these businesses, valuable property and employees safe from floods continued funding of the Blue River project is essential.

The project, which began in 1983, is located along the Blue River from its mouth at the Missouri River continuing approximately 12 miles upstream to 63rd Street, running through an industrial area of Kansas City, which is a long-standing business district employing 12,000 people, and containing many residential neighborhoods.

The progress made to date has provided significant benefits to those businesses downstream. But much work remains. Delays in funding will increase the risk of flooding as rapid development of the watershed in the State of Kansas increases the run off. Increased flooding has forced many businesses to abandon the valley and relocate to new "Greenfields". The project's completion date has already been delayed from 1998 to 2008.

This is an economically sound project with a benefit to cost ratio of 3 to 1. Therefore, we urge you to provide the $8,000,000 in funding needed to continue this project.

PREPARED STATEMENT OF VANCE BROTHERS INC.

On behalf of the 200 employees of Vance Brothers Inc., I am requesting that you provide the funding necessary to continue the Blue River Channel Project.

In 1993 and again in 1995 the water was so high that we had to initiate our Emergency Flood Plan. Besides costing thousands of dollars, it put employees out of work for several days.

Because of the residential and commercial development of the upper Blue River basin in the State of Kansas, along with their paved parking lots and new storm sewer systems, we had up to 8 feet of water in our plant in 1990.

Increased flooding has forced many businesses to abandon the valley. Delays in funding will increase the risk of flooding as rapid development of the watershed in the State of Kansas increases the run off. The project's completion date has already been delayed from 1998 to 2008.

This project will benefit the workers in our area creating good paying jobs.

This is an economically sound project with a benefit to cost ratio of 3 to 1. Therefore, we urge you to provide the $8,000,000 in funding needed to continue this project.

PREPARED STATEMENT OF WAREHOUSE ONE, INC.

On behalf of the 55 associates of Warehouse One, Inc., and the thousands of other Kansas City workers and residents in the Blue Valley, I am requesting that you pro-

vide the $8,000,000 in funding necessary to continue the Blue River Channel Project.

The Blue River flows through the historical and industrial heart of Kansas City with its lower stretch in the Enterprise Zone. Increased flooding from upstream development has forced many businesses to abandon the valley at a cost of thousands of jobs and lowered property values. The Army Corps of Engineers' revised completion date has now been extended from 1998 to 2008. This delay will only cause more companies and residents to leave our neighborhoods.

In areas where the project has been completed, redevelopment is significant. Hundreds of millions of dollars of public and private money have been invested to reclaim abandoned properties providing jobs, homes, and tax dollars.

The Blue River Channel Project, with a benefit to cost ratio of 3 to 1 has already proven to be economically sound. I urge you to provide the $8,000,000 in funding to continue the project.

PREPARED STATEMENT OF THE BI-STATE TURKEY CREEK ASSOCIATION

We received a NEW START APPROPRIATION in the Fiscal Year 2004 Appropriations Bill and construction is underway.

We MUST have funds to continue this project which affects hundreds of privately held company and thousands of employees.

Major Interstate Highways 35 and 635 flood along with U.S. Highways 69 and 169. The Main Lines of the Burlington-Northern and Santa-Fe railroads flood.

We request that $2,500,000 be appropriated for fiscal year 2005 for continued construction.

PREPARED STATEMENT OF THE LIVERS BRONZE CO.

Livers Bronze Co. moved into Swope Industrial in 1999. We purchased two buildings that house our lifetime investments and the futures for many families. Coming into this we needed FEMA flood insurance but also knew there was a project under way to give us flood protection which at some point would eliminate this costly insurance. We have an active association and go to regular meetings with the U.S. Corps of Engineers and our sponsor, Kansas City, MO. At this time we have completed both Reconnaissance and Feasibility studies.

The Blue River has a history of flooding in Kansas City. Downstream of 63rd Street the work has nearly been finished; the Bannister project at 95th Street has completed and the Dodson project at 85th Street has just started. This leaves the Swope project at 75th Street in between, not started and could possibly put us at higher risk during high water events. The Swope project is truly the last piece of the Blue River puzzle with regard to the flood protection of industrial sites along the Blue in Kansas City.

We request that the $600,000 be appropriated to complete the design phase of the Blue River, Swope Industrial project. The ongoing expenses and threats of future floods in our park are detrimental to the different industries in our park. Without your help, our businesses and the lives of our employees and associates will always have the threats of flooding in our future. Please help us complete this last segment of the Blue River project.

PREPARED STATEMENT OF THE SALVAJOR COMPANY

The Swope Park Industrial Association member companies have collectively worked for flood protection for many years, even prior to our flooding in 1990. We have met many times with our sponsor, Kansas City, MO, and the U.S. Army Corps of Engineers, and have completed both Reconnaissance and Feasibility studies.

Our location is separate of the Blue River Channel project that is from the mouth of the Blue River upstream to 63rd Street. As you know there are two other projects on the Blue River, the completed Bannister project at 95th Street and the newly under construction, Dodson project at 85th Street. Our location on 75th Street is between Bannister/Dodson and Blue River Channel projects. This location, between two active projects, puts us at higher risk than any other industrial area on the Blue River during high water events. Our project, when constructed, will complete the protection of industrial sites on the Blue River—the last piece of the puzzle.

Even though we continue to work for the protection of our employees and the preservation of our business, we are now mostly concerned about continued funding of our project. We are a small project, and the only industrial area on the Blue River

with the risk of not realizing construction since our project is still in design phase, a phase that is in most risk of not being funded for the upcoming year.

Without funding, Swope Park Industrial area companies will definitely lose investments in property and jobs that were created here long before we were designated flood plains. We realize we are only one of many projects that need funding, but our project is unique in our location, our size, and we are the key to completion of a great program that has already shown positive results in retaining business and reducing blight in the completed areas. We request that the $600,000 be appropriated to complete the design phase of the Blue River; Swope Park Industrial project.

PREPARED STATEMENT OF THE CLAY AND BAILEY MANUFACTURING COMPANY

On behalf of the 60 employees of Clay & Bailey Manufacturing Company, I am requesting that you provide the $8,000,000 in funding necessary to continue the Blue River Channel Project.

Our company, like many others in the valley, were "high & dry" in the record floods of 1961 and 1977. However, because of the residential and commercial development of the upper Blue River basin in the State of Kansas, along with their paved parking lots and new storm sewer systems, we had 5 feet of water in our plant in 1990. The $1.5 million in damages almost closed us down.

The rainfall in 1990 was considerably less than in 1977, yet the extent of the flooding throughout the lower valley was much more severe. In 1993 and again in 1995 the water was so high that we had to initiate our Emergency Flood Plan. This involves shutting down, raising motors and moving material. Besides costing thousands of dollars, it put employees out of work for several days.

The Blue River flows through the industrial heart of Kansas City with most of the lower stretch in the Enterprise Zone. Increased flooding over the years has forced many industries to abandon the valley. The Army Corps of Engineers' new estimated completion date has been extended from 1998 to 2008. The delay will cause more companies to move out of the valley either because they see the risk as unacceptable or they are washed away by a flood that should have been prevented. Likewise redevelopment of abandoned properties continues to be delayed.

Meanwhile, remediation and redevelopment in the areas where the project is complete has been tremendous. Hundreds of millions of dollars of private money has already been expended to recover the abandoned industrial properties providing jobs and tax dollars.

This is an economically sound project with a benefit to cost ratio of 3 to 1. Again we urge you to provide the $8,000,000 in funding to continue the project.

PREPARED STATEMENT OF THE BOARD OF LEVEE COMMISSIONERS FOR THE YAZOO-MISSISSIPPI DELTA

This statement, made on behalf of the citizens represented by the Yazoo-Mississippi Delta Levee Board (YMD), is not only in support of the funding requests contained herein, but also for the general funding testimony offered for Fiscal 2005 by the Mississippi Valley Flood Control Association. I would ask that this statement be made part of the record.

The Mississippi Valley Flood Control Association is requesting of Congress funding in the amount of $450 million for the Mississippi River and Tributaries Project (MR&T), an amount based on the association's professional assessment of the capabilities of the U.S. Army Corps of Engineers, Mississippi Valley Division.

While we recognize that this is a time when the Federal budget is being inordinately strained by both a slowly recovering economy, the continued hostilities in Iraq and the ongoing war against terrorism, we also recognize both the Nation's economy and the lives and livelihoods of its citizen's rests upon the continued provision of adequate flood control for its heartland.

In the aftermath of the devastating and historic Great Flood of 1927, the Flood Control Act of 1928 established as national priority, the development of a comprehensive flood control plan to reduce the likelihood of such a horrific events ever happening again in the Lower Mississippi Valley. As we look back, the MR&T has returned $284180 billion in benefits for the $11.90 billion invested—truly an American public works success story.

However, much work remains uncompleted, and if the MR&T success story is to continue, Congress must give it a higher priority than has the administration in its budget. For the totality of the MR&T, the president proposes only $270 million, an amount which we find critically austere.

The YMD Levee Board urges the Congress to provide funding at a level which will allow the MR&T to continue at a pace commensurate with the national priority to protect people and property from the ravages of flooding. We urge Congress to provide funding in the amount of $450 million so that this national promise can be kept.

A line item chart reflecting existing and needed funding levels for MR&T projects in the Lower Mississippi Valley follows, with special emphasis herein given to those projects most critical to our levee district:

Mississippi River Levees.—Life as we know it simply could not continue in the Lower Mississippi Valley without its levee system. The need to keep our levee system strong and secure must be given a top priority. The administration's budget earmarks only $7.665 million to maintaining our levees and we ask Congress to allocate $14.915 million for this critical need.

Upper Yazoo Projects (UYP).—The top priority for the YMD Levee Board, the Upper Yazoo Projects, was conceived in 1936. The overall project includes a system of flood control reservoirs which discharge into a system of channels and levees intended to safely convey headwater from the hills into the Mississippi River. Perhaps the least contentious major flood control project in the country, the UYP is progressing smoothly, with virtually no public opposition. However, the proposed budget funds this project at only $3.850 million and we urge Congress to fully fund at the capability of the Corps of Engineers—$20 million—so that it might progress and the following be accomplished:

—Complete Channel Item 5B;
—Complete Item 7A and 7B structures;
—Purchase project and mitigation lands;
—Continue Channel Items 6A and 6B and;
—Initiate bridge relocation.

Delta Headwaters Project.—Formerly known as the Demonstration Erosion Control Project, this is a proven concept which works, and should continue, yet is unfunded and would be phased out. We urge Congress not to allow this. Vast amounts of sediments which would be controlled by this project would in its absence end up within the Coldwater/Tallahatchie/Yazoo river system. We urge Congress to appropriate $25 million for this badly needed effort.

Yazoo Headwater Flood Control Reservoirs.—Four major flood control reservoirs exist in Mississippi to control the release of headwater into the Yazoo River system—Sardis, Arkabutla, Enid and Grenada. These have prevented significant flood damages by allowing excess waters to be released at controlled rates. All four are aging and require both routine maintenance and upgrading and we ask that the Congress do so at the following levels:

—Arkabutla—$12.9 million;
—Sardis—$19.322 million;
—Enid—$13.679 million;
—Grenada—$10.101 million.

Big Sunflower River.—We ask that Congress fund at the level of $5 million so that Item 66 A/B at Swan Lake Levee might be completed and that, the purchase of mitigation lands mitigation and reforestation might continue.

Big Sunflower River Maintenance Project.—We request Congress fund at the level of $2.139 million so that Items 2 and 4 might be initiated and design might continue.

Yazoo Backwater Pumps.—Of critical concern to South Delta residents and our sister levee board, the Mississippi Levee Board; this project would alleviate backwater flooding. We support that effort and join in requesting funding at a level of $12 million so that planning and acquisition may continue and a pump supply contract might be initiated.

Yazoo Backwater.—We ask Congress to appropriate $300,000 to continue pump operations at Greentree reservoirs and to appropriate $926,000 to rehabilitate bulkheads and provide environmental mitigation.

Main Stem.—We seek $3.966 million to rehabilitate and replace drainage structures and we request $25,000 to monitor Sheley Bridge bank stabilization.

Coldwater Basin.—We ask $750,000 so that a feasibility study might continue.

Quiver River.—We seek $100,000 to continue a reconnaissance phase of this effort.

Reformulation Unit.—We request $450,000 to complete reform of the backwater unit and continue work in the tributaries phase of this project.

Finally, in an overall statement on proposed Peer Review Policy within the Corps of Engineers, we would prefer that any such reviews be mandated by Congress to take place only during the study phase of projects and not when actual work has begun.

PREPARED STATEMENT OF THE GREEN BROOK FLOOD CONTROL COMMISSION

Mr. Chairman and members of the subcommittee, my name is Vernon A. Noble, and I am the Chairman of the Green Brook Flood Control Commission. I submit this testimony in support of the Raritan River Basin—Green Brook Sub-Basin project, which we request be budgeted in fiscal year 2005 for $10,000,000 in Construction General funds.

As you know from our previous testimony, a tremendous flood took place in September of 1999. Extremely heavy rainfall occurred, concentrated in the upper part of Raritan River Basin. As a result, the Borough of Bound Brook, New Jersey, located at the confluence of the Green Brook with the Raritan River, suffered catastrophic flooding. Water levels in the Raritan River and the lower Green Brook reached record levels.

There were tremendous monetary damages, and extensive and tragic human suffering.

The flooding of September 1999 is not the first bad flood to have struck this area. Records show that major floods have occurred here as far back as 1903.

Disastrous flooding took place in the Green Brook Basin in the late summer of 1971. That flood caused $304,000,000 in damages (April 1996 price level) and disrupted the lives of thousands of persons.

In the late summer of 1973, another very severe storm struck the area, and again, thousands of persons were displaced from their homes. $482,000,000 damages was done (April 1996 price level) and six persons lost their lives.

The first actual construction of the Project began in late fiscal year 2001, in which an old bridge over the Green Brook, connecting the Boroughs of Bound Brook and Middlesex, was replaced with a new and higher bridge. That work is now complete.

The second construction contract, known as Segment T, began in 2002, and is now nearing completion. This work will complete the protection for the eastern portion of Bound Brook Borough.

The next following segment of the Project is planned for construction to begin this year. This next construction, known as Segment U, will begin the protection for the western portion of Bound Brook Borough.

When Congress authorized the Project for construction, it did so only for the lower and Stony Brook portions. This was the result of the objections raised in 1997 by the Municipality of Berkeley Heights, located in the highest elevation portion of the Green Brook Basin.

In 1998 a Task Force was formed to seek a new consensus for protection of the upper portion of the Basin.

Following the recommendations of the Task Force, in calendar year 2003, Resolutions of Support for protection of the upper portion of the Basin were adopted, along the lines of the recommendations of the Task Force. These new Resolutions of Support for the protection of the upper portion of the Basin, principally the Municipalities of Plainfield and Scotch Plains, were adopted by those Municipalities, and by the two affected Counties of Union and Somerset.

A final design for a new plan to protect these upper basin Municipalities remains to be done. This work will involve a new effort by the Corps of Engineers, and of course will require that the Corps of Engineers enlist technical support for surveying, environmental investigations, and design studies, by the placing of appropriate contracts with qualified outside consulting engineering firms.

This work will require many months, and contracts for actual construction of these protective measures for the upper portion of the region are not likely to be ready until several more years. It is understood that when these studies have been completed, it will be necessary for Congress to specifically authorize the final design of the recommended plan. That likely cannot happen until fiscal year 2006, or later.

Meantime, it is essential that this preparatory work continue. And it is thus essential that the Corps of Engineers be authorized and allowed to place contracts for environmental and engineering studies in order to develop an acceptable plan for the protection of the upper portion of the Green Brook Basin.

It is understood that specific action by the Congress is required at this time to authorize the Corps of Engineers to continue this work in fiscal year 2005 and beyond. It is also understood that before final design for protection of the upper portion of the Green Brook Basin can proceed, it will be necessary that a Project Cooperation Agreement be entered into between the Corps of Engineers and the State of New Jersey. Presumably, this Project Cooperation Agreement will be similar to the Agreement now in force between the Corps of Engineers and the State of New Jersey, which was made for the lower and Stony Brook portions of the Green Brook Basin.

Page one of the Syllabus contained in the approved Final General Re-evaluation Report of May 1997 contains the following:

"Accordingly, this final document is considered a decision document for construction of the lower and Stony Brook portions of the Basin, with continued planning and engineering of the separable upper portion of the Basin. The decision to construct the upper portion features will be deferred until such time that evaluations of additional information and views are completed and local interests have the opportunity to review findings."

To carry this work forward, it is essential that the Corps of Engineers be authorized, within the funds appropriated to them in fiscal year 2005, to place contracts for engineering and environmental studies pertaining to the protection of the upper portion of the Basin.

It is to be noted that the Estimated Damages caused by the Flood of 1973, in the upper portion Municipalities only, reported in the final GRR of May 1997, page 33, showed that Estimated Damages in Plainfield, Scotch Plains and Watchung (the upper portion of the Basin) amounted to an estimated $357 million.

We urge the members of Congress to direct the Corps of Engineers, within the funds made available to them for fiscal year 2005, to continue the necessary investigations and studies, and to authorize the Corps of Engineers to place contracts for such investigations as may be necessary, so that the preparatory work for the ultimate protection of the people and property within the upper portion of the Basin can be carried forward.

The Green Brook Flood Control Commission is made up of appointed representatives from Middlesex, Somerset and Union Counties in New Jersey, and from the 13 Municipalities within the Basin. This represents a combined population of about one-quarter of a million people.

The Members of the Commission are all volunteers, and for 33 years have served, without pay, to advance the cause of flood protection for the Basin. Throughout this time, the Corps of Engineers, New York District, has kept us informed of the progress of their work, and a representative from the Corps has been a regular part of our monthly meetings.

We believe that it is clearly essential that the Green Brook Flood Control Project be carried forward, and pursued vigorously, to achieve protection at the earliest possible date. This Project is needed to prevent loss of life and property, as well as the trauma caused every time there is a heavy rain.

New Jersey has programmed budget money for its share of the Project in fiscal year 2005.

We urgently request an appropriation for the Project in fiscal year 2005 of $10,000,000.

With your continued support, the Green Brook Flood Control Commission is determined to see this Project through to completion.

Thank you, Mr. Chairman, and members of the subcommittee, for your vitally important past support for the Green Brook Flood Control Project; and we thank you for the opportunity to submit this Testimony.

GREEN BROOK FLOOD CONTROL

GREEN BROOK SUB-BASIN, RARITAN RIVER BASIN, NEW JERSEY

GREEN BROOK FLOOD CONTROL PROJECT FUNDING

	A	B	C	D	E	F	G
FEDERAL FISCAL YEAR	FEDERAL ADMINISTRATION BUDGET REQUEST	CONGRESSIONAL APPROPRIATION (NOMINAL)	SAVINGS AND SLIPPAGES	EFFECTIVE NET APPROPRIATION TO CORPS OF ENGINEERS	TRANSFER BY CORPS TO (-) FROM (+) OTHER PROJECTS	NET MONEY AVAILABLE FOR WORK ON PROJECT (WORK ALLOWANCE)	CUMULATIVE MONEY RECEIVED BY CORPS SINCE AUTHORIZATION IN 1986
1986	$ 445,000	$ 445,000	$ -19,000	$ 426,000	$ ---	$ 426,000	$ 426,000
1987	1,370,000	1,370,000	---	1,370,000	---	1,370,000	1,796,000
1988	1,400,000	1,400,000	---	1,400,000	---	1,400,000	3,196,000
1989	1,500,000	1,500,000	-68,000	1,432,000	---	1,432,000	4,628,000
1990	1,200,000	1,200,000	-116,000	1,084,000	+23,000	1,107,000	5,735,000
1991	2,000,000	2,000,000	-496,000	1,504,000	-98,000	1,406,000	7,141,000
1992	2,600,000	3,169,000	-364,000	2,805,000	---	2,805.000	9,946,000
1993	---	3,500,000	---	3,500,000	---	3,500,000	13,446,000
1994	---	2,800,000	-594,000	2,206,000	+571,000	2,777,000	16,223,000
1995	2,000,000	2,000,000	---	2,000,000	+135,000	2,135,000	18,358,000
1996	3,600,000	3,600,000	-932,000	2,668,000	+193,000	2,861,000	21,219,000
1997	2,781,000	2,781,000	-300,000	2,481,000	300,000	2,781,000	24,000,000
1998	---	3,100,000	-189,000	2,911,000	---	2,911,000	26,911,000
1999	---	9,900,000	-694,000	9,206,000	- 6,500,000	2,706,000	29,617,000
2000	1,000,000	1,000,000	-142,000	858,000	---	858,000	30,475,000
2001	4,000,000	4,000,000	- 640,000	3,360,000	+ 89,000	3,449,000	33,924,000
2002	10,000,000	10,000,000	-1,598,000	8,402,000	+1,048,000	9,450,000	43,374,000
2003	5,000,000	7,000,000	-1,253,000	5,747,000	-842,000	4,905,000	48,279,000
2004	6,500,000	7,000,000	Recommendation of the Green Brook Flood Control Commission				
2005	9,100,000	$ 10,000,000	For FY2005 to Continue Construction				

REFERENCE:
THIS SUMMARY OF FUNDING FOR THE GREEN BROOK FLOOD CONTROL PROJECT HAS BEEN ASSEMBLED BASED UPON PUBLICLY AVAILABLE INFORMATION.

PRESENTED BY:
GREEN BROOK FLOOD CONTROL COMMISSION
GREEN BROOK, NJ 08812 MAR. 2004

PREPARED STATEMENT OF THE MOSS LANDING HARBOR DISTRICT

Mr. Chairman and members of the subcommittee, on behalf of the chairman and members of the Board of Harbor Commissioners, thank you for the opportunity for me, Russell Jeffries, as President of the Board of Harbor Commissioners of Moss Landing Harbor District in California to submit prepared remarks to you for the record in support of the fiscal year 2005 energy and water regular appropriations measure.

The commission recognizes and expresses its gratitude to our two senators, the Honorable Dianne Feinstein, a valuable member of this committee, and the Honorable Barbara Boxer for their continued assistance and support on our behalf.

We express our profound appreciation to the subcommittee and full committee for its inclusion of $600,000 in fiscal year 2004 appropriated funds for the preparation of a screening level Ecological Risk Assessment under U.S. Army Corps of Engineers Waterways Experiment Station supervision. The assessment was recently critiqued by a preeminent peer group of experts scholars representing a broad cross section of professional disciplines.

This sets the stage—with the committee's support—for the preparation of a first-ever Dredged Material Management Plan (DMMP) for the Harbor District in order to plan for orderly maintenance dredging of the Federal channel and local berths next year and over the next 20 or more years. This effort is supported by a working group organized under national dredging team local planning guidance, including representatives of the Federal, State and local agencies, and other stakeholder and public interest groups with an interest in dredging activities.

To put our needs in proper perspective, our geographical location and marine ecosystem is unique in that the Harbor District is located at the confluence of the Pajaro and Salinas rivers in between two national treasures—the Monterey Bay National Marine Sanctuary and the Elkhorn Slough National Estuarine Research Reserve—precluding most potential upland disposal sites for contaminated dredged material. The SF–12 aquatic disposal site is grandfathered for sanctuary purposes. It is located 50 yards offshore at the apex of the Monterey Bay Submarine Canyon which plunges to a depth of 8,000 feet in less than 1 mile. Every year. Periodic deposition, erosion, and flushing cycles transport thousands of tons of sedimentary material down the canyon like a chute—so much so that our dredged material is a miniscule amount measured against the total annual flushing event.

Periodic El Niño events deposit trace elements of DDT in our harbor sediments traced to Salinas Valley Agriculture—America's Salad Bowl—as a natural sink. With no realistic long term alternative—including upland disposal—to continued use of our current disposal site, our very livelihood as the largest fishing port on the central coast and largest concentration of marine scientific research south of Seattle, is at stake.

Of amounts previously appropriated, approximately $2.4 million has been expended for maintenance dredging to date and $600,000 has been expended to begin the ERA process. Most of that was transferred to the Corps of Engineers Waterways Experiment Station (WES) to prepare a preliminary Ecological Risk Assessment (ERA). Previously appropriated operations and maintenance funds have already been expended to reimburse the San Francisco district for program management costs, conduct of the required economic analysis (including a finding of a very favorable current project benefit cost ratio of 1.7 to 1), DMMP plan formulation and project scoping including alternative upland disposal site analysis), and technical support to WES.

The most significant findings of the screening comparative ERA were that in most cases the environmental impacts associated with periodic maintenance dredging and disposal at the SF–12 site were less than the no action alternative as periodic dredging removes the accumulation of contaminated material in the first few centimeters thereby reducing its bioavailability to benthic organisms at the base of the food web thereby precluding its absorption in the lipid tissue of higher trophic level organisms.

With the committee's support 2 years we completed a periodic dredging cycle of the Federal channel work and the Inner Harbor using a combination of beach replenishment and ocean disposal at the SF–12 historic disposal site for the first time in a decade. We anticipate that next year we will finally returned to a normal 3-year maintenance cycle of the Federal channel while local berth dredging of our all-important commercial fishing and oceanographic vessel berths continues on an annual basis.

During the next year we will be analyzing exiting data from a variety of sources including USGS, Moss Landing Marine Laboratory, and the Naval Post Graduate School among others filling in identified data gaps in the screening ERA to drive the WES model, as necessary completing complementary local site-specific scientific studies, and integrating all those results into the DMMP process.

To this end we request the subcommittee's approval of $600,000 in appropriations from the Operations and Maintenance General account in fiscal year 2004 in order to complete the ecological risk assessment and dredged material management plan so that the process is completed and plan implemented prior to the next periodic maintenance event scheduled to occur in fiscal year 2006.

With the assistance of the local scientific community, we are fortunate to have as much as 3 years of scientific data in the form of benthic community biomass and tissue sampling, and first-ever near-shore state-of-the-art bathymetric survey of the disposal site and Monterey Bay Canyon. These efforts should prove invaluable in measuring before and after direct impacts of dredged material disposal at the disposal site.

With the assistance of the San Francisco district, we were able to take advantage of last year's dredging episode to do before and after measurement of both sedimentary transport at the disposal site and to measure any direct impacts on benthic communities—the source of any bioaccumulation of contaminated sediments in trace amounts.

Despite the drastic differences between the use of the WES ERA model adapted from aquatic Mississippi River application and our unique submarine canyon ecosystem and volume of material, a tracer study using European technology was synchronized with the last disposal event that demonstrated the rapid dispersion of dredged material at the SF–12 site. We are confident that on the basis of our preliminary review—and that of the peer group—of the screening level ERA supported by local site specific analysis of data already collected and focused studies to augment the WES risk assessment model, the end result will be a document that will ultimately prove persuasive and compelling to the greater scientific community, Federal and State regulatory agencies, and an informed and involved public in our community.

We now know that there is a considerable body of unpublished relevant data concerning the Monterey Bay Canyon and the impact, fate and effect of sedimentary material transport in the hands of the local scientific community that must be collected, catalogued, analyzed, and used both as input data and for comparison with the WES model so that each can operate as an invaluable countercheck on the out-

put results of the other in predicting and directly measuring the impacts of dredged material disposal at our ocean disposal site.

Based upon our experience thus far, the funds expended completing the DMMP/ERA process in developing a persuasive case to the various constituencies and decision document supporting continued aquatic disposal for all but a very small fraction of total dredged material in exceptional circumstances over a 20 year span of the study will save significant amounts of scarce Federal and local dollars in the future.

That said, we sincerely hope our experience in this effort will:

(1) produce both a useful and practical multidisciplinary decision document for those agencies exercising regulatory or oversight jurisdiction over dredging in both our and other settings; and

(2) serve as a model for collaborative effort in dredged material disposal consensus decision-making in unique situations such as for other Corps districts and local sponsors seeking to balance required maintenance dredging to support navigation with the corresponding need to protect environmentally sensitive areas, in this instance the unique Monterey Submarine Canyon located at the heart of the Monterey Bay Marine Sanctuary.

I am prepared to supplement my prepared remarks for the record in response to any questions that the chair, subcommittee members, or staff may wish to have me answer. Thank you Mr. Chairman and members of the subcommittee. This concludes my prepared remarks.

JOINT PREPARED STATEMENT OF THE PORT COMMERCE DEPARTMENT, THE PORT AUTHORITY OF NEW YORK & NEW JERSEY; NEW JERSEY MARITIME RESOURCES, DEPARTMENT OF TRANSPORTATION, STATE OF NEW JERSEY; EMPIRE STATE DEVELOPMENT CORPORATION, STATE OF NEW YORK; AND NEW YORK CITY ECONOMIC DEVELOPMENT CORPORATION

On behalf of the Port of New York and New Jersey, we thank you for your continued support of the Nation's navigation system. We appreciate the consistent level of funding that the committee has provided this bi-State gateway that we are preparing for tomorrow's commerce in partnership with the Federal Government. We were very pleased that Chairman David Hobson and Rep. Rodney Frelinghuysen were able to visit the port earlier this year. We would welcome all members of the subcommittee to get a first-hand look at the harbor and its role in the U.S. transportation system.

We are gratified that in the fiscal year 2005 budget the administration maintains the deepening of the Port's main system of channels as a priority. As such, we strongly endorse the President's request for $103,000,000 for the NY & NJ Harbor Deepening Project. As pleased as we are with that, we also share the concerns of many in the national water resources sector that the overall civil works program is shrinking. That is happening even as demand for navigation and other water resource projects remains high. Our transportation and economic systems will remain strong as long as the Nation's infrastructure is up to the task and natural resources are in good condition. The long-term capacity of the Corps of Engineers to help non-Federal governments tackle infrastructure needs depends on strong funding.

Business in the Port of NY/NJ continues to increase at a strong pace, lending credence to the government's view that investing in port channels is good for the Nation. In 2003, our region's marine terminals handled a record 4 million TEUs, an increase of roughly 300,000 TEUs over 2002. More steamship lines are starting all-water service to the East Coast to reduce costs and their reliance on ports of only one U.S. coast. This continuing trend promises greater cargo throughput in the years ahead. The Port and industry are preparing for the influx with a $1.46 billion redevelopment program that includes underwater, terminal, and access improvements. That public/private investment illustrates the partnership between the Federal and non-Federal investors in the Nation's economic future. The bi-State Port supports almost 40,000 terminal-based jobs and over 189,000 off-terminal positions, but the benefits are not limited to our region. Nationwide, almost 186,000 additional jobs are supported by the Port. The Port directly serves the Northeast and Midwest as well as most States in the continental United States. The channel projects will improve transportation efficiency that will benefit those markets and our national defense.

Crucial to the Port redevelopment program is the support of Governor James McGreevey and Governor George Pataki. They made strong commitments to investing Port Authority and other resources to make the Port and regional freight transportation more efficient, and the Port's natural resources healthier. We are proud

of the support that businesses, labor, local government and others, listed at the top of this statement, have given to this most productive port on the Atlantic Ocean.

Below are our comments on the fiscal year 2005 budget request. We enthusiastically support the administration's request with respect to the Harbor Deepening Project and respectfully request that the subcommittee appropriate funds at higher levels for select projects as noted and discussed below. Projects in bold lettering are requests beyond the fiscal year 2005 budget levels.

	Budget	Port Request
Construction: New York & New Jersey Harbor	$103,000,000	$103,000,000
Surveys (Studies):		
Hudson-Raritan Estuary, NY & NJ	450,000	2,500,000
Hudson-Raritan Estuary, Lower Passaic River, NJ	50,000	1,500,000
Hudson-Raritan Estuary, Gowanus Canal, NY	150,000	1,500,000
Hudson-Raritan Estuary, Meadowlands, NJ	100,000	850,000
TOTAL	750,000	6,350,000
Operation and Maintenance:		
Buttermilk Channel, NY	1,030,000	1,030,000
East River, NY	370,000	370,000
East Rockaway Inlet, NY	2,100,000	2,100,000
Flushing Bay & Creek, NY		11,000,000
Hudson River Channel		4,500,000
Jamaica Bay, NY	2,200,000	2,200,000
New York Harbor, NY & NJ Drift Removal	5,414,000	5,914,000
New York Harbor, NY	4,235,000	4,235,000
New York & New Jersey Channels	5,700,000	7,000,000
Newark Bay, Hackensack & Passaic Rivers, NJ	120,000	3,000,000
Project Condition Surveys, NJ	1,670,000	1,670,000
Project Condition Surveys, NY	1,075,000	1,075,000
Raritan River, NJ		2,500,000
Westchester Creek, NY		100,000
TOTAL	23,914,000	46,744,000

CONSTRUCTION

New York and New Jersey Harbor

This project was authorized by Section 101(a)(2) of WRDA 2000 (Public Law 106–541). It includes deepening the Ambrose Channel from deep water to the Verrazano-Narrows Bridge to 53 feet mlw, and deepening the Anchorage Channel and those channels that lead to the principal general cargo and breakbulk marine terminal areas to 50 feet mlw. The Corps of Engineers and the intended project sponsor are engaged in pre-construction engineering and design work to bring this project into construction seamlessly as the Kill Van Kull and Newark Bay deepening to 45 feet is concluded in late 2004. To facilitate project transition, the intended project sponsor is completing a construction contract to deepen to 50-feet portions of the Kill Van Kull and Newark Bay channels as a complement to the Corps' 45-foot project. These efforts and the overall commitment of the Port to the projects are strong testimony to our desire to advance this project with the Federal Government. We urge adoption of the budget request.

SURVEYS (STUDIES)

Hudson-Raritan Estuary Studies

These studies were authorized by House Committee Resolution dated April 15, 1999, Docket Number 2596. Increases are requested for the studies in order to achieve the completion schedules of 2005 for the New York & New Jersey and Lower Passaic studies and 2004 for the Gowanus study.

—*New York & New Jersey.*—The study purpose is to identify projects to restore estuarine, wetland and adjacent upland buffer habitat throughout the port region to the extent practicable and in keeping with existing port and regional management plans. The Corps and the Port Authority signed the Feasibility Cost Sharing Agreement on July 12, 2001, and immediately began the study. Natural resource areas, degraded as a result of historic damage, need to be re-

turned to their full potential. The continued loss of wetlands, not only through development but due to inexplicable causes, will require further analysis, monitoring and restoration. One project that can move on a fast track is Liberty State Park, where the State of New Jersey has all of its required project funds on hand, ready to provide to the Corps for construction. Given the past funding levels, the Corps is unable to proceed both with the Liberty State Park and the comprehensive regional study. We respectfully request that the budget be augmented to $2,500,000 to allow the Corps to keep its commitments to place the environment on an equal footing with navigation improvements.

—*Lower Passaic.*—Local communities throughout the Passaic River Basin requested a program of improvements to remediate and restore the river. The river and adjacent shorelines have been degraded by historic industrial/commercial activity and associated impacts of urban development. The Corps initiated the Reconnaissance Phase in January 2000 that recommended a separate study for the tidal influence of the Lower Passaic River. In June 2003, the Corps, in partnership with EPA and the NJDOT/Office of Maritime Resources, completed a comprehensive Project Management Plan (PMP) that integrates the work of all three agencies into a single study to determine the best approach. In the same month, the Corps signed the Feasibility Cost-Sharing Agreement (FCSA) with the Office of Maritime Resources and began the feasibility study. This project also has been designated as a pilot project under the joint Corps-EPA Urban Rivers Restoration Initiative. Despite the outstanding coordination between the three agencies, Federal funding is a concern. We are pleased that the non-Federal matching funding will be available as the project requires. EPA expects sufficient funding from PRPs to begin field investigations by Fall 2004. As such, lack of Federal funding will jeopardize the Corps' ability to participate in the joint fieldwork envisioned in the PMP. For that reason, we request that the budget be augmented to $1,500,000 for this study.

—*Gowanus.*—The feasibility study will assess the environmental problems and potential solutions in the Gowanus Canal and Bay. Restoration measures will assess hot spot clean-up of off-channel contaminated sediments, contaminant reduction measures, creation of wetlands, water quality improvements, and alteration of hydrology/hydraulics to improve water movement and quality. This has been designated as a pilot project under the joint Corps-EPA Urban Rivers Restoration Initiative. A FCSA was executed with the NYC Department of Environmental Protection in March 2002. The City has committed its full share to the project, and awaits the Federal match. In order to continue the study restoration of this highly contaminated, visible urban body of water (including benefits to human health), we request that the budget be augmented to $1,500,000.

—*Hackensack.*—This study will look at the feasibility of restoring wetlands in the Hackensack Meadowlands area and will assess toxic waste remediation potential. The area's existing wildlife habitat preserves are threatened by dwindling open marshes. The local sponsor is the NJ Meadowlands Commission, which has committed funding, and looks toward the Federal share. We respectfully request that the budget be augmented to $850,000 for this study aimed at protecting marshes, tidal creeks and open spaces.

OPERATION AND MAINTENANCE

Operation and maintenance projects are critical to the commerce, navigation and security of the Port as well as the Nation's security. If channels are not maintained to official depths and as needed by today's commerce, the efficiency of the Federal system of channels is lost and the risk of groundings increases. The Corps deepened the Newark Bay channel that leads to the Port Newark/Elizabeth terminal complex from 35 feet to 40 feet in 1995 as part of Phase 1 of the Kill Van Kull-Newark Bay 45-foot deepening project. In fiscal year 2002, Congress appropriated funds that enabled only partial maintenance of that channel, leaving significant areas at shallow and potentially unsafe depths. Unfortunately, the proposed budget would provide insufficient funding to adequately maintain Federal channels in the Port. The Port is one the Nation's busiest petroleum ports and the Arthur Kill and Raritan River channels are critical to that trade. Maintenance of the two channels is needed to support the industry, which serves not only the greater New York metropolitan area but much of the American northeast. Of course, maintenance also protects and perpetuates the Federal infrastructure investment.

With the above concerns in mind, we think it is important to be on the record as to how this part of the fiscal year 2005 budget is insufficient to meet the practical needs of commerce. We respectfully request that the budget be augmented by $22,830,000 to $46,744,000 for Port channel operation and maintenance work. This

also would enable the Corps to address serious shoaling problems in industrial and commercial portions of Flushing Creek, the Arthur Kill, the Hudson River Channel and the Raritan River, and to maintain on-going activities and upgrade the operational facilities at the Corps' Caven Point facility relative to the important, ongoing New York Harbor Drift Removal efforts.

CONCLUSION

The Port of New York & New Jersey continues to be a major gateway for a substantial part of the country. Cargo volume has grown, even while the economy struggles, and has been a source of increased jobs and commercial investment. The civil works program in the Port, coupled with public and private sector investments, has served well the Nation's economic and security interests for the better part of two centuries. The same is true in ports across the United States. We are proud of that history and commit to continuing this productive partnership with the Federal Government so that our region will serve the Nation for centuries to come.

PREPARED STATEMENT OF THE MISSISSIPPI VALLEY FLOOD CONTROL ASSOCIATION

My name is M.V. Williams, I serve as President of the West Tennessee Tributaries Association and submit this statement on behalf of the Mississippi Valley Flood Control Association. It is my privilege to serve as Chairman of the Executive Committee for the Association.

The Mississippi Valley Flood Control Association was first organized in 1922 and played a very large role in gaining authorization for the first major Federal water resources bill, the Flood Control Act of 1928 that established the Mississippi River and Tributaries Project. This statement is in support of additional funding for that project.

Today our Nation is faced with a war on terror and we are also mindful of the fact that we must rectify an economic condition that needs immediate attention. Even faced with those facts, we feel that we are justified in urging additional appropriations for the Mississippi River and Tributaries Project because the assets and resources of this great Nation must not be neglected during these times. We know of no other appropriation which contributes as much to national wealth and resources as does flood control and navigation for the major rivers of this country.

Millions of acres which were overflow lands decades ago are now highly productive and contributing to our national wealth. These lands by reason of their geographic location are the most fertile of the Nation. They produce an abundance of food and fiber for the general welfare and prosperity of the country. This is only possible because of the coordinated work performed by the United States Corps of Engineers and the local people.

The inland waterways of the Nation provide the cheapest and in some cases the only method to move bulk commodities that are absolutely essential to the general welfare and prosperity of the country. Moneys appropriated by Congress for flood control and navigation has and will augment our natural resources and improve our economic well-being. The appropriations made by Congress for the Mississippi River and Tributaries Project are investments in this Nation's future.

Since the productivity of the millions of acres of low lying lands adjacent to the main stem of the Mississippi River are totally dependent upon the integrity of the flood control works, any major slow down in the completion of this work will represent economic strangulation to this productive portion of our Nation.

If no funds are added to the President's budget request, the Corps of Engineers will be forced to curtail operations of locks and some harbors may be closed from lack of maintenance dredging. This will mean the loss of jobs and possible closure of plants that have millions of dollars invested in their facilities. Recreational areas will be forced to close, disrupting the lives of millions of citizens from all walks of life.

In addition to the problems with the inadequate funding in the President's budget request, we also have a tremendous problem with the fact that the Office of Management and Budget is attempting to dictate policy matters by the use of the budget submission. The greatest damage from this policy change would be to take the Congress out of its historical role of legislating policy for the flood control and navigation programs that have played a large part in making the United States the greatest industrial and commercial nation on the globe—with its resources, its wealth and productive capability that has saved the world in war and sustained it through years of troubled peace.

The executive department is again attempting to supplant this historical Congressional role and assume these policy making functions. In past attempts, the Con-

gress in its wisdom has soundly rejected these attempts. We would urge this Congress to do the same.

In closing let me reemphasize that Federal works projects with proven merit such as the Mississippi River and Tributaries Project represent a sound Federal investment which has and will return to the tax payers of this country generous dividends. Such Federal investments contribute to the economic well being of the Nation by reducing unemployment; adding to the stability and economic growth of agriculture and industry; and providing a flood free environment for the welfare of the people of the Mississippi River Valley.

For these and other reasons, we are firmly convinced that the amount of appropriations required in fiscal year 2005 for the Mississippi River and Tributaries Project is $450,000,000. An attached sheet to this statement reflects our request in more detail.

Speaking for the entire Mississippi Valley Flood Control Association, I wish to thank the subcommittee for the opportunity to present this statement and special thanks for the actions that this group has taken in the past to assist us with our problems and concerns with water resources.

MISSISSIPPI VALLEY FLOOD CONTROL ASSOCIATION—FISCAL YEAR 2005 CIVIL WORKS REQUESTED BUDGET—MISSISSIPPI RIVER AND TRIBUTARIES PROJECT—MAINTENANCE

Project	President's Budget	MVFCA Request
Wappapello Lake, MO	$4,046,000	$6,352,000
Mississippi River Levees	7,665,000	14,915,000
Dredging	20,515,000	20,515,000
Revetment and Dikes	48,760,000	48,760,000
Memphis Harbor, TN	1,205,000	2,010,000
Helena Harbor, TN	385,000	510,000
Greenville Harbor, MS	29,000	412,000
Vicksburg Harbor, MS	32,000	345,000
St. Francis River & Tribs, AR	6,080,000	8,805,000
White River Backwater, AR	1,316,000	2,260,000
North Bank, Arkansas River, AR	146,000	146,000
South Bank, Arkansas River, AR	122,000	122,000
Boeuf & Tensas Rivers, LA	2,160,000	2,160,000
Red River Backwater, LA	3,083,000	7,390,000
Yazoo Basin, Sardis Lake, MS	7,046,000	19,322,000
Yazoo Basin, Arkabutla Lake, MS	5,710,000	12,900,000
Yazoo Basin, Enid Lake, MS	4,954,000	13,679,000
Yazoo Basin, Grenada Lake, MS	5,553,000	10,101,000
Yazoo Basin, Greenwood, MS	585,000	2,035,000
Yazoo Basin, Yazoo City, MS	729,000	729,000
Yazoo Basin, Main Stem, MS	1,013,000	3,966,000
Yazoo Basin, Tributaries, MS	923,000	923,000
Yazoo Basin, Whittington Aux Channel, MS	400,000	400,000
Yazoo Basin, Big Sunflower, MS	139,000	2,139,000
Yazoo Basin, Yazoo Backwater, MS	440,000	926,000
Lower Red River, South Bank, LA	105,000	105,000
Bonnet Carre, LA	2,310,000	3,100,000
Old River, LA	7,350,000	29,900,000
Atchafalaya Basin, LA	13,000,000	25,000,000
Atchafalaya Basin Floodway, LA	2,775,000	4,200,000
Baton Rouge Harbor Devil's Swamp, LA	14,000	300,000
Miss Delta Region, LA	588,000	588,000
Bayou Cocodrie & Tribs, LA	65,000	65,000
Inspection of Completed Works	1,500,000	1,700,000
Mapping	1,112,000	1,325,000
Total MR&T Maintenance	151,855,000	248,105,000

MISSISSIPPI VALLEY FLOOD CONTROL ASSOCIATION—FISCAL YEAR 2005 CIVIL WORKS REQUESTED BUDGET—MISSISSIPPI RIVER AND TRIBUTARIES APPROPRIATIONS

Project and State	President's Budget	MVFCA Request
Surveys, Continuation of Planning and Engineering & Advance Engineering & Design:		
Memphis Harbor, TN	.....	.....
Germantown, TN	$27,000	$27,000
Millington, TN	100,000	100,000
Fletcher Creek, TN	93,000	93,000
Memphis Metro Storm Water Management, TN	.....	100,000
Bayou Meto, AR	.....	2,447,000
Germantown, TN	.....	200,000
Southeast Arkansas	.....	600,000
Coldwater Basin Below Arkabutla Lake, MS	203,000	750,000
Quiver River, MS	.....	100,000
Spring Bayou, LA	500,000	600,000
Point Coupee to St. Mary Parish, LA	.....	100,000
Atchafalaya Basin Floodway System, LA*	100,000	100,000
Alexandria, LA to the Gulf of Mexico	435,000	435,000
Morganza, LA to the Gulf of Mexico	1,500,000	10,000,000
Donaldsonville, LA to the Gulf of Mexico	800,000	1,200,000
Tensas River, LA	.....	500,000
Donaldsonville Port Development, LA	.....	100,000
Collection & Study of Basic Data	700,000	700,000
Subtotal, Surveys, Continuation of Planning & Engineering & Advance Engineering & Design	4,458,000	18,152,000
Construction:		
St. John's Bayou-New Madrid Floodway, MO	8,300,000	8,300,000
Eight Mile Creek, AR	1,357,000	3,293,000
Helena & Vicinity, AR	.....	.....
Grand Prairie Region, AR	.....	20,000,000
Bayou Meto, AR	.....	18,000,000
West Tennessee Tributaries, TN	.....	700,000
Nonconnah Creek, TN	2,153,000	2,753,000
Wolf River, Memphis, TN	.....	2,400,000
August to Clarendon Levee, Lower White River, AR	.....	2,000,000
St. Francis Basin, MO & AR	3,000,000	9,500,000
Yazoo Basin, MS	5,850,000	62,775,000
Atchafalaya Basin, LA	22,495,000	32,500,000
Atchafalaya Basin Floodway, LA	7,200,000	10,000,000
MS Delta Region, LA	1,800,000	4,700,000
Horn Lake Creek, MS	.....	203,000
MS & LA Estaurine Area, MS & LA	.....	50,000
Channel Improvements, IL, KY, MO, AR, TN, MS & LA	36,882,000	44,082,000
Mississippi River Levees, IL, KY, MO, AR, TN, MS & LA	38,960,000	54,800,000
Subtotal, Construction	127,997,000	276,056,000
Subtotal, Maintenance	151,855,000	248,105,000
Subtotal, Mississippi River & Tributaries	284,310,000	542,313,000
Less Reduction for Savings & Slippage	−14,310,000	92,313,000
Grand Total, Mississippi River & Tributaries	270,000,000	450,000,000

Prepared Statement of the Salt River Pima-Maricopa Indian Community and the City of Mesa, Arizona

Chairman Domenici, Ranking Member Reid, and distinguished members of the subcommittee, thank you for allowing us to testify on behalf of the Salt River Pima-Maricopa Indian Community (SRPMIC) and the City of Mesa in support of a fiscal year 2005 appropriation of $1.5 million for the Va Shly'ay Akimel, Arizona, project of the U.S. Army Corps of Engineers. This project, intended to restore a degraded

stretch of the Salt River in central Arizona, is critically important to the tribe, the City, and the region.

Mr. Chairman, because of this subcommittee's efforts, $800,000 was appropriated for the feasibility phase of the Va Shly'ay Akimel project in fiscal year 2004. We are extremely grateful for the subcommittee's ongoing support of the project. We respectfully request your continued support for this project in fiscal year 2005 with an appropriation of $1.5 million, which will initiate the pre-construction engineering and design portion (PED) of the project.

Like many projects of the U.S. Army Corps of Engineers, Va Shly'ay is drastically underfunded in the President's budget. Although the budget does include $349,000 for the project in fiscal year 2004, the Corps has a capability of $1.5 to initiate PED in the coming year. We hope that the subcommittee will provide this level of funding in order to contain costs and maintain an optimal project schedule.

SRPMIC and the City of Mesa fully recognize the importance of restoring the Salt River's environmental integrity. As a consequence, the tribe and City—the non-Federal sponsors of the project—remain committed to discharging the requisite cost-sharing obligations associated with the project. We would also note that, as far as we know, this project is the only one in the Nation featuring a joint cost-share agreement between an Indian tribe and a local community. This makes it a unique project of the Corps of Engineers. We have every reason to believe that this example of municipal-tribal cooperation could serve as a model for future joint projects of tribal communities and local governments.

In conclusion, it is critically important that this project remain on an optimal schedule. The Corps has expressed a maximum capability of $1.5 million to initiate PED on this project in fiscal year 2005. On behalf of the SRPMIC and the City of Mesa, we ask that you fully fund the Va Shly'ay Akimel project at $1.5 million in fiscal year 2005.

PREPARED STATEMENT OF THE SEMINOLE TRIBE OF FLORIDA

The Seminole Tribe of Florida is pleased to submit this statement regarding the fiscal year 2005 budget for the Army Corps of Engineers (Corps). The Tribe asks that Congress provide $27,000,000 in the Corps' construction budget for critical projects in the South Florida Ecosystem, as authorized in section 528 of the Water Resources Development Act (WRDA) of 1996, and amended by section 208 of WRDA 1999. The critical projects program is tasked with completing ten projects, one of which is complete, and the remaining nine either completing planning and design or construction. The Seminole Tribe has partnered with the Corps to design, build, and operate the critical project on the Big Cypress Reservation, located in the western basins of the Everglades, directly north of the Big Cypress National Preserve.

On January 7, 2000, the Tribe and the Corps signed a Project Coordination Agreement for the Big Cypress Reservation's critical project. The Tribe's critical project includes a complex water conservation plan and a canal that transverses the Reservation. In signing this Agreement, the Tribe, as the local sponsor, committed to funding half of the cost of this approximately $50 million project. The project is divided into two phases; construction of the first phase is complete and planning and design on the second phase will be complete in a few months, allowing construction to begin in fiscal year 2005.

The Seminole Tribe's project addresses the environmental degradation wrought by decades of Federal flood control construction and polluted urban and other agricultural runoff. The interrupted sheet flow and hydroperiod have stressed native species and encouraged the spread of exotic species. Nutrient-laden runoff has supported the rapid spread of cattails, which choke out the periphyton algae mat and sawgrass necessary for the success of the wet/dry cycle that supports the wildlife of the Everglades. This is designed to mitigate the degradation the ecosystem has suffered through decades of flood control projects and urban and agricultural use and ultimately to restore the Nation's largest wetlands to a healthy state.

The Seminole Tribe's critical project provides for the design and construction of flood control, storage, and treatment facilities on the western half of the Big Cypress reservation with other conveyance facilities on the eastern side. The project elements include canal and pump conveyance systems, including major canal bypass structures, irrigation storage cells, and water quality polishing areas. This project will enable the Tribe to meet targets for low phosphorus concentrations, as well as to convey and store irrigation water and improve flood control. It will also provide an important public benefit: a new system to convey excess water from the western basins to the Big Cypress National Preserve, where water is vitally needed for rehydration and restoration of natural systems within the Preserve.

Improving the water quality of the basins feeding into the Big Cypress National Preserve and the Everglades National Park is vital to restoring the Everglades for future generations. Congress has acknowledged this need through the passage of the last three Water Resource Development Acts. This committee has consistently shown its support through appropriating requested amounts over the last seven fiscal years. By continuing to grant this appropriation request for critical project funding, the Federal Government will take another substantive step towards improving the quality of the surface water that flows over the Big Cypress Reservation and on into the delicate Everglades ecosystem. Such responsible action with regard to the Big Cypress Reservation, which is Federal land held in trust for the Tribe, will send a clear message that the Federal Government is committed to Everglades restoration and the Tribe's stewardship of its land.

Completion of the critical project requires a substantial commitment from the Tribe, including the dedication of over 2,400 acres of land for water management improvements and meeting a 50/50 cost share. The Tribe has completed the first phase of construction with the main conveyance canal. As the Tribe moves forward with its contribution to the restoration of the South Florida ecosystem, increasing Federal financial assistance will be needed as well.

The Tribe has demonstrated its economic commitment to the Everglades Restoration effort; the Tribe is asking the Federal Government to also participate in that effort. This effort benefits not just the Seminole Tribe, but all Floridians who depend on a reliable supply of clean, fresh water flowing out of the Everglades, and all Americans whose lives are enriched by this unique national treasure.

Thank you for the opportunity to present the request of the Seminole Tribe of Florida. The Tribe will provide additional information upon request.

PREPARED STATEMENT OF VOLUSIA COUNTY, FLORIDA

On behalf of our citizens and fishermen, Volusia County, Florida requests that the Energy & Water Subcommittee appropriate:

—$3,500,000 in fiscal year 2005 to the U.S. Army Corps of Engineers' (Corps) Construction account to fund an 1,000 foot seaward extension of the South Jetty of the Ponce DeLeon Inlet. The South Jetty seaward extension, along with the North Jetty landward extension funded in fiscal years 1999, 2000, and 2002 and completed in June 2003, is essential for safe inlet navigation and protection of the Federal investment in the Inlet channel.

—$3,000,000 in fiscal year 2005 to the Corps' Operations and Maintenance account to fund the removal of 300,000 cubic yards of sand from the North Cut of the Ponce DeLeon Inlet to provide for safe navigation until the South Jetty construction is complete.

—$500,000 in fiscal year 2005 to the Corps' General Investigations account to fund the feasibility study for the Volusia County Shore Protection project for the shore protection of 49.5 miles of Volusia County beaches.

A more detailed case history and description of the situation and projects follow below.

PONCE DELEON INLET

Ponce DeLeon Inlet is located on the east coast of Florida, about 10 miles south of the City of Daytona Beach in Volusia County. The Inlet is a natural harbor connecting the Atlantic Ocean with the Halifax River and Indian Rivers and the Atlantic Intra-coastal Waterway (AICW). Ponce DeLeon Inlet provides the sole ocean access to all of Volusia County and is the only stabilized inlet on the east coast of Florida between St. Augustine and Cape Canaveral, a distance of 112 miles. Fishing parties and shrimp and commercial fisherman bound for New Smyrna Beach or Daytona Beach use the Inlet, as well as others entering for anchorage. Nearby fisheries enhanced by the County's artificial reef program attract both commercial and sport fisherman. Head boat operators also provide trips to view marine life and space shuttle launches from Cape Canaveral. In addition, U.S. Coast Guard Lifeboat Station Ponce is located immediately inside Ponce de Leon Inlet and provides navigation safety and security for boaters, fisherman, divers and sailors from the entire east central Florida region.

Unfortunately, the Inlet is highly unstable and, despite numerous navigation projects, continues to threaten safe passage for the charter boat operators and commercial fisherman who rely on the access it provides for their livelihood. Recreational boaters and Coast Guard operators are also at risk passing through this unstable inlet. The shoaling of the channels in the Inlet so restricts dependable navigation that the Coast Guard no longer marks the north channel in order to dis-

courage its use. The Coast Guard continues to move the south and entrance channel markers and provides warnings that local knowledge and extreme caution must be used in navigating the inlet. More seriously, the Coast Guard search and rescue data for fiscal years 1981–1995 show that 20 deaths have resulted from vessels capsizing in the Inlet, the direct result of the Inlet's instability. One hundred forty seven vessels capsized and 496 vessels ran aground in the Inlet during the same period.

The Federal interest in navigation through the Ponce DeLeon Inlet dates back to 1884 and continues to the present. The existing navigation project was authorized by the Rivers and Harbors Act of 1965. The construction authorized by that Act, including ocean jetties on the north and south sides of the Inlet, was completed in July 1972. It became evident soon after completion of the authorized project that the project did not bring stability to the Inlet. A strong northeaster in February 1973 created a breach between the western end of the North Jetty and the sand spit the Jetty was connected to inside the Inlet. The breach allowed schoaling to occur that was serious enough to close boat yards and require almost $2 million worth of repairs, including extending the western end of the North Jetty.

Under the existing maintenance agreement entered into upon completion of the construction, the Corps periodically performs maintenance on the Inlet. Maintenance projects have included several dredging efforts, adding stone sections to the south side of the North Jetty, extending the westward end of the North Jetty for the second time, and closing the North Jetty weir. Prior to the North Jetty project discussed below, the Corps' last maintenance was dredging, completed on the entrance channel in January 1990.

In fiscal year 1998, the Corps received a $3,500,000 appropriation for emergency maintenance on the North Jetty. Migration of the entrance channel undermined the North Jetty, seriously threatening its structural integrity. The fiscal year 1998 funds were used to construct a granite rock scour apron for the 500 to 600 feet of where the Jetty was undermined.

In fiscal year 1999, the Corps received $4,034,000 from the Operations and Maintenance account to extend the North Jetty of the Inlet landward by 800 feet. This maintenance project was completed in July 2002 to prevent the erosion that will cause outflanking of the North Jetty. Continued outflanking of the west end of the North Jetty could create a new inlet for the Halifax and Indian Rivers resulting in major changes to the Ponce DeLeon Inlet. The resultant shoaling of both the north and south channels, as well as changes to the entrance channel, would make passage through the inlet extremely dangerous and unpredictable.

In fiscal year 2000, the Corps received $7,696,000 in their Operations and Maintenance account for use in the Ponce DeLeon Inlet. This appropriation provided funding to continue the North Jetty project, funding for surveys designed to determine the scope of a new maintenance contract for the Ponce De Leon Inlet, and funding for a dredging project to address a minor maintenance issue under the existing maintenance contract.

In fiscal year 2001, the Corps received $46,000 in their Operations and Maintenance account for standard maintenance of the Ponce DeLeon Inlet.

In fiscal year 2002, Congress appropriated $2.032 million to the Corps' Operations and Maintenance account for completion of the North Jetty construction. The Corps completed construction of this project in July 2002.

In fiscal year 2003, Congress provided $1 million in the Corps' Construction account for commencement of the South Jetty oceanward extension, as authorized by WRDA 1999.

In fiscal year 2004, Congress provided $500,000 in the Corps' Construction account for construction of the South Jetty oceanward extension, as authorized by WRDA 1999.

For fiscal year 2005, Volusia County requests that the Corps receive $3.5 million for the balance of the Federal share of construction funds for the South Jetty oceanward extension. The project manager expects the South Jetty to be constructed in one fiscal year. The Corps anticipates that the construction of the Jetty extensions will help stabilize the Inlet and reduce future maintenance costs. In addition to creating a safer navigation environment, completion of the South Jetty, to complement the North Jetty, will save future Federal maintenance costs.

The Ponce DeLeon Inlet presents a serious engineering challenge, the success of which is measured in terms of human life and vessel damage. The existing project has failed to stabilize the Inlet. Extending the North Jetty was the first step toward correcting the failure and meeting the challenge. Full funding of the 1,000 foot oceanward extension of the South Jetty is the next critical step toward providing safe passage for the commercial and recreational boaters in Volusia County.

State agencies, including the Florida Inland Navigation District and the Florida Department of Environmental Protection agree and therefore have committed to assisting the County in meeting the local cost share. In addition, providing these funds at this time is likely to prevent the need for a much more substantial maintenance project in the near future.

In addition to the construction funding for the jetty projects to protect the Ponce DeLeon Inlet, the County also requests $3,000,000 be appropriated in the Corps' Operations and Maintenance account, for the Corps to remove 300,000 cubic yards of sand from the North Cut of the Ponce DeLeon Inlet. As discussed above, the North Jetty construction was completed in July 2002 and the South Jetty construction will begin this year. Maintenance dredging is needed until both jetties are constructed.

Until both the North and South Jetty projects are operational, sand continues to shoal in the navigation channels of the Ponce DeLeon Inlet. The shoaling creates unsafe navigation conditions, thereby impeding commercial and recreational traffic. Removing 300,000 cubic feet of sand from the North Cut of the Inlet will greatly improve safe navigation. Finally, this effort is supported locally, as evidenced by the County's grant of $395,000 to the Corps for emergency dredging of the North Cut in fiscal year 2003.

VOLUSIA COUNTY BEACH PROTECTION PROJECT

In August 1991, the Corps of Engineers completed a favorable reconnaissance report for the shore protection study to address the critical erosion along the County's 49.5 miles of ocean shoreline, as authorized by the House Transportation and Infrastructure Committee in September 1988. The County declined to act as the non-Federal sponsor for the feasibility study at that time. The Corps modified the 1991 reconnaissance study in 1994. As a result of heavy damage to the County's shoreline sustained during the 1999 hurricane season, the County recognized the critical need to address the growing impact of the storm-induced erosion. The Corps will need to modify the earlier studies. A new reconnaissance study for the Volusia County Shore Protection project (formerly known as the Daytona Beach Shores project) was authorized by a resolution adopted by the House Transportation and Infrastructure Committee on February 16, 2000. In fiscal year 2003, Congress provided the Corps with $100,000 to complete the reconnaissance study. The Corps has completed the draft reconnaissance study, which is currently undergoing final review and is expected to be completed during fiscal year 2004. The draft reconnaissance study recommends further action. A feasibility study is the next step.

The feasibility study will include, among other things, plan formulation, surveys, geotechnical analysis, beach modeling, and environmental analysis for Volusia County's 49.5 mile shoreline. The Corps estimates the cost of the feasibility study to be $3 million and expects to complete the study in 3 to 4 years. The cost share for the feasibility study is 50 percent Federal and 50 percent non-Federal. In fiscal year 2005, the Corps will spend $1 million for the Volusia County Shore Protection Project, of which the Federal share is $500,000.

While previous studies to address beach erosion were not acceptable to the County as the local sponsor, the County seeks the Corps' assistance now to address continuing erosion damage initiated during the 1999 hurricane season. The County recognizes its dire need in having its beaches renewed, preserved, and protected.

Thank you for your consideration of this request.

PREPARED STATEMENT OF THE NATIONAL MINING ASSOCIATION

The National Mining Association's (NMA) membership includes companies engaged in the production of coal, metallic ores, nonmetallic minerals, and in manufacturing mining machinery and equipment. The transportation of coal and minerals to domestic and international markets utilizes our Nation's inland waterways system, Great Lakes, coastal shipping lanes, and harbors and shipping channels at deep draft inland and coastal ports.

NMA believes that a strong transportation network comprised of our highways, rails, inland waterways and ports is critical to the economic growth, security and competitiveness of the United States. According to the U.S. Army Corps of Engineers Waterborne Commerce Statistics of 2002, approximately 2.34 billion tons of commerce moved in the U.S. marine system (inland waterways, Great Lakes, coastal and deep-draft ports). Of that total, approximately 1.02 billion tons were domestic movements with coal comprising approximately 227 million tons or 22 percent of all commodities. Of the 227 million tons of coal, 175 million tons were carried on the inland and intracoastal waterways, 19.4 million tons on the Great Lakes and the remainder moved in coastwise and intraport shipments. On the Ohio River system

and its tributaries, coal movements totaled 159 million tons or 56 percent of all the traffic. Coal moved to power plants along the system and to power plants in 8 States outside of the Ohio basin. In addition, 48.7 million tons of coal was exported in 2002.

Iron ore, phosphate rock, and other minerals also utilize the inland waterways system. In 2002, 73.1 million tons of iron ore moved on the system. Of the total, 52.4 million tons moved domestically with 46.8 million tons moved on the Great Lakes and 5.6 million tons on the inland system. More than 6.2 million tons of phosphate rock moved on the waterways system with 3.5 million tons by coastwise movements.

NMA is very concerned that the proposed fiscal year 2005 budget for the Corps of Engineers does not provide sufficient funding to keep critical navigation projects on schedule, allow for the start of new projects, and address the maintenance backlog for existing navigation projects. The 25,000 miles of waterways and harbor channels are a major component of the transportation infrastructure system in the United States. The Nation's waterways system is an efficient and timely method to move commerce throughout the United States. It currently moves 2.4 billion tons of cargo annually.

Each year, barges on the waterways handle cargo equal to 40 million trucks or 10 million railcars. Without the waterways system, the Nation's already overcrowded and in some cases gridlocked highways, would not be able to be used. In addition, there would be a significant increase in air and noise pollution from the additional trucks on the roads. A river barge with a 1,500-ton capacity can transport up to 58 large trucks or 15 large jumbo rail hopper cars worth of cargo. Barge transport also saves shippers on average $11 per ton, compared to shipping the same amount of cargo by truck or rail.

In addition, the waterways system is critical to our Nation's national defense. Manufacturing and industrial facilities providing the military with needed weapons and materials are located near the Nation's water system. Many of our Nation's large commercial ports also serve as the home to the U.S. Navy's fleets.

NMA is concerned that the full amount appropriated by Congress to a specific project is not always what is actually available to a project for a specified fiscal year. For example, in fiscal year 2004, the Kentucky Lock was appropriated $29.9 million but the project actually received $23.1 million for fiscal year 2004. Because of the reduced funding levels, projects are taking longer and the benefits are being lost to shippers and to the U.S. economy. NMA requests that projects receive the full amount appropriated in a given fiscal year.

NMA continues to be very concerned with the surplus in the Inland Waterways Trust Fund (IWTF). One-half of the lock and dam construction and major rehabilitation funds come from the Inland Waterways Trust Fund (IWTF), which receives 20 cents from a 24.3 cents per gallon tax on the fuel used for inland waterways barge operations. The General Treasury receives the remaining 4.3 cents. Commercial users are the only beneficiaries of the inland waterways system who pay a fuel tax, while beneficiaries who receive flood control, water supply, recreational and other benefits do not contribute to the construction or maintenance of the system providing these benefits. For the last 12 years, the Federal Government has not allocated sufficient funds to these projects to keep up with revenues flowing into the IWTF. The result as of September 30, 2001 is a Fund surplus of approximately $392 million according to The Bureau of Public Debt, U.S. Department of the Treasury. A constraint on the funding for construction and rehabilitation projects has not been the revenue collected from the fuel tax but the limited level of funding appropriated from the IWTF. It is time to seriously address the backlog and to appropriate funds to finish the projects underway.

NMA reviewed the proposed fiscal year 2005 request for the U.S. Army Corps of Engineers and the Civil Works Program and has the following general recommendations.

—A minimum of $5.5 billion should be appropriated in fiscal year 2005 for the Civil Works Program. This level balances the need to address the significant project backlog and the capability of the Corps with our Nation's needs for jobs, economic growth, homeland security and national defense.

—A level of $150 million should be appropriated from the Inland Waterways Trust Fund to be matched by an equal expenditure from the general fund for the construction and major rehabilitation of locks and dams on the inland waterways system. By maintaining this level of appropriations for the next 10 years, the surplus in the Trust Fund can be reduced to more appropriate levels and timely completion of these required navigation projects will accelerate the national economic benefits from the projects and minimize cost increases.

—The fiscal year 2005 appropriations for the Corps' General Investigations account should be increased to $200 million. The proposed fiscal year 2005 level of $90.5 million will not permit the Corps to undertake any new studies. These studies are critical to ascertaining and developing future projects. It takes time to complete these projects and while there are issues related to new construction starts, projects should be in the pipeline and ready should funds be available.

—The fiscal year 2005 proposed funding in the amount of $1.926 billion for the Corps' Operations and Maintenance functions should be increased. At the beginning of fiscal year 2004, it was estimated that critical maintenance backlog was $1.01 billion. This is a $127 million or 12.7 increase from the previous year. It is anticipated the backlog will grow to $1.1 billion under the administration's fiscal year 2005 request. This increase is of great concern given that the backlog was approximately $200 million in fiscal year 1998. Currently, more than half of the locks and dams on the system are 50 years older or more. With the funding constraints for new construction and rehabilitation projects, it is imperative that existing locks and dams be maintained. Delaying necessary maintenance impacts the ability to move commerce efficiently, exasperates further deterioration and accelerates the need for major rehabilitation and possibly at higher costs than necessary.

The problems of an aging system were exemplified at Greenup Locks and Dam when significant problems were encountered during ongoing repairs to the gates on the main chamber. What began on September 8, 2004 as a scheduled 3-week outage lasted 54 days and cost the navigation industry an estimated $14 million in lost revenue due to significant delays. For Dayton Power and Light, the delays cost $7 million to find alternative rail transportation for its coal.

NMA'S FISCAL YEAR 2005 PROJECT APPROPRIATIONS LEVELS NEEDING ADDITIONAL FUNDS

Construction and Rehabilitation Projects

Olmsted Locks & Dam—Fiscal Year 2005 Request: $75 million, Efficient Funding Level: $110 million

According to the U.S. Army Corps of Engineers Waterborne Commerce Statistics for 2001, more tonnage passes through this point than any other place in the inland waterways system with 96.7 million tons valued at $20 billion in 2001. Coal comprises 25 percent of the tonnage, moving to more than 50 power plants on the Ohio River System and 17 power plants in eight States on the Upper or Lower Mississippi River. The total project cost is $1.40 billion with a balance of $800 million. The project is 6 years behind schedule with lost benefits of $2.7 billion. If the project continues to be funded at constrained levels and not at efficient funding levels, the project could be delayed another 8 years with a total of loss of $7.2 billion in navigation benefits.

McAlpine Locks—Fiscal Year 2005 Request: $58 million, Efficient Funding Level: $120 million

According to the U.S. Army Corps of Engineers Waterborne Commerce Statistics for 2001, more than 55 million tons of commodities valued at nearly $11.7 billion were shipped through the locks. With 20 million tons, coal was the leading commodity comprising 37 percent of all shipments. Thirteen million tons went to 30 power plants in 8 States. The total project cost is $350 million with a balance of $241 million. The project is 5 years behind schedule with lost benefits of $228 million. If the project continues to be funded at constrained levels, it could be delayed another 5 years (2012) resulting in an additional loss of $163 million in navigation benefits.

Locks & Dams 2, 3 and 4—Fiscal Year 2005 Request: $31 million, Efficient Funding Level: $60 million

According to the U.S. Army Corps of Engineers Waterborne Commerce Statistics for 2001, almost 22.2 million tons of commodities valued at $1.7 billion where shipped through any or all of the locks. Coal comprised 86 percent of the tonnage with 19.2 million tons of coal moving through the locks. More than 7.2 million tons went to 23 power plants in 7 States. The value of the coal was almost $1.6 billion. The total cost is $750 million with a balance of $500 million. The project is 9 years behind schedule resulting in $870 million in lost navigation benefits. If the project continues to be funded at constrained levels, the project could be further delayed to 2020 and a total of $1.2 billion in lost navigation benefits.

Marmet Locks & Dams—Fiscal Year 2005 Request: $50 million, Efficient Funding Level: $75 million

The U.S. Army Corps of Engineers Waterborne Commerce Statistic for 2001 indicate 17.1 million tons of commodities valued at $802 million were shipped through the locks. Coal shipments comprised 95 percent of all shipments with 16.1 million tons moving through Marmet. The project cost is $333 with a 2010 completion date (originally 2007). There is a balance of $219 million. Marmet has already experienced a 2-year completion delay and continued constrained funding levels, the project could be delayed another 5 years at loss of $201 million in navigation benefits.

Kentucky Lock—Fiscal Year 2005 Request: $25 million, Efficient Funding Level: $55 million

The U.S. Army Corps of Engineers Waterborne Commerce Statistics for 2001 indicate 35 million tons of commodities valued at $6.2 billion moved through the lock. Coal was the number one commodity with 12.6 million tons or 36 percent of all shipments. The value was almost $500 million. The coal moved to 9 power plants in the south including several owned by the Tennessee Valley Authority. Total project cost is $642 million. The project is already 5 years behind schedule. If the project continues to be funded at constrained levels then the project could be delayed until 2025 with $780 million in lost navigation benefits.

Preconstruction Engineering and Design

J.T. Myers Locks & Dam—Fiscal Year 2005 Request: $700,000, Efficient Funding Level: $2 million.

Surveys

Emsworth, Dashields & Montgomery Lock and Dams Fiscal Year 2005 Request: $3.1, Efficient Funding Level: $1.5 million.

CONCLUSION

NMA is very concerned that the Nation's inland waterways system is not receiving sufficient funds in the fiscal year 2005 budget to keep critical navigation projects on schedule and to address the very large maintenance backlog for existing navigation projects. As a country, we cannot afford to neglect the continued improvement and maintenance of our Federal navigation system. Failure to continue our investment and commitment to all aspects of our marine system will have serious long-term consequences for our Nation's economic health, safety and security.

PREPARED STATEMENT OF THE BOARD OF COMMISSIONERS OF THE PONTCHARTRAIN LEVEE DISTRICT

FLOOD CONTROL, NAVIGATION, HURRICANE PROTECTION AND WATER RESOURCE PROJECTS

Project	Recommended
General Investigations:	
Amite River & Tributaries Bayou Manchac, LA	$800,000
West Shore, Lake Pontchartrain & Vicinity, LA, St. John the Baptist Parish	400,000
General Construction:	
Lake Pontchartrain & Vicinity, LA (Hurricane Protection)	22,000,000

COMMENTS ON PROJECTS

Lake Pontchartrain & Vicinity, LA

Around Lake Pontchartrain there are several segments under construction with this major title. All segments are nearing completion except St. Charles Parish Hurricane Protection of which the local sponsor is the Pontchartrain Levee District. The St. Charles project has 10 miles of levee, 5 major floodgate structures and a construction cost of $100 million. If Congress provides maximum funding capability for 2004 and 2005, then the first lift levees would be complete and much of the second lift and all structures can be completed. A closed system would be complete, except for some second lift levees, by the 2005 hurricane season. Of the recommended appropriations requested above for Lake Pontchartrain and Vicinity, about $6,000,000 could be scheduled for the St. Charles Parish segment. Any reduction in the recommended budget would certainly reduce the amount that would be assigned to St.

Charles Parish and result in a disappointing slow down. Non-Federal funds for participation are in place now.

West Shore, Lake Pontchartrain & Vicinity, LA, St. John the Baptist Parish

This segment is currently under study with the Pontchartrain Levee District acting as local sponsor. Preliminary indications are the hurricane protection project will have 18 miles of levee and 3 drainage pump stations. The Feasibility Study should be completed in fiscal year 2004. Protection will be provided from the west levee of the Bonnet Carre Floodway westward to the LaPlace area, and will include protection of portions of I–10, I–55 and U.S. 51, designated hurricane evacuations routes for this area and the New Orleans Metropolitan area. This intersection has been previously flooded from storm tides.

Amite River & Tributaries, Bayou Manchac, LA

This investigation is being made as a result of a number of homes being flooded from rains produced by tropical storm Allison in late May and early June 2001 along the Bayou Manchac Watershed. A few homes remained flooded for as much as a month or more because of very slow receding waters. A highly sensitive area of Spanish Lake and surrounding swamp also remained flooded for an extensive period which caused extensive ecosystem damages. The affected area covers portions of Ascension, Iberville and East Baton Rouge parishes and all have joined with the Pontchartrain Levee District to provide non-Federal funding with the Levee District acting as local sponsor.

COMMENTS

The Pontchartrain Levee District has full realization of the necessity of keeping these subcommittees advised of current and future needs for Federal monetary support on vital items of the MR&T Flood Control Project. Beginning in 1995 the subcommittees refused to give audience to our pleadings. This year no oral testimony will be heard. Again, this is a great travesty of justice. Such actions seriously erode the partnership that has been built between Congress, the Corps of Engineers and local sponsors. We trust this pattern will revert back to the practice of hearing our delegation.

CONCLUSION

The Board of Commissioners, Pontchartrain Levee District, compliments the Subcommittees on Energy and Water Development for its keen understanding of real needs for the MR&T Flood Control Project along with hurricane protection and efficient, alert actions taken to appropriate funds for the many complex requirements. We endorse recommendations presented by the Association of Levee Boards of Louisiana, Department of Transportation and Development, Mississippi Valley Flood Control Association and Red River Valley Association. The Board of Commissioners desires our statement be made a part of the record.

PREPARED STATEMENT OF THE BOARD OF COMMISSIONERS OF THE PONTCHARTRAIN LEVEE DISTRICT

MISSISSIPPI RIVER & TRIBUTARIES PROJECT

Project	Recommended
Mississippi River & Tributaries: Flood Control Project	$435,000,000

COMMENTS ON PROJECTS

Mississippi River & Tributaries Flood Control Project

History.—The Mississippi River and Tributaries Project (MR&T) was authorized following the Record Flood of 1927 that inundated some 26,000 square miles of the fertile and productive land in the Alluvial Valley of the Mississippi River, left 700,000 people homeless, stopped all East/West Commerce and adversely affected both the Economy and Environment of the entire Nation.

The MR&T Project has prevented over $180 billion in flood damages for an investment of less that $70 billion and in addition the Nation derives about $900 million in Navigation Benefits each year due to the MR&T.

The Project is not complete and we cannot pass another event as great as the 1927 Flood safety to the Gulf, this is an Historical Event—not the much greater Project Flood.

Levees.—The Mississippi River and Tributaries Flood Control Project has been under construction as an authorized project for about 76 years, and yet there are a number of segments not yet complete. Although most levees are complete to grade and section in south Louisiana and extensive reach from the Old River Control Structure in lower Concordia Parish upstream to the Lake Providence area is still below grade. Should these levees be overtopped during a major flood, those people in south Louisiana know full well those flood waters are going to head southward. Other items not yet complete are slope protection and crown surfacing. It is recommended that a minimum of $50,645,000 be appropriated for Mississippi River Levees.

Channel.—The second item of indispensable importance to the Pontchartrain Levee District and the State of Louisiana is Channel Improvements. Main line levees must be protected from caving banks throughout this lower river reach where extremely narrow battures are the last line of defense against levee crevasses and failures. If caving banks are not controlled the only answer is "setback". Simply stated there is no room remaining for levee setbacks in the Pontchartrain Levee District. Revetment construction must be annually funded to prevent levee failures, land losses and relocations. This item also benefits the 55-foot depth navigation channel. The Pontchartrain Levee District recommends at least $44,017,000 be appropriated for fiscal year 2004 for Mississippi River Channel Improvements.

Total Appropriation Request for MR&T.—The $435 million we are requesting for fiscal year 2004 appropriations for the MR&T Project is the minimum amount we consider necessary to continue with vital on-going construction work and to do the barest amount of maintenance work that is required to prevent further deterioration of the Federal investment already made to our Flood Control and Navigation Work and to continue to work of restoring and protecting our natural environmental including providing for adequate water supply. The total appropriation we are requesting is attached.

Opposition.—We strongly oppose the administration's recommendation in its fiscal year 2004 budget submission to use funds from the INLAND WATERWAYS TRUST FUND to pay for a part of the Operations and Maintenance Cost of the Inland Waterways. The Trust Fund was established in 1978 to make available monies for Construction and Rehabilitation for navigation on the Inland and Coastal Waterways, not for Operations and Maintenance. If Congress allows this recommendation the Trust Fund would be drained in a short period of time and the 50 percent share to pay for Construction for Navigation would not be available unless the tax on fuel used by tow-boats was raised, some day doubled, which would make it extremely difficult for barge operators to continue their operations and making it more expensive for farmers to get their products to market and for the public to realize savings in transportation cost for bulk commodities such as fuel, oil, gasoline and other items shipped by barge.

We are also strongly opposed to any action that would transfer all or any part of the U.S. Army, Corps of Engineers Civil Works mission to other agencies or department of the Federal Government. It has been reported that the administration would desire to transfer the Corps NAVIGATION program to the Department of Transportation, FLOOD CONTROL AND ENVIRONMENTAL RESTORATION to the Department of the Interior, and the REGULATORY PROGRAMS to EPA. The U.S., Army, Corps of Engineers has rendered extremely valuable services to this Nation since 1802 (over 200 years). The Corps has created an Inland Waterways System that is the envy of the rest of the world. This commercial transportation system is critical to the Nation's economy and environmental well-being and part of this system is used to deploy military equipment in support of the war on terrorism. The Corps has also been in the forefront to provide Flood Control and Environmental Restoration Projects, they have also supported our troops in every armed conflict this Nation has engaged in. It would be a serious mistake of Nation-wide impact to spread the functions of the Corps into several parts and across the Federal bureaucracy. This Nation would lose a wonderful asset that we have enjoyed for many, many years.

We are strongly opposed to any proposal to "out-source" or contract-out any of the present positions in the Corps of Engineers' Civil Works function. The Secretary of the Army has proposed that 90 percent of all Corps of Engineers' positions be contracted out, this would eliminate approximately 32,000 current employees and make it almost impossible to continue with our work.

Comments

The Pontchartrain Levee District has full realization of the necessity of keeping these subcommittees advised of current and future needs for Federal monetary support on vital items of the MR&T Flood Control Project. Beginning in 1995 the subcommittees refused to give audience to the Mississippi Valley Flood Control Association. This year no oral testimony will be heard. Again, this is a great travesty of justice. Such actions seriously erode the partnership that has been built between Congress, the Corps of Engineers and local sponsors.

We trust that this pattern will revert back to the 63 year practice of hearing our delegation.

Conclusion

The Board of Commissioners, Pontchartrain Levee District, compliments the Subcommittees on Energy and Water Development for its keen understanding of real needs for the MR&T Flood Control Project along with Hurricane Protection and efficient, alert actions taken to appropriate funds for the many complex requirements. We endorse recommendations presented by the Association of Levee Boards of Louisiana, Department of Transportation and Development, Mississippi Valley Flood Control Association and Red River Valley Association. The Board of Commissioners desires our statement be made a part of the record.

PREPARED STATEMENT OF THE RED RIVER VALLEY ASSOCIATION

Mr. Chairman and members of the committee, I am Wayne Dowd, and pleased to represent the Red River Valley Association as its President. Our organization was founded in 1925 with the express purpose of uniting the Citizens of Arkansas, Louisiana, Oklahoma and Texas to develop the land and water resources of the Red River Basin.

The Resolutions contained herein were adopted by the Association during its 79th Annual Meeting in Bossier City, Louisiana on February 19, 2004, and represent the combined concerns of the citizens of the Red River Basin area as they pertain to the goals of the Association.

The President's budget included $4.215 billion for civil works programs, which is $700 million (14.3 percent) less than what the Corps expended in fiscal year 2004 ($4.905 million). Again, the Corps took the biggest reduction than any of the other major Federal agencies. This does not come close to the real needs of our Nation. A more realistic funding level to meet the requirements for continuing the existing needs of the civil works programs is $5.5 billion in fiscal year 2005. The traditional programs, inland waterways and flood protection remain at the low, unacceptable level as in past years. These projects are the backbone to our Nation's infrastructure for waterways, flood control and water supply. We remind you that civil works projects are a true "jobs program" in that 100 percent of project construction is contracted to the private sector, as is much of the architect and engineer work. Not only do these funds provide jobs, but provide economic development opportunities for our communities to grow and prosper.

We are very concerned with the way in which the administration has determined what they term "low use waterways". Included in the fiscal year 2005 Civil Works Budget, published February 2004, is a table indicating "net benefits/current costs" and "remaining benefits/remaining costs". The J. Bennett Johnston Waterway, LA is shown at the bottom of the table with an unfavorable ratio. Nowhere in the document do they explain the criteria used for these ratios. This is the criterion used to justify the priorities to fund waterway projects and we do not agree with it.

If they are using "ton-miles", as we suspect, this is just a small factor of determining the success of a waterway. Ton-miles is simply the tons moved the length of the waterway. It does not give credit to the waterway for the miles moved to the final destination, for outbound cargo, or origin, for inbound cargo. Just using tonnage moved on a waterway neglects the main benefit that justified the project, transportation cost savings. Currently there is no analysis to consider "water compelled rates" (competition with rail). We know that there are industries not using our waterway because the rail rates dropped, to match the waterborne rates, the same year our waterway became operational. If our waterway were discontinued the rail rates would increase. Many industries have experienced great transportation savings without using the waterway.

The main problem is that there is no post-project evaluation for navigation projects. We support the development of such an evaluation and volunteer our waterway and our efforts to develop one. We request that both Houses of Congress direct that this be accomplished. The Corps of Engineers should take the lead to de-

velop a true evaluation that considers all benefits of a waterway. We also believe any evaluation adopted must have input from and be validated by the administration, Congress and industry.

The current criteria used to prioritize funding for projects, both Construction General and Operations and Maintenance, is incomplete and inaccurate. Too much money has been expended to use an evaluation that is unfair and disregards the true benefits realized from these waterway projects.

We do not support any efforts to increase the benefit to cost ratio for projects above 1.0 and we do not support increasing the local sponsor's cost sharing requirements. This is not "Corps reform," it is an initiative to eliminate the civil works program. We do support true reform that would make civil works projects less expensive and faster to complete. Corps reform should make the Corps of Engineers more efficient, less expensive and faster in the execution of civil works studies and completion of projects, not eliminate the program.

I would now like to comment on our specific requests for the future economic well being of the citizens residing in the four-State Red River Basin regions.

Navigation.—The J. Bennett Johnston Waterway is living up to the expectations of the benefits projected. We are extremely proud of our public ports, municipalities and State agencies that have created this success. The four public ports had a 20 percent increase in tonnage from calendar year 2002 to calendar year 2003. New opportunities were announced in calendar year 2003 at each of the ports, which will further increase annual tonnage. You are reminded that the Waterway is not complete, 6 percent remains to be constructed, $118 million. We appreciate Congress's appropriation level in fiscal year 2004 of $10.4 million, however, the President's fiscal year 2005 budget drastically cuts that to $4 million, which is unacceptable. There is a capability for $20 million of work, but we realistically must have a minimum of $10–15 million to keep the project moving toward completion.

The RRVA formed a Navigation Committee for industry, the Corps of Engineers and Coast Guard to partner in making our Waterway a success. In calendar year 2003 we succeeded in getting electronic charts completed and they are now in use. Permanent channel markers have also been completed. Both of these initiatives will provide additional aids to navigation necessary to insure safe and efficient navigation, especially during high water events, when commercial operations have ceased in past years.

Now that the J. Bennett Johnston Waterway is reliable year round we must address efficiency. Presently a 9-foot draft is authorized for the J. Bennett Johnston Waterway. Our Waterway feeds into the Mississippi River, Atchafalaya River and Gulf Inter-coastal Canal, which are all authorized at a 12-foot draft. A 12-foot draft would allow an additional one-third cargo capacity, per barge, which will greatly increase the efficiency of our Waterway and reduce transportation rates. This one action would have the greatest, positive impact to reduce rates to a competitive level that would bring more industries to use waterborne transportation. We request that the Corps conduct a reconnaissance study, to evaluate this proposal, at a cost of $100,000.

The feasibility study to continue navigation from Shreveport-Bossier City, Louisiana into the State of Arkansas will be completed in calendar year 2004. We appreciate that Congress appropriated adequate funding to complete this study. There is great optimism that the study will recommend a favorable project. This region of SW Arkansas and NE Texas continues to suffer major unemployment and this navigation project, although not the total solution, will help revitalize the economy. We request funding $400,000 to initiate planning, engineering and design, PED.

Bank Stabilization.—One of the most important, continuing programs, on the Red River is bank stabilization in Arkansas and North Louisiana. We must stop the loss of valuable farmland that erodes down the river and interferes with the navigation channel. In addition to the loss of farmland is the threat to public utilities such as roads, electric power lines and bridges; as well as increased dredging cost in the navigable waterway. These bank stabilization projects are compatible with subsequent navigation and we urge that they be continued in those locations designated by the Corps of Engineers to be the areas of highest priority. We appreciated the Congressional funding in fiscal year 2004 and request you fund this project at a level of $10 million in fiscal year 2005.

Flood Control.—You will recall that in 1990 major areas of northeast Texas, Southwest Arkansas and the entire length of the Red River in Louisiana were ravaged by the worst flooding to hit the region since 1945 and 1957. More than 700,000 acres were flooded with total damages estimated at $20.4 million. However, it could have been much worse. The Corps of Engineers estimates that without the flood control measure authorized by Congress over the past several decades an additional

1.3 million acres would have been flooded with an estimated $330 million in additional flood damage to agriculture and urban developments.

We continue to consider flood control a major objective and request you continue funding the levee rehabilitation projects ongoing in Arkansas. Five of eleven levee sections have been completed and brought to Federal standards. Appropriations of $4 million will construct two more levee sections in Lafayette County, AR.

The levees in Louisiana have been incorporated into the Federal system; however, they do not meet current safety standards. These levees do not have a gravel surface roadway, threatening their integrity during times of flooding. It is essential for personnel to traverse the levees during a flood to inspect them for problems. Without the gravel surface the vehicles used cause rutting which can create conditions for the levees to fail. A gravel surface will insure inspection personnel can check the levees during the saturated conditions of a flood. Funding has been appropriated and approximately 50 miles of levees in the Natchitoches Levee District will be completed this year. We request $2 million to continue this important project in other parishes.

Clean Water.—Nearly 3,500 tons of natural salts, primarily sodium chloride, enter the upper reaches of the Red River each day, rendering downstream waters unusable for most purposes. The Truscott Brine Lake project, which is located on the South Fork of the Wichita River in King and Knox Counties, Texas became operational in 1987. An independent panel of experts found that the project not only continues to perform beyond design expectations in providing cleaner water, but also has an exceptionally favorable cost benefit ratio. In fiscal year 1995 $16 million dollars was appropriated by the administration, to accelerate engineering design, real estate acquisition and initiate construction of the Crowell Brine Dam, Area VII and Area IX.

Due to a conflict over environmental issues, raised by the U.S. Fish and Wildlife Service, completion of the SFEIS was delayed pending further study to determine the extent of possible impacts to fish and wildlife, their habitats and biological communities along the Red River and Lake Texoma. In an effort to resolve these issues and insure that no harmful impact to the environment or ecosystems would result, a comprehensive environmental and ecological monitoring program was implemented. It evaluates the actual impacts of reducing chloride concentrations within the Red River watershed. This base line data is crucial to understanding the ecosystem of the Red River basin west of Lake Texoma and funding for this must continue.

The Assistant Secretary of the Army (Civil Works), in October 1998, agreed to support a re-evaluation of the Wichita River Basin tributary of the project. The re-evaluation report will be completed in fiscal year 2004. Completion of this project will reclaim Lake Kemp as a usable water source for the City of Wichita Falls and the region. This project will provide improved water quality throughout the four States of the Red River providing the opportunity to use surface water and reduce dependency on ground water. We request appropriations of $2,500,000 to continue this important environmental monitoring and to complete plans and specifications of the Wichita River control features.

Water Supply.—Northwest Texas has been overrun with non-native species of brush and mesquite. It now dominates millions of acres of rangelands and has negatively impacted water runoff. Studies have indicated that brush management could increase runoff by as much as 30 percent to 40 percent. This would be of great value in opportunities for more surface water use and less dependency on ground water. Other benefits include an ecological diversity of plant and animal species, range fire control and cattle production. A $100,000 reconnaissance study would determine if there is a Federal interest and what magnitude these benefits would be.

Lake Kemp, just west of Wichita Falls, TX, is a water supply for the needs of this region. Due to siltation the available storage of water has been impacted. A $750,000 reallocation study is requested to determine water distribution needs and raising the conservation pool. $375,000 is requested in fiscal year 2005 to initiate this 2-year study.

Operation & Maintenance.—We appreciate the support of your subcommittee to support navigation to Shreveport/Bossier City, which is now providing a catalyst to our industrial base, creating jobs and providing economic growth. We request that O&M funding levels remain at the expressed Corps capability to maintain a safe, reliable and efficient transportation system.

Our major project for O&M is the J. Bennett Johnston Waterway. From this project four public ports and three private terminals have been established. The tonnage at the public ports increased by 20 percent from calendar year 2002 to calendar year 2003. Even though we continue to show growth the administration continues to reduce our O&M budget and not include maintenance dredging. Without

dredging the Waterway would effectively close down terminating our ports and terminal. The President's budget included $10,600,000; however, a minimum of $14,000,000 is required to address our annual dredging needs and operational costs for the five locks and dams.

Full O&M capability levels are not only important for our Waterway project but for all our Corps projects and flood control lakes. The backlog of critical maintenance only becomes worse and more expensive with time. We urge you to appropriate funding to address this serious issue at the expressed full Corps capability. The "Summary of Fiscal Year 2004 Requests", following this testimony, lists our major O&M projects and the level needed to address this issue.

We are sincerely grateful to you for the past support you have provided our various projects. We hope that we can count on you again to fund our needs and complete the projects started that will help us diversify our economy and create the jobs so badly needed by our citizens. We have included a summary of our requests for easy reference.

Thank you for the opportunity to present this testimony and project details of the Red River Valley Association on behalf of the industries, organizations, municipalities and citizens we represent throughout the four-State Red River Valley Region. We believe that any Federal monies spent on civil work projects are truly investments in our future and will return several times the original investment in benefits that will accrue back to the Federal Government.

Grant Disclosure.—The Red River Valley Association has not received any Federal grant, sub grant or contract during the current fiscal year or either of the 2 previous fiscal years.

PREPARED STATEMENT OF THE CRESCENT CITY HARBOR DISTRICT

The Crescent City Harbor District is requesting $3 million in funding in the fiscal year 2005 Energy and Water Development appropriations bill. These funds are needed for maintenance dredging of our harbor and for completing our Dredging Materials Management Plan.

Dredging funds are critical for the future of our harbor. Crescent City has long been a key port for the landing of Pink shrimp, Dungeness crab, and groundfish. In 2001, commercial landings exceeded $6 million. In 2002, even with reduced fishing opportunities, our fleets landed over five and $500,000 worth of seafood. The most recent Dungeness crab season, from December 2003 until the present, very likely set a record for production and value. Although some groundfish and Salmon species are at relatively low levels, many others are abundant. We look forward to harvesting the sustainable yield of our natural resources once the weaker stocks are rebuilt. But we must dredge the harbor now to take advantage of these future opportunities.

Over the years our community has made a substantial investment in the harbor. Our major dock is called "Citizens Dock" because it was built entirely by local volunteers in 1950. Since then, we have built a modern boat basin, fish processing plants, and a superb vessel repair facility. Our harbor is the safest, most convenient harbor in Northern California for both recreational and commercial fishermen. But the economic viability of these facilities depends on dredging the harbor.

Currently we are in the midst of developing a master plan that will help identify and then implement new opportunities to diversify the economic base of our harbor. Both the City of Crescent City and the County of Del Norte are actively supporting our master plan efforts. We hope to identify several opportunities that will expand and revitalize our struggling local economy. But the success of our planning process depends on dredging the harbor.

All our efforts, investments, and plans will come to nothing if we cannot dredge our harbor. We look forward to working together to ensure that dredging funds are in place in next year's appropriations cycle so that our harbor can remain a key part of the economy of Del Norte County and Northern California.

LETTER FROM THE ARIZONA POWER AUTHORITY

Phoenix, Arizona, March 23, 2004.

Senate Subcommittee on Energy and Water Development,
126 Dirksen Senate Office Bldg., Washington, DC 20510.

Re: Increased security costs at Reclamation, Corps of Engineers and Western Area Power Administration facilities

DEAR CHAIRMAN DOMENICI AND RANKING MEMBER REID: Enclosed please find a copy of a resolution passed by the Arizona Power Authority Commission at its March meeting urging that increased costs for security at Hoover Dam and similar Federal projects be made non-reimbursable. Would you please enter this letter and the attached resolution in the record of your proceedings.

Sincerely,

JOSEPH W. MULHOLLAND,
Executive Director.

ARIZONA POWER AUTHORITY RESOLUTION NO. 04–2

SECURITY COSTS AT HOOVER DAM AND OTHER FEDERAL POWER FACILITIES

Hoover Dam, one of the most famous structures in the world, is one of a number of Federal dams that were developed to provide benefits to millions of citizens in the Western United States, including flood control, irrigation, municipal and industrial water supplies, hydropower generation, recreation and environmental benefits.

Ensuring the safety and security of Hoover Dam and other similar Federal projects is of vital importance to all of the citizens of the United States.

The Arizona Power Authority and other State agencies and consumer-owned electric utilities already shoulder the majority of the reimbursable cost of these facilities, including subsidizing irrigation features, environmental programs, and repayment of the Federal debt associated with construction, operation, maintenance and replacements.

NOW THEREFORE, BE IT RESOLVED:

That the Commissioners of the Arizona Power Authority call upon the Federal Government to ensure that all costs associated with the safety and security of Hoover Dam and similar Federal facilities in the aftermath of the events of September 11, 2001, be treated as nonreimbursable and that payment of such costs be funded through Federal appropriations as a national obligation.

UNANIMOUSLY ADOPTED by the Arizona Power Authority Commission this sixteenth day of March 2004.

PREPARED STATEMENT OF THE ST. FRANCIS LEVEE DISTRICT OF ARKANSAS

EXECUTIVE SUMMARY

The Mississippi Valley Flood Control Association Fiscal Year 2005 Civil Works Budget, Mississippi River and Tributaries Appropriations—Requesting Appropriations of $9,500,000 for Construction and $8,805,000 for Maintenance and Operation in the St. Francis Basin Project and a total of $450,000,000 for the Mississippi River and Tributaries Project.

BACKGROUND INFORMATION

My name is Rob Rash, and my home is in Marion, Arkansas, located on the West side of the Mississippi River and in the St. Francis Basin. I am the Chief Engineer of the St. Francis Levee District of Arkansas. Our District is the local cooperation organization for the Mississippi River and Tributaries Project and the St. Francis Basin Project in Northeast Arkansas. Our District is responsible for the operation and maintenance of 160 miles of Mississippi River Levee and 75 miles of St. Francis River Tributary Levee in Northeast Arkansas.

The St. Francis Basin is comprised of an area of approximately 7,550 square miles in Southeast Missouri and Northeast Arkansas. The basin extends from the foot of Commerce Hills near Cape Girardeau, Missouri to the mouth of the St. Francis River, 7 miles above Helena, Arkansas, a total distance of 235 miles. It is bordered on the east by the Mississippi River and on the West by the uplands of Bloomfield and Crowley's Ridge, having a maximum width of 53 miles. The Mississippi River and Tributaries Project and the St. Francis Basin Project provide critical flood protection to over 2,500 square miles in Northeast Arkansas alone. This basin's flood control system is the very lifeblood of our livelihood and prosperity. Our resources and infrastructure are allowing the St. Francis Basin and the Lower Mississippi Valley to develop into a major commercial and industrial area for this great Nation. The basin is quickly becoming a major steel and energy production area. The agriculture industry in Northeast Arkansas and the Lower Mississippi Valley continues to play an integral role in providing food and clothing for this Nation. This has all been made possible because Congress has long recognized that flood control in the Lower Mississippi Valley is a matter of national interest and security and has authorized the U.S. Army Corps of Engineers to implement a flood control system in

the Lower Mississippi Valley that is the envy of the civilized world. With the support of Congress over the years, we have continued to develop our flood control system in the Lower Mississippi Valley through the Mississippi River and Tributaries Project and for that we are extremely grateful.

Although, at the current level of project completion, there are areas in the Lower Mississippi Valley that are subject to major flooding on the Mississippi River. The level of funding that has been included in the President's Budget for the overall Mississippi River and Tributaries Project is not sufficient to adequately fund and maintain this project. The level of funding will require the citizens of the Lower Mississippi Valley to live needlessly in the threat of major flood devastation for the next 30 years. Timely project completion is of paramount importance to the citizens of the Lower Mississippi. Ten and Fifteen Mile Bayou improvements are just one of many construction projects necessary for flood relief in the St. Francis Basin. Ten and Fifteen Mile Bayou improvements were reauthorized by Congress through the Flood Control Act of 1928, as amended. Section 104 of the Consolidated Appropriation Act of 2001 modified the St. Francis Basin to expand the project boundaries to include Ten and Fifteen Mile Bayous and shall not be considered separable elements. Total project length of 38 miles includes Ten and Fifteen Mile Bayou, Ditch No. 15 and the 10 Mile Diversion Ditch that provide flood control for West Memphis and Vicinity. Without additional funds, construction would be delayed and West Memphis and Vicinity will continue to experience record flooding as seen December 17, 2001. West Memphis and Vicinity would experience immediate flood relief when the first item of construction is completed.

U.S. ARMY CORPS OF ENGINEERS

We are strongly opposed to any action that would transfer any part or the entire U.S. Army Corps of Engineers Civil Works mission to any other agency or department of the Federal Government. This agency has completed and overseen the Civil Works mission since its inception and has done quite well. Very few of our other governmental bodies can report and show a return of the taxpayer's investment as the Corps of Engineers can and has been doing for many years. It has been reported this administration desires to transfer the Corps Civil Works program to the Department of Transportation, the Flood Control and Environmental Restoration to the Department of Interior and the Regulatory Program to the Environmental Protection Agency. The U.S. Army Corps of Engineers has rendered extremely valuable services for this Nation for many years. The Corps has created an inland waterways system that is the envy of the rest of the world. Our Nation's commercial transportation system is critical to the Nation's economy and the environmental well being and part of this system is used to transport military equipment in support of the war on terrorism. The Corps has also been in the forefront to provide flood control and environmental restoration projects and have supported our troops at every armed conflict this Nation has engaged in. In our opinion, it will be a serious mistake and have a negative Nation-wide impact to spread the functions of the Corps into several parts across a Federal bureaucracy. This Nation would lose a wonderful asset and one we have enjoyed for over 200 years.

PROPOSED FUNDING

We support the amount of $450,000,000 requested by the Mississippi Valley Flood Control Association for use in the overall Mississippi River and Tributaries Project. This is the minimum amount that the Executive Committee of the Association feels is necessary to maintain a reasonable time line for completion of the overall Mississippi River and Tributaries Project. Also, the amounts that have been included in the President's Budget for the St. Francis Basin Project; construction, operation and maintenance have not been sufficient to fund critical projects. These declined amounts have resulted in a significant backlog of work within the St. Francis Basin. Therefore, our District is requesting additional capabilities of $9,500,000 for the St. Francis Basin Project construction funds and $8,805,000 for the St. Francis Basin operation and maintenance funds. The amounts requested for the St. Francis Basin Project are a part of the total amounts requested for the Mississippi River and Tributary Appropriations of the Civil Works Budget.

SUMMATION

As your subcommittee reviews the Civil Works Budget of Fiscal Year 2005 Appropriations for the Mississippi River and Tributaries Project, please consider the significance of this project to the Mississippi Valley and the Nation's economy and infrastructure. As always, I feel the subcommittee will give due regard to the needs of the Mississippi River Valley as it considers appropriations for the Mississippi

River and Tributaries Project. I would like to sincerely thank the subcommittee for its past and continued support of the Mississippi River and Tributaries Project.

PREPARED STATEMENT OF THE CITY OF VIRGINIA BEACH, VIRGINIA

I am writing on behalf of the City of Virginia Beach, Virginia, to request funding for three critical projects in the fiscal year 2005 Energy and Water Development Appropriations Bill. These three projects are:

—$7 million for the Virginia Beach Erosion Control and Hurricane Protection Project under the Construction account of the Army Corps of Engineers.
—$5.5 million for the City's Beach Renourishment for Sandbridge Beach under the Construction account of the Army Corps of Engineers.
—$1.25 million for the maintenance of Rudee Inlet under the Operation and Maintenance account of the Army Corps of Engineers.

VIRGINIA BEACH EROSION CONTROL AND HURRICANE PROTECTION PROJECT

Funding for this project was originally authorized under the Water Resources Development Act of 1992, and a Public Cooperation Agreement was reached and signed between the City and the Army Corps of Engineers in August 1993. The Water Resources Development Act of 1992 authorized $112 million for Virginia Beach Erosion Control and Hurricane Protection project for the City.

To date, the Federal Government has invested over $80 million for this project, matched by over $40 million in City funds. The results of the investment are a magnificent beach and seawall system, providing flood damage protection for the City's tourism industry infrastructure, which is important for the economic vitality of the City. The resulting beach is a showpiece for the region.

The project has proven it works, most recently after Hurricane Isabel. The 100-year hurricane event protection level in this project did indeed protect the whole commercial beach area with no sustainable damage. If this project had not been in place there would have been huge losses.

The Federal Government has a long-term (50-year) commitment with the City to maintain this project. However, in the President's Fiscal Year 2005 Budget no funding was included. The Federal and City government have spent too much money to build this project to let it all go to waste by not renourishing the beach with sand for protection. It is important to maintain this project, both to protect the investments already made and to minimize damages from future storm events.

BEACH RENOURISHMENT FOR SANDBRIDGE BEACH

The Sandbridge Beach Replenishment project was created after decades of flood damage from storm events. Once the beach was replenished, flooding due to storms significantly decreased. The most recent example of the project's benefit is the reduced damage from Hurricane Isabel. Our request of $5,500,000 is needed to honor the previous Federal commitments for the programmed maintenance of these projects.

The Sandbridge project was first approved by the Army Corps of Engineers and the North Atlantic Division of the Corps and subsequently authorized by Congress as a part of the Water Resources Development Act of 1992. The initial Public Cooperation Agreement was executed on February 3, 1998.

When the beach was first replenished in 1998, the City funded 100 percent of the total cost ($8.1 million). In 2002, the City covered 35 percent of the cost while the Federal Government covered the remaining 65 percent (total of $12 million). To date, the total amount of money invested (including City funds and funds from the Federal Government) is almost $20 million.

As with the Hurricane Protection Project, the President's Fiscal Year 2005 Budget did not include funding for the Sandbridge Beach project. It is imperative that the City be able to maintain this project in order to protect the large number of family homes and rental properties in the area and minimize overall damages from future storm events. Today, only due to past efforts, Sandbridge is a vital and vibrant public beach.

RUDEE INLET

Rudee Inlet, which was authorized under the Water Resources and Development Act of 1992, is a vital commercial and recreational resource to the City. But its special significance from a Federal standpoint is that it is used by the U.S. Navy Special Operations for training and equipment testing. The Army Corps of Engineers has been maintaining Rudee Inlet since 1991.

Over the years there has been funding included in the President's budget for Rudee Inlet, however there was no funding included in the President's fiscal year 2005 budget. It is important to ensure that the inlet receives proper funding because failure to continue the maintenance on Rudee Inlet would negatively impact the City and the U.S. Navy special operations.

It is vital to the City of Virginia Beach that the Federal Government maintain funding for these projects. All businesses located in the City, including hotels and restaurants, along with recreational activities, military operations, and tourism would be negatively impacted without the proper maintenance of these projects.

I appreciate your time and consideration regarding this matter.

PREPARED STATEMENT OF THE SANTA CLARA VALLEY WATER DISTRICT

SOUTH SAN FRANCISCO BAY SHORELINE STUDY

Background.—Congressional passage of the Water Resources Development Act of 1976, originally authorized the San Francisco Bay Shoreline Study, and Santa Clara Valley Water District (District) was one of the project sponsors. In 1990, the U.S. Army Corps of Engineers (Corps) concluded that levee failure potential was low because the existing non-Federal, non-engineered levees, which were routinely maintained by Leslie Salt Company (subsequently Cargill Salt) to protect their industrial interests, had historically withstood overtopping without failure. As a result, the project was suspended until adequate economic benefits could be demonstrated.

Since the project's suspension in 1990, many changes have occurred in the South Bay. The State and Federal acquisition of approximately 15,000 acres of South Bay salt ponds was completed in early March 2003. The proposed restoration of these ponds to tidal marsh will significantly alter the hydrologic regime and levee maintenance activities, which were assumed to be constant in the Corps' 1990 study. In addition to the proposed restoration project, considerable development has occurred in the project area. Many major corporations are now located within Silicon Valley's Golden Triangle, lying within and adjacent to the tidal flood zone. Damages from a 1 percent high tide are anticipated to far exceed the $34.5 million estimated in 1981, disrupting business operations, infrastructure, and residences. Also, historical land subsidence of up to 6 feet near Alviso, as well as the structural uncertainty of existing salt pond levees, increases the potential for tidal flooding in Santa Clara County.

In July 2002, Congress authorized a review of the Final 1992 Letter Report for the San Francisco Bay Shoreline Study. The final fiscal year 2004 appropriation for the Corps included funding for a new start Reconnaissance Study.

Project Synopsis.—At present, large areas of Santa Clara, Alameda and San Mateo Counties would be impacted by flooding during a 1 percent high tide. The proposed restoration of the South San Francisco Bay salt ponds will result in the largest restored wetland on the West Coast of the United States, and also significantly alter the hydrologic regime adjacent to South Bay urban areas. The success of the proposed restoration is therefore dependent upon adequate tidal flood protection, and so this project provides an opportunity for multi-objective watershed planning in partnership with the California Coastal Conservancy, the lead agency on the restoration project. Project objectives include: restoration and enhancement of a diverse array of habitats, especially several special status species; tidal flood protection; and provision of wildlife-oriented public access.

Fiscal Year 2004 Funding.—$100,000 was appropriated in fiscal year 2004 to conduct a Reconnaissance Study.

Fiscal Year 2005 Funding Request.—It is requested that the congressional committee support an appropriation add-on of $500,000 for the South San Francisco Bay Shoreline Study to initiate a Feasibility Study to evaluate integrated flood protection and environmental restoration.

THOMPSON CREEK RESTORATION PROJECT

Background.—Thompson Creek, a tributary of Coyote Creek, flows through the City of San Jose, California. Historically, the creek was a naturally-meandering stream and a component of the Coyote Creek watershed. The watershed had extensive riparian and oak woodland habitat along numerous tributary stream corridors and upland savanna. Currently, these habitat types are restricted to thin sparse pockets in the Thompson Creek restoration project area.

Significant urban development over the last 20 years has modified the runoff characteristics of the stream resulting in significant degradation of the riparian habitat and stream channel. The existing habitats along Thompson Creek, riparian

forest stands, are threatened by a bank destabilization and lowering of the water table. Recent large storm events (1995, 1997, and 1998) and the subsequent wet years in conjunction with rapid development in the upper watershed have resulted in a succession of high runoff events leading to rapid erosion.

The upstream project limits start at Aborn Road and the downstream project limit is Quimby Road where Thompson creek has been modified as a flood Protection project. The project distance is approximately 1 mile.

Status.—In February 2000, the Santa Clara Valley Water District (District) initiated discussions with U.S. Army Corps of Engineers (Corps) for a study under the Corps' Section 206 Aquatic Ecosystem Restoration Program. Based on the project merits, the Corps began preparation of a Preliminary Restoration Plan (PRP) and subsequent Project Management Plan (PMP). Approval of the PRP will lead to the development of a Detailed Project Report (DPR). The DPR will provide the information necessary to develop plans and specifications for the construction of the restoration project.

PROJECT TIMELINE

	Date
Request Federal assistance under Sec. 206 Aquatic Ecosystem Restoration Program	Feb. 2002
Initiate Study	Jan. 2003
Public Scoping Meeting and Local Involvement	Sept. 2004
Final Detailed Project Report to South Pacific Division of Corps	May 2006
Initiate Plans and Specifications	July 2006
Project Cooperation Agreement signed	Dec. 2006
Certification of Real Estate	Mar. 2007
Advertise Construction Contract	May 2007
Complete Plans and Specifications	July 2007
Award Construction Contract	July 2007
Construction Start	Sept. 2007
Complete Physical Construction	Dec. 2008

Fiscal Year 2004 Funding.—$100,000 earmark was received in the fiscal year 2004 Section 206 appropriation to complete the PRP.

Fiscal Year 2005 Funding Recommendation.—It is requested that the congressional committee support an earmark of $300,000 within the Section 206 Aquatic Ecosystem Restoration Program.

PAJARO RIVER WATERSHED STUDY

Background.—Pajaro River flows into the Pacific Ocean at Monterey Bay, about 75 miles south of San Francisco. The drainage area encompasses 1,300 square miles in Santa Clara, San Benito, Monterey, and Santa Cruz counties. Potential flood damage reduction solutions will require cooperation between four counties and four water/flood management districts. There is critical habitat for endangered wildlife and fisheries throughout the basin. Six separate flood events have occurred on the Pajaro River in the past half century. Severe property damage in Monterey and Santa Cruz counties resulted from floods in 1995, 1997, and 1998. Recent flood events have resulted in litigation claims for damages approaching $50 million. $20 million in U.S. Army Corps of Engineers (Corps) flood fight funds have been expended in recent years.

Status.—Two separate Corps activities are taking place in the watershed. The first activity is a Corps reconnaissance study authorized by a House Resolution in May 1996 to address the need for flood protection and water quality improvements, ecosystem restoration, and other related issues. The second activity is a General Revaluation Report initiated in response to claims by Santa Cruz and Monterey Counties that the 13 mile levee project constructed in 1949 through agricultural areas and the city of Watsonville is deficient. The reconnaissance study on the entire watershed was completed by the San Francisco District of the Corps in fiscal year 2002. The decision to continue onto a cost-shared feasibility study is currently delayed pending the Corps resolution of the flooding problems on the lower Pajaro River (Murphy's Crossing to the Ocean) and defining feasibility study goals that meet the interests of all Authority members.

Local Flood Prevention Authority.—Legislation passed by the State of California (Assembly Bill 807) in 1999 titled "The Pajaro River Watershed Flood Prevention Authority Act" mandated that a Flood Prevention Authority be formed by June 30, 2000. The purpose of the Flood Prevention Authority is "to provide the leadership

necessary to . . . ensure the human, economic, and environmental resources of the watershed are preserved, protected, and enhanced in terms of watershed management and flood protection." The Flood Prevention Authority was formed in July 2000 and consists of representatives from the Counties of Monterey, San Benito, Santa Clara, and Santa Cruz, Zone 7 Flood Control District, Monterey County Water Resources Agency, San Benito County Water District, and the Santa Clara Valley Water District. The Flood Prevention Authority Board sent a letter of intent to cost share a feasibility study of the Pajaro River Watershed to the Corps in September 2001.

Fiscal Year 2004 Funding.—$100,000 was authorized in fiscal year 2004 for the Pajaro Watershed Feasibility Study.

Fiscal Year 2005 Funding Recommendation.—It is requested that the congressional committee support an appropriation add-on of $100,000 in fiscal year 2005 for the Pajaro River Watershed Study.

UPPER GUADALUPE RIVER PROJECT

Background.—The Guadalupe River is one of two major waterways flowing through a highly urbanized area of Santa Clara County, California, the heart of Silicon Valley. Historically, the river has flooded the central district and southern areas of San Jose. According to U.S. Army Corps of Engineers (Corps) 1998 feasibility study, severe flooding would result from a 100-year flooding event and potentially cause $280 million in damages.

The probability of a large flood occurring before implementation of flood prevention measures is high. The upper Guadalupe River overflowed in March 1982, January 1983, February 1986, January 1995, March 1995, and February 1998, causing damage to several residences and businesses in the Alma Avenue and Willow Street areas. The 1995 floods in January and March, as well as in February 1998, closed Highway 87 and the parallel light-rail line, a major commute artery.

Project Synopsis.—In 1971, the Santa Clara Valley Water District (District) requested the Corps to reactivate an earlier study of Guadalupe River. From 1971 to 1980, the Corps established the economic feasibility and Federal interest in the Guadalupe River only between Interstate 880 and Interstate 280. Following the 1982 and 1983 floods, the District requested that the Corps reopen its study of the upper Guadalupe River upstream of Interstate 280. The Corps completed a reconnaissance study in November 1989, which established an economically justifiable solution for flood protection in this reach. The report recommended proceeding to the feasibility study phase, which began in 1990. In January 1997, the Corps determined that the National Economic Development (NED) Plan would be a 2 percent or 50-year level of flood protection rather than the 1 percent or 100-year level. The District strongly emphasized overriding the NED Plan determination, providing compelling reasons for using the higher 1 percent or 100-year level of protection. In 1998, the Acting Secretary of the Army did not concur to change the basis of cost sharing from the 50-year NED Plan to the locally preferred 100-year plan, resulting in a project that will provide less flood protection, and therefore, be unable to reduce flood insurance requirements and reimbursements, as well as eliminate recreational benefits and increase environmental impacts. Based on Congressional delegation requests, the Assistant Secretary of the Army directed the Corps to revise the Chief's Report to reflect more significant Federal responsibility. The Corps feasibility study determined the cost of the locally preferred 100-year plan is $153 million and the Corps NED 50-year plan is $98 million. The District has requested that the costs of providing 50-year and 100-year flood protection be analyzed again during the preconstruction engineering design phase. In a memorandum for the Assistant Secretary of the Army, dated October 12, 2000, Major General Hans A. Van Winkle, Deputy Commander for Civil Works, made a similar recommendation.

Fiscal Year 2004 Funding.—$150,000 was authorized in fiscal year 2004 for the Upper Guadalupe River Project to continue preconstruction engineering and design.

Fiscal Year 2005 Funding Recommendation.—It is requested that the congressional committee support an appropriation add-on of $3.5 million in fiscal year 2005 for the Upper Guadalupe River Flood Protection Project.

LLAGAS CREEK PROJECT

Background.—The Llagas Creek Watershed is located in southern Santa Clara County, California, serving the communities of Gilroy, Morgan Hill and San Martin. Historically, Llagas Creek has flooded in 1937, 1955, 1958, 1962, 1963, 1969, 1982, 1986, 1996, 1997, 1998, and 2002. The 1997, 1998, and 2002 floods damaged many homes, businesses, and a recreational vehicle park located in areas of Morgan Hill and San Martin. These are areas where flood protection is proposed. Overall, the

proposed project will protect the floodplain from a 1 percent flood affecting more than 1,100 residential buildings, 500 commercial buildings, and 1,300 acres of agricultural land.

Project Synopsis.—Under authority of the Watershed Protection and Flood Prevention Act (Public Law 566), the Natural Resources Conservation Service completed an economic feasibility study in 1982 for constructing flood damage reduction facilities on Llagas Creek. The Natural Resources Conservation Service completed construction of the last segment of the channel for Lower Llagas Creek in 1994, providing protection to the project area in Gilroy. The U.S. Army Corps of Engineers (Corps) is currently updating the 1982 environmental assessment work and the engineering design for the project areas in Morgan Hill and San Martin. The engineering design is being updated to protect and improve creek water quality and to preserve and enhance the creek's habitat, fish, and wildlife while satisfying current environmental and regulatory requirement. Significant issues include the presence of additional endangered species including the red-legged frog and steelhead, listing of the area as probable critical habitat for steelhead, and more extensive riparian habitat than were considered in 1982. Project economics are currently being updated as directed by Corps Headquarters to determine continued project economic viability.

Until 1996, the Llagas Creek Project was funded through the traditional Public Law 566 Federal project funding agreement with the Natural Resources Conservation Service paying for channel improvements and the District paying local costs including utility relocation, bridge construction, and right of way acquisition. Due to the steady decrease in annual appropriations for the Public Law 566 construction program since 1990, the Llagas Creek Project has not received adequate funding from U.S. Department of Agriculture to complete the Public Law 566 project. To remedy this situation, the District worked with congressional representatives to transfer the construction authority from the Department of Agriculture to the Corps under the Water Resources Development Act of 1999 (Section 501). Since the transfer of responsibility to the Corps, the District has been working the Corps to complete the project.

Fiscal Year 2004 Funding.—$250,000 was appropriated in fiscal year 2004 for the Llagas Creek Flood Protection Project for planning and design.

Fiscal Year 2005 Funding Recommendation.—Based upon the high risk of flood damage from Llagas Creek, it is requested that the congressional committee support an appropriation add-on of $1.35 million in fiscal year 2005 for planning, design, and environmental updates for the Llagas Creek Project.

COYOTE CREEK WATERSHED STUDY

Background.—Coyote Creek drains Santa Clara County's largest watershed, an area of more than 320 square miles encompassing most of the eastern foothills, the City of Milpitas, and portions of the Cities of San Jose and Morgan Hill. It flows northward from Anderson Reservoir through more than 40 miles of rural and heavily urbanized areas and empties into south San Francisco Bay.

Prior to construction of Coyote and Anderson Reservoirs, flooding occurred in 1903, 1906, 1909, 1911, 1917, 1922, 1923, 1926, 1927, 1930 and 1931. Since 1950, the operation of the reservoirs has reduced the magnitude of flooding, although flooding is still a threat and did cause damages in 1982, 1983, 1986, 1995, and 1997. Significant areas of older homes in downtown San Jose and some major transportation corridors remain susceptible to extensive flooding. The Federally-supported lower Coyote Creek Project (San Francisco Bay to Montague Expressway), which was completed in 1996, protected homes and businesses from storms which generated record runoff in the northern parts of San Jose and Milpitas.

The proposed Reconnaissance Study would evaluate the reaches upstream of the completed Federal flood protection works on lower Coyote Creek.

Objective of Study.—The objectives of the Reconnaissance Study are to investigate flood damages within the Coyote Creek Watershed; to identify potential alternatives for alleviating those damages which also minimize impacts on fishery and wildlife resources, provide opportunities for ecosystem restoration, provide for recreational opportunities; and to determine whether there is a Federal interest to proceed into the Feasibility Study Phase.

Study Authorization.—In May 2002, the House of Representatives Committee on Transportation and Infrastructure passed a resolution directing the Corps to ". . . review the report of the Chief of Engineers on Coyote and Berryessa Creeks . . . and other pertinent reports, to determine whether modifications of the recommendations contained therein are advisable in the interest of flood damage reduction, environmental restoration and protection, water conservation and supply, recreation, and other allied purposes . . .".

Fiscal Year 2004 Funding.—No Federal funding was received in fiscal year 2004.

Fiscal Year 2005 Funding Recommendation.—It is requested that the congressional committee support an appropriation add-on of $100,000 to initiate a multipurpose Reconnaissance Study within the Coyote Creek Watershed.

UPPER PENITENCIA CREEK FLOOD PROTECTION PROJECT

Background.—The Upper Penitencia Creek Watershed is located in northeast Santa Clara County, California, near the southern end of the San Francisco Bay. In the last two decades, the creek has flooded in 1980, 1982, 1983, 1986, 1995, and 1998. The January 1995 flood damaged a commercial nursery, a condominium complex, and a business park. The February 1998 flood also damaged many homes, businesses, and surface streets.

The proposed project on Upper Penitencia Creek, from the Coyote Creek confluence to Dorel Drive, will protect portions of the cities of San Jose and Milpitas. The floodplain is completely urbanized; undeveloped land is limited to a few scattered agricultural parcels and a corridor along Upper Penitencia Creek. Based on the U.S. Army Corps of Engineers' (Corps) 1995 reconnaissance report, 4,300 buildings in the cities of San Jose and Milpitas are located in the flood prone area, 1,900 of which will have water entering the first floor. The estimated damages from a 1 percent or 100-year flood exceed $121 million.

Study Synopsis.—Under authority of the Watershed Protection and Flood Prevention Act (Public Law 83–566), the Natural Resources Conservation Service (formerly the Soil Conservation Service) completed an economic feasibility study (watershed plan) for constructing flood damage reduction facilities on Upper Penitencia Creek. Following the 1990 U.S. Department of Agriculture Farm Bill, the Natural Resources Conservation Service watershed plan stalled due to the very high ratio of potential urban development flood damage compared to agricultural damage in the project area.

In January 1993 the Santa Clara Valley Water District (District) requested the Corps proceed with a reconnaissance study in the 1994 fiscal year while the Natural Resources Conservation Service plan was on hold. Funds were appropriated by Congress for fiscal year 1995 and the Corps started the reconnaissance study in October 1994. The reconnaissance report was completed in July 1995, with the recommendation to proceed with the feasibility study phase. The feasibility study, initiated in February 1998, is currently scheduled for completion in 2005.

Advance Construction.—To accelerate project implementation, the District submitted a Section 104 application to the Corps for advance approval to construct a portion of the project. Approval of the Section 104 application was awarded in December 2000. The advance construction is for a 2,600-foot-long section of bypass channel between Coyote Creek and King Road. However, due to funding constraints at the District and concerns raised by regulatory agencies, the design was stopped and turned over to the Corps to complete.

Fiscal Year 2004 Funding.—$460,000 was appropriated in fiscal year 2004 for the Upper Penitencia Creek Flood Protection Project for project investigation.

Fiscal Year 2005 Funding Recommendation.—Based upon the high risk of flood damage from Upper Penitencia Creek and the need to proceed with the feasibility study, it is requested that the congressional committee support an appropriation add-on of $535,000 million, in addition to the $46,000 in the administration's fiscal year 2005 budget, for a total of $600,000 for the Upper Penitencia Creek Flood Protection Project.

COYOTE/BERRYESSA CREEK PROJECT

BERRYESSA CREEK PROJECT ELEMENT

Background.—The Berryessa Creek Watershed is located in northeast Santa Clara County, California, near the southern end of the San Francisco Bay. A major tributary of Coyote Creek, Berryessa Creek drains 22 square miles in the City of Milpitas and a portion of San Jose.

On average, Berryessa Creek floods once every 4 years. The most recent flood in 1998 resulted in significant damage to homes and automobiles. The proposed project on Berryessa Creek, from Calaveras Boulevard to upstream of Old Piedmont Road, will protect portions of the Cities of San Jose and Milpitas. The flood plain is largely urbanized with a mix of residential and commercial development. Based on the U.S. Army Corps of Engineers (Corps) 1993 draft General Design Memorandum, a 1 percent or 100-year flood could potentially result in damages of $52 million with depths of up to 3 feet.

Study Synopsis.—In January 1981, the Santa Clara Valley Water District (District) applied for Federal assistance for flood protection projects under Section 205 of the 1948 Flood Control Act. The Water Resources Development Act of 1990 authorized construction on the Berryessa Creek Flood Protection Project as part of a combined Coyote/Berryessa Creek Project to protect portions of the Cities of Milpitas and San Jose.

The Coyote Creek element of the project was completed in 1996. The Berryessa Creek Project element proposed in the Corps' 1987 feasibility report consisted primarily of a trapezoidal concrete lining. This was not acceptable to the local community. The Corps and the District are currently preparing a General Reevaluation Report which involves reformulating a project which is more acceptable to the local community and more environmentally sensitive. Project features will include setback levees and floodwalls to preserve sensitive areas (minimizing the use of concrete), appropriate aquatic and riparian habitat restoration and fish passage, and sediment control structures to limit turbidity and protect water quality. The project will also accommodate the City of Milpitas' adopted trail master plan. Estimated total costs of the General Reevaluation Report work are $3.8 million, and should be completed in the summer of 2005.

Fiscal Year 2004 Funding.—$250,000 was appropriated in fiscal year 2004 for the Coyote/Berryessa Creek Flood Protection Project to continue the General Reevaluation Report and environmental documents update.

Fiscal Year 2005 Funding Recommendation.—Based on the continuing threat of significant flood damage from Berryessa Creek and the need to continue with the General Reevaluation Report, it is requested that the congressional committee support an appropriation add-on of $750,000 for the Berryessa Creek Flood Protection Project element of the Coyote/Berryessa Creek Project.

SAN FRANCISQUITO CREEK WATERSHED PROJECT

Background.—The San Francisquito Creek watershed comprises 45 square miles and 70 miles of creek system. The creek mainstem flows through five cities and two counties, from Searsville Lake, belonging to Stanford University, to the San Francisco Bay at the boundary of East Palo Alto and Palo Alto. Here it forms the boundary between Santa Clara and San Mateo counties, California and separates the cities of Palo Alto from East Palo Alto and Menlo Park. The upper watershed tributaries are within the boundaries of Portola Valley and Woodside townships. The creek flows through residential and commercial properties, a biological preserve, and Stanford University campus. It interfaces with regional and State transportation systems by flowing under two freeways and the regional commuter rail system. The local communities have formed a Joint Powers Authority in 1999 to cooperatively manage flood and restoration efforts. San Francisquito Creek is one of the last natural continuous riparian corridors on the San Francisco Peninsula and home to one of the last remaining viable steelhead trout runs. It is a highly valued resource by all communities. The riparian habitat and urban setting offer unique opportunities for a multi-objective project addressing flood protection, habitat, water quality, and recreation.

Flooding History.—The creeks mainstem has a flooding frequency of approximately once in 11 years. It is estimated that over $155 million in damages could occur in Santa Clara and San Mateo counties from a 1 percent flood, affecting 4,850 home and businesses. Significant areas of Palo Alto flooded in December 1955, inundating about 1,200 acres of commercial and residential property and about 70 acres of agricultural land. April 1958 storms caused a levee failure downstream of Highway 101, flooding Palo Alto Airport, the city landfill, and the golf course up to 4 feet deep. Overflow in 1982 caused extensive damage to private and public property. The flood of record occurred on February 3, 1998, when overflow from numerous locations caused severe, record consequences with more than $28 million in damages. More than 1,100 homes were flooded in Palo Alto, 500 people were evacuated in East Palo Alto, and the major commute and transportation artery, Highway 101, was closed.

Status.—Active citizenry are anxious to avoid a repeat of February 1998 flood. Numerous watershed based studies have been conducted by the Corps, the Santa Clara Valley Water District, Stanford University, and the San Mateo County Flood Control District. Grassroots, consensus-based organization, called the San Francisquito Watershed Council, has united stakeholders including local and State agencies, citizens, flood victims, developers, and environmental activists for over 10 years. The San Francisquito Creek Joint Powers Authority was formed in 1999 to coordinate creek activities with five member agencies and two associate members.

The Authority Board has agreed to be the local sponsor for a Corps project and received congressional authorization for a Corps reconnaissance study in May 2002.

Fiscal Year 2004 Funding.—$100,000 was appropriated to San Francisquito Creek in fiscal year 2004 to conduct a Watershed Reconnaissance Study.

Fiscal Year 2005 Funding Recommendation.—It is requested the congressional committee support an appropriation add-on of $200,000 in fiscal year 2005 budget to initiate a Feasibility Study for the San Francisquito Creek Watershed.

GUADALUPE RIVER PROJECT

Background.—The Guadalupe River is a major waterway flowing through a highly developed area of San Jose, in Santa Clara County, California. A major flood would damage homes and businesses in the heart of Silicon Valley. Historically, the river has flooded downtown San Jose and the community of Alviso. According to the U.S. Army Corps of Engineers (Corps) 2000 Final General Reevaluation & Environmental Report for Proposed Project Modifications, estimated damages from a 1 percent flood in the urban center of San Jose are over $576 million. The Guadalupe River overflowed in February 1986, January 1995, and March 1995, damaging homes and businesses in the St. John and Pleasant Street areas of downtown San Jose. In March 1995, heavy rains resulted in breakouts along the river that flooded approximately 300 homes and business.

Project Synopsis.—In 1971, the local community requested that the Corps reactivate its earlier study. Since 1972, substantial technical and financial assistance have been provided by the local community through the Santa Clara Valley Water District in an effort to accelerate the project's completion. To date, more than $85.8 million in local funds have been spent on planning, design, land purchases, and construction in the Corps' project reach.

The Guadalupe River Project received authorization for construction under the Water Resources Development Act of 1986; the General Design Memorandum was completed in 1992, the local cooperative agreement was executed in March 1992, the General Design Memorandum was revised in 1993, construction of the first phase of the project was completed in August 1994, construction of the second phase was completed in August 1996. Project construction was temporarily halted due to environmental concerns.

To achieve a successful, long-term resolution to the issues of flood protection, environmental mitigation, avoidance of environmental effects, and project monitoring and maintenance costs, a multi-agency "Guadalupe Flood Control Project Collaborative" was created in 1997. A key outcome of the collaborative process was the signing of the Dispute Resolution Memorandum in 1998, which modified the project to resolve major mitigation issues and allowed the project to proceed. Energy and Water Development Appropriations Act of 2002 was signed into law on November 12, 2001. This authorized the Modified Guadalupe River Project at a total cost of $226,800,000. Construction of the last phase of flood protection is scheduled for completion by December 2004 and is dependent on timely Federal funding and continuing successful mitigation issue resolution. The overall construction of the project including the river park and the recreation elements is scheduled for completion in 2006.

Fiscal Year 2004 Funding.—$14 million was authorized in fiscal year 2004 to continue Guadalupe River Project construction.

Fiscal Year 2005 Funding Recommendation.—It is requested that the congressional committee support an appropriation add-on of $6 million, in addition to the $6 million in the administration's fiscal year 2005 budget, for a total of $12 million to continue construction of the final phase of the Guadalupe River Flood Protection Project.

PREPARED STATEMENT OF THE RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

Project	Request
Murrieta Creek Flood Control Project: Construction General	$5,000,000
San Jacinto & Santa Margarita River Watersheds Special Area Management Plan (SAMP): General Investigations	1,000,000
Santa Ana River—Mainstem: Construction General	58,060,000

MURRIETA CREEK FLOOD CONTROL PROJECT

Murrieta Creek poses a severe flood threat to the cities of Murrieta and Temecula. Over $12 million in damages was experienced in the two cities as a result of Murrieta Creek flooding in 1993. The 1997 Energy and Water Appropriations Act dedicated $100,000 to conducting a Reconnaissance Study of watershed management in the Santa Margarita Watershed "including flood control, environmental restoration, stormwater retention, water conservation and supply, and related purposes". The study effort was initiated in April 1997 and completed the following December. The Reconnaissance Study identified a Federal interest in flood control on the Murrieta sub-basin, and recommended moving forward with a detailed feasibility study for a flood control project on Murrieta Creek.

Efforts on the Feasibility Study began in April 1998 and were completed in September 2000. The Feasibility Study Report recommends the implementation of Alternative 6, the Locally Preferred Plan (LPP) for flood control, environmental restoration and recreation. The LPP is endorsed by the Cities of Temecula and Murrieta and by the community as a whole.

H.R. 5483, the Energy and Water Appropriations Act of 2000 included specific language authorizing the Corps to construct "the locally preferred plan for flood control, environmental restoration and recreation described as Alternative 6, based on the Murrieta Creek Feasibility Report and Environmental Impact Statement dated September 2000."

After finalizing the necessary cost sharing agreement in February 2001, the Corps initiated the detailed engineering design necessary to develop construction plans and specifications for a Murrieta Creek Project utilizing a fiscal year 2001 appropriation of $750,000. The project received an additional appropriation of $1,000,000 for engineering design efforts in fiscal year 2002. Those funds were utilized to develop design-level topographic mapping for the entire 7-mile long project, to complete all necessary geotechnical work, and to begin the preparation of construction drawings for the initial phases of construction.

The Murrieta Creek Flood Control Project is being designed and will be constructed in four distinct phases. Phases 1 and 2 include channel improvements through the city of Temecula. Phase 3 involves the construction of a 240-acre detention basin, including the 160-acre restoration site and over 50 acres of recreational facilities. Phase 4 of the project will include channel improvements through the city of Murrieta. Equestrian, bicycle and hiking trails as well as a continuous habitat corridor for wildlife are components of this and every phase of the project.

The Omnibus Appropriations Bill for fiscal year 2003 provided $1 million for a new construction start for this critical public safety project. Construction activities on Phase 1 of the project commenced in the Fall of 2003 and the Groundbreaking Ceremony was held on November 12, 2003. The appropriations for fiscal year 2004 allowed the Corps to continue construction on Phase 1 and initiate its engineering design work for Phase 2 of the project. Phase 2 traverses the area of Temecula hardest hit with damages from the severe flooding of 1993. The Corps anticipates having a Phase 2 construction contract ready to award in the summer of 2005. The District, therefore, respectfully requests the committee's support of a $5 million appropriation in fiscal year 2005 so that the Corps may complete construction on Phase 1, complete the design work for Phase 2 and initiate construction on Phase 2 of the long awaited Murrieta Creek Flood Control, Environmental Restoration and Recreation Project.

SAN JACINTO & SANTA MARGARITA RIVER WATERSHEDS SPECIAL AREA MANAGEMENT PLAN

The County of Riverside recognizes the interdependence between the region's future transportation, habitat, open space and land-use/housing needs. In 1999, work was initiated on Riverside County's Integrated Project (RCIP) to determine how best to balance these factors. The plan will create regional conservation and development reserves that will protect entire communities of native plants and animals while streamlining the process for compatible economic development in other areas. The major elements of the plan include water resource identification, multi-species planning, land use and transportation.

In order to achieve a balance between aquatic resource protection and economic development, the Corps is developing a Special Area Management Plan (SAMP) for both the San Jacinto and Santa Margarita Watersheds. This comprehensive planning effort will be used to assist Federal, State and local agencies with their decision making and permitting authority to protect, restore and enhance aquatic resources while accommodating various types of development activities. The Santa

Margarita and San Jacinto watersheds include such resources as woodlands, wetlands, freshwater marshes, vernal pools, streams, lakes and rivers.

The final product of the SAMP will be the establishment of an abbreviated or expedited regulatory permitting process by the Corps under Section 404 of the Clean Water Act. The Corps' effort includes facilitating meetings between all potential watershed partners, and the integration of the joint study effort with the planning and multiple species habitat conservation efforts of the balance of the RCIP project.

The $500,000 Federal appropriation received for fiscal year 2001 allowed the Corps to initiate work on this 3-year, $5.5 million SAMP effort. The $2 million appropriation received in fiscal year 2002 allowed the Corps to make significant progress on a "landscape level aquatic resource delineation", and to initiate a functional assessment to determine the value of waters and wetlands. The $1 million appropriation received for fiscal year 2003 allowed the Corps to complete their wetlands delineation effort. The $200,000 appropriations received for fiscal year 2004 allowed for some of the management of the preparation of the NEPA document to continue.

Further funding is now needed to continue the SAMP effort. We, therefore, respectfully request that the committee support a combined $1,000,000 appropriation of Federal funding for fiscal year 2005 for the Corps to continue its work on the Special Area Management Plan for the San Jacinto and Santa Margarita River Watersheds.

SANTA ANA RIVER—MAINSTEM

The Water Resources Development Act of 1986 (Public Law 99–662) authorized the Santa Ana River—All River project that includes improvements and various mitigation features as set forth in the Chief of Engineers' Report to the Secretary of the Army. The Boards of Supervisors of Orange, Riverside and San Bernardino Counties continue to support this critical project as stated in past resolutions to Congress.

The three local sponsors and the Corps signed the Local Cooperation Agreement (LCA) in December 1989. The first of five construction contracts started on the Seven Oaks Dam feature in the spring of 1990 and the dam was officially completed on November 15, 1999. A dedication ceremony was held on January 7, 2000. Significant construction has been completed on the lower Santa Ana River Channel and on the San Timoteo Creek Channel. Construction activities on Oak Street Drain and the Mill Creek Levee have been completed. Seven Oaks Dam was turned over to the Local Sponsors for operation and maintenance on October 1, 2002.

For fiscal year 2005, an appropriation of $4.46 million is necessary to initiate construction activities on several features within "Reach 9" of the Santa Ana River immediately downstream of Prado Dam. This segment of the Santa Ana River project is the last to receive flood protection improvements. The streambed existing today in a relatively natural state would receive only localized levee and slope revetment treatment to protect existing development along its southerly bank.

The removal of accumulated sediment within an already completed section of the Santa Ana River Channel near its outlet to the Pacific Ocean will necessitate a fiscal year 2005 appropriation of $4.3 million. This dredging work is necessary before project turnover to the Local Sponsors for operation and maintenance.

Construction activities on the last remaining phase of San Timoteo Creek Channel, a Mainstem feature located within San Bernardino County, would be completed given a final $5 million appropriation.

An appropriation of $7.0 million is being requested to fund the required mitigation for the operation and maintenance of the Seven Oaks Dam project.

The Prado Dam feature of the Santa Ana River Mainstem project is in need of several major upgrades in order that it mitigate the potential impacts of a 100-year storm. All of the engineering work necessary to redesign the dam is now complete. In fiscal year 2003, the Corps was able to award a construction contract to begin modifications to the dam embankment and outlet works. An fiscal year 2005 appropriation of $37.3 million would allow the Corps to continue with the construction of improvements to Prado Dam's outlet works and embankment, and would fund all necessary environmental mitigation measures.

We, therefore, respectfully request that the committee support an overall $58,060,000 appropriation of Federal funding for fiscal year 2005 for the Santa Ana River Mainstem project including Prado Dam.

PREPARED STATEMENT OF THE STANDING ROCK SIOUX TRIBE

Project.—Standing Rock MRI and Irrigation Systems, Garrison Diversion Unit (Public Law 99–294).

Agency.—Corps of Engineers, Missouri Basin Pick Sloan, OMR.

FISCAL YEAR 2005 BUDGET REQUEST

The Standing Rock Sioux Tribe requests $6,500,000 in the Corps of Engineers' budget for fiscal year 2005 for the Missouri Basin Pick Sloan Project from the operation, maintenance and replacement (OMR) account to reconstruct three intakes made inoperable by siltation caused by the operation of water levels in Lake Oahe in the months August through December 2003 as set out below:

Cannonball Irrigation Intake	$2,000,000
Fort Yates Irrigation Intake	1,500,000
Fort Yates Municipal and Industrial Intake	3,000,000
Total	6,500,000

BACKGROUND

The construction and operation of Garrison and Oahe dams, principle components of the Missouri River Pick Sloan Program, by the Corps of Engineers has caused considerable damage to the Standing Rock Sioux Tribe of the Standing Rock Indian Reservation, North and South Dakota. The following activities have caused the siltation of three major intakes owned and operated by the Tribe for irrigation and domestic water use and threatens proposed downstream intakes:

—The construction of Garrison Dam, upstream from Lake Oahe, has caused the erosion of the bed and banks of the free flowing Missouri River between Garrison Dam and Bismarck;

—The construction of Oahe Dam and the filling of Lake Oahe has caused the deposition of sediment eroded from the bed and banks of the Missouri River between Garrison Dam and Bismarck at the upper end of Lake Oahe. This deposition has been estimated by the U.S. Bureau of Reclamation at 14,600 acre feet annually (equivalent to 560,000 acre of deposition over the past 40 years);

—Lowering the Lake Oahe water levels to historic minimums in fall 2003 caused the transport of sediments deposited in the upper end of Lake Oahe to more downstream locations in Lake Oahe within the Standing Rock Indian Reservation and inundated the Cannonball irrigation intake and the Fort Yates municipal, rural and industrial water intake, the principle source of domestic water supply for the Standing Rock Sioux Tribe, The Fort Yates irrigation intake was likewise stranded in fall 2003;

—The Cannonball irrigation intake was inundated with 11 feet of sediment between August and December 2003, and the Fort Yates municipal, rural and industrial water intake was rendered unusable by the deposition of sediment creating a water supply emergency for 10,000 members of the Standing Rock Sioux Tribe.

The Corps of Engineers was fully knowledgeable with respect to the erosion of the bed and bank of the Missouri River between Garrison Dam and Bismarck and the subsequent deposition of sediments on the Standing Rock Indian Reservation in the upper end of Lake Oahe as evidenced by the following documents, among others:

—Alfred S. Harrison and Warren J. Mellema, May 1984, Aggradation and Degradation Aspects of the Missouri River Mainstem Dams, MRD Sediment Series, Number 34, U.S. Army Corps of Engineers, Omaha District.

—Corps of Engineers, December 1983, Deposition at the Heads of Reservoirs, MRD Sediment Series, Number 31, Omaha District.

—Sedimentation and Channel Stabilization Section, November 1999, Sedimentation Impacts in the Cheyenne River Arm—Lake Oahe, Phase II, Projected to 2058, MRR Sediment Memorandum, 20, U.S. Army Corps of Engineers, Omaha District.

—U.S. Geological Survey, 1995, Transport and Sources of Sediment in the Missouri River between Garrison Dam and the Headwaters of Lake Oahe, North Dakota, May 1988 through April 1991 Water-Resources Investigations Report 95–4087.

The Standing Rock Sioux Tribe, pursuant to the Treaties of 1851 and 1868 possesses prior and superior rights to the use of water in the Missouri River, its tributaries and its aquifers for present and future purposes and has exercised those water rights for the present development of irrigation and domestic water supply

by the construction of intakes on the Missouri River where the natural channel of the river crosses the Standing Rock Indian Reservation, which intakes are submerged at the upper end of Lake Oahe.

DEPLETION OF TRIBES' FUNDS APPROPRIATED PURSUANT TO PUBLIC LAW 99–294, AS AMENDED

The Standing Rock MRI project funds (Public Law 99–294) have been depleted to make interim, emergency corrections to restore the drinking water supply for the Tribal membership and other residents served in Fort Yates, Cannonball, Porcupine and intermediate rural areas.

Questions also arise with respect to the viability of the new irrigation intake in the Kenel area where the next phase of the Public Law 99–294 irrigation project is to be implemented. It is not known how long an intake as far south as Kenel will be viable because the rate of progress of sediment movement from the upper to middle segments of Lake Oahe is not known. Kenel has been under consideration as a possible site for long-term MRI intake, but this option must be reevaluated after better information is in hand to determine if the migration of sediment will reach Kenel in the near term.

The cost of a long-term solution is not yet known. Far more information is needed on the phenomenon of sediment movement in Lake Oahe before a permanent location and elevation for a new intake can be established. Sound cost estimates can be prepared thereafter.

The Cannonball Irrigation Unit was to begin operation in spring 2004. It appears the Tribe will not be able to meet those expectations because 11 feet of silt now resides atop that intake. Funds for corrective measures at this site in fiscal year 2004 will further deplete the irrigation authority of Public Law 99–294 intended for development of additional parts of the 2,380 authorized acres.

STANDING ROCK SEDIMENT ANALYSIS IN LAKE OAHE

When Garrison Dam closed in 1955, a streamflow of 10,000 cubic feet per second (cfs) produced a water level elevation in the Missouri River downstream from the dam of approximately 1,676 feet above mean sea level. In 1990 a streamflow of 10,000 cfs produced a water level elevation in the Missouri River of approximately 1,668 feet, a decline in water level elevation of 8 feet. The reason for the decline in water level elevation for the same flow rate of 10,000 cfs was the excavation of the bed of the River below the dam. (See Figure 1 from the Corps of Engineers). With entrapment of all incoming sediment in the reservoir upstream from the dam, releases from the dam are free of sediment and have the capability to capture material from the bed and banks of the downstream river channel. Over a long period of time (1955 to 2003) this predictable activity has lowered the bed of the Missouri River and eroded the banks.

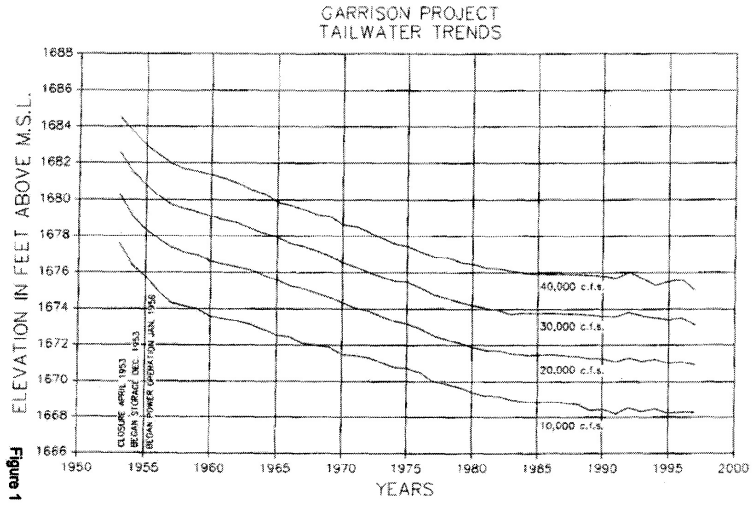

Figure 1- INDICATOR OF DECLINING RIVER BED (COE)

When Oahe Dam closed and began filling in 1962, material excavated from the Missouri River below Garrison Dam was deposited by the slowing velocity of the River as it entered the upper end of the Oahe pool. Over a 30-year period an unknown volume and tonnage of sediment was excavated upstream and deposited downstream from Bismarck. (See Figure 2 from USGS with independent modifications to show zones of excavation and deposition upstream and downstream from Bismarck, respectively.) The following statement confirms that Bismarck is near the transition between upstream excavation or "degradation" and downstream deposition or "aggradation" of the channel.

". . . there have been no marked changes in stage at this station [Bismarck] except for discharges of 30,000 cfs or greater, which have exhibited a slight upward trend . . . a study completed by the Corps [of Engineers] in 1985 'Oahe-Bismarck Area Studies' indicated that aggradation has reduced the size of the channel in the study area, resulting in higher stages for the same discharge. The study concluded that for discharges of 50,000 to over 100,000 cfs, the stages have increased by 1 to 2 feet in the study area. It was also estimated that future aggradation will further increase stages for those discharges by an additional 0.8 to 1.4 feet." (U.S. Geological Survey, 1995, Transport and Sources of Sediment in the Missouri River Between Garrison Dam and the Headwaters of Lake Oahe, North Dakota, May 1988 through April 1991, Water-Resources Investigations Report 95–4087).

During the drought of the last few years, including 2003, water levels in Lake Oahe fell from average elevations of 1,605 feet to historic minimums. Only in year 1990 had water levels reached as low (1,582 feet) as in 2003. In 2002, water levels in the October through December time frame reached averages of 1,584 feet. In November 2003, water levels reached as low as 1,576 feet, the lowest on record.

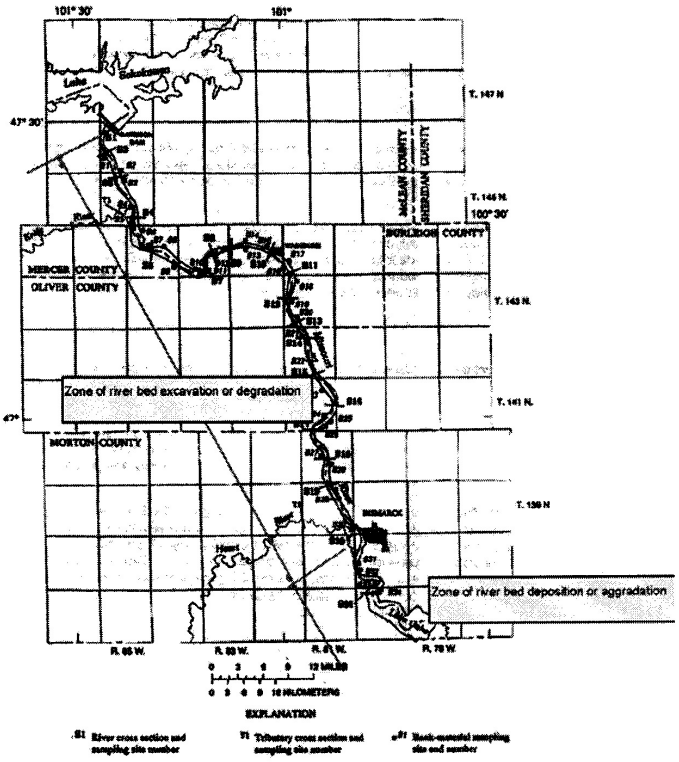

Figure 2. Location of study reach and river, tributary, and bank-material sampling sites along the Missouri River downstream from Garrison Dam.

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Figure 2 – Map of Study Area (USGS WRRI 95-4087) With Modifications

Sufficient information is not in hand (but should be available) to determine the elevation of the bed of the Missouri River before sediment began to accumulate in the upper end of Lake Oahe. When the intake for the Cannonball Irrigation Project was constructed in the late 1990's, the intake was placed underwater in the former channel of the Missouri River (the lowest point at that River-mile). The top of the intake screen was at 1,573 feet. Similarly, the intake for the Standing Rock MRI Project was reportedly constructed in the former channel of the River at a known elevation not available at the time of this writing.

Sediment moved downstream in fall 2003 as the reservoir levels in Lake Oahe were lowered and the Missouri River was required to flow across areas normally inundated and filled with sediment over the past 40 years. In this zone at the upper end of the lowered Lake Oahe, the Missouri River eroded artificially deposited sediments and moved them further downstream in the Reservoir. This caused the failure of the intake for the Tribe's MRI Project and deposited as much as 11 feet of sediment in the former Missouri River channel at the Cannonball intake site. Sediment has reached elevation 1,584 feet or 11 feet above the bottom of 1,573 feet measured at the irrigation intake in August 2003.

Elements of the phenomenon reported here have been studied by agencies of the United States, including the U.S. Geological Survey and the Corps of Engineers. It is believed that the Corps of Engineers knew or should have known that the low-

ering of water levels in Lake Oahe would cause the redistribution of sediments from the upper end of the Reservoir, where they knew sediments were deposited, to further downstream locations. At a minimum, the Tribe should have been notified in advance of the risk to its intakes as the Corps began its operations in the critical October to December period. Reasonable management of reservoir levels may have avoided the exigent conditions that existed for the Tribe in December and the considerable expense to redesign, reconstruct and relocate both MRI and irrigation intakes due to the releases from Garrison and management of water levels in Lake Oahe. When the emergency occurred, the Corps of Engineers increased releases from Garrison Dam from approximately 13,000 cfs (River stage at 4.2 feet) to 18,000 cfs (River stage at 6.2 feet), the most marked change in releases during the October to December 2003 time frame. (See Figure 3 from USGS).

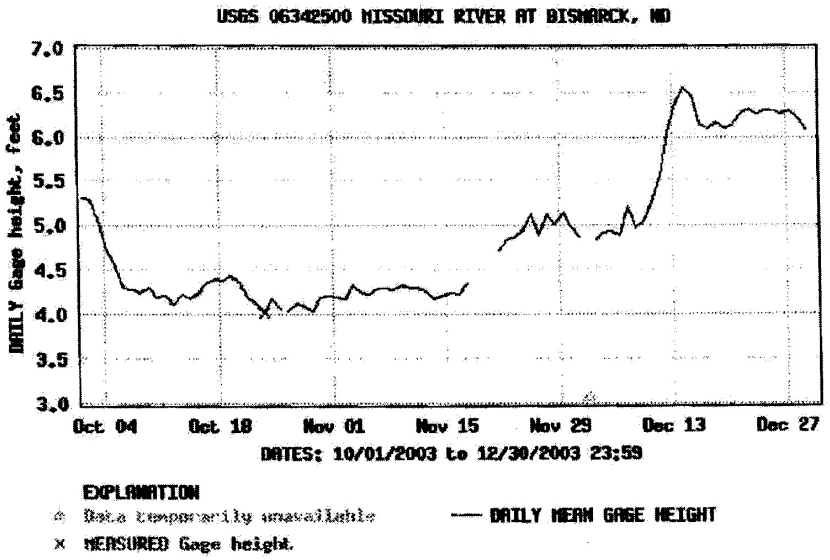


Figure 3 – Corps Response to Fort Yates MRI Exigency With Increased Flow Rate

Long-term solutions for the Tribe require collection of information not in the Tribe's hands and revision of the procedures for Garrison releases and management of Lake Oahe during drought conditions. Specifically, a sediment survey in the upper reaches of Lake Oahe is needed to document the current position of sediment deposits. Analysis is needed to determine where those deposits will move in the future and how the Tribe can locate and build dependable intakes. This problem affects at least two existing irrigation intakes (Cannonball and Fort Yates) and the MRI intake. The future irrigation intake at Kenel is also subject to an unknown level of risk. New operating procedures are needed that raised the minimum operating water levels. A diking system may be needed to contain upstream sediment.

The Corps of Engineers is the responsible Federal agency that constructed and operated the Federal facilities causing the degradation of the bed of the Missouri River, the aggradation of the upper end of Lake Oahe, and the redistribution of sediments in the upper end of Lake Oahe to the destruction of the Tribe's intakes in fall 2003. Legislation is be needed to authorize the appropriation of funds to reconstruct new intakes of the Tribe in a manner to insure their dependability. Appropriate investigations will be needed of the baseline sediment conditions and the probable future redistribution in advance of permanent reconstruction. Mitigation measures and changes in the Master Manual are needed, including diking and new minimum operating water levels.

PREPARED STATEMENT OF THE CITY OF MORRO BAY

During World War II the Army Corps of Engineers (ACOE) designed and constructed a new harbor entrance at Morro Bay with two rock breakwaters. Since the

initial construction, over 60 years ago, the Federal Government has maintained the harbor entrance, breakwaters and navigational channels. In fiscal year 1995 the ACOE completed the Morro Bay Harbor entrance improvement project to improve safety for commercial fishing and coastal navigation.

The City of Morro Bay contributed almost $1,000,000 in local cost share to the ACOE Entrance Improvement Project. Since 1995 the Federal Government has funded maintenance dredging of Morro Bay Harbor every year. The most cost-effective manner to conduct this dredging has been using the ACOE dredge Yaquina every year in the Entrance Area due to rapid shoaling in that area, and scheduling a larger project to maintain the Morro and Navy Navigation channels every 3 to 4 years as those channels accumulate sediment at a slower rate.

Below is a summary of dredging history for the federally designated navigation channels in Morro Bay.

Date	Area Dredged	Cubic Yardage
1997	Outer Entrance	63,009.00
1998	Entrance, Main, Navy, Morro & Sand Trap	579,692.00
1998	Entrance, Main	115,388.00
1999	Entrance & Transitional Channel	134,234.00
2000	Entrance & Transitional Channel	236,883.00
2001	Entrance & Transitional Channel	180,467.00
2002	Entrance, Navy, Morro & Sand Trap	868,483.10
2003	Entrance & Transitional Channel	170,817.00

Morro Bay Harbor is the only all-weather harbor of refuge between Santa Barbara and Monterey on the West Coast. Our Harbor directly supports almost 250 home-ported fishing vessels and marine dependent businesses. We provide critical maritime facilities for both recreational and commercial interests. Businesses that depend on the harbor generate $50,000,000 annually and employ over 700 people. The United States Coast Guard (USCG) maintains a 32 person National Security Base and Search and Rescue Station at Morro Bay Harbor to provide the Coast Guard services for the entire Central California Coast, including port safety coverage for the Diablo Canyon Nuclear Power Plant and Vandenberg Air Force Base.

In 2000 the California legislature designated Morro Bay and several other small ports along the California coast as "Harbors of Safe Refuge". This legislation recognizes the critical role many small harbors play in affording a safety zone for commercial and recreational vessels transiting the California coast.

Exposure to the open ocean and strong winter currents carrying sediment into the harbor create the need for a routine maintenance schedule to insure that the harbor entrance and federally designated navigation channels remain safe and navigable. The Morro Bay National Estuary Program recognizes the need to maintain the navigational channels in the harbor both for the viability of the commercial fishing industry and to maintain adequate tidal exchange for the health of the Morro Bay Estuary. It is imperative that the federally constructed navigation channels, entrance area and protective jetties be maintained to insure safe commerce and navigation on a 300-mile stretch of the California Coast and to maintain a safe port for the Coast Guard to operate from. Without continued Federal maintenance, all of the past local and Federal investment will be lost.

Last year the budget included $1.4 million for dredging of the navigational channels including the Entrance Channel, the Navy Channel and the Morro Channel. This year the proposed budget eliminates all funding for the Morro Bay navigation channel maintenance dredging.

The Army Corps of Engineers has the capability to execute $4.11 million in maintenance dredging operations for fiscal year 2005. The entrance area has shoaled significantly since the last dredge cycle and will require dredging next year to sustain safe navigation in our area. We respectfully request that your distinguished subcommittee include $4.11 million in dredging funds for Morro Bay Harbor to keep our harbor open and safe in all conditions and to provide a safe base of operations for the United States Coast Guard.

In addition to being homeport to over 250 commercial fishing vessels, Morro Bay Harbor is part of the federally designated National Estuary Program. The Morro Bay Estuary was the subject of an ACOE reconnaissance study (funded by Congress in 1998) of potential projects to restore sensitive habitat through improving tidal circulation and decreasing sedimentation. The County of San Luis Obispo and the Bay Foundation are acting as local sponsors for the Feasibility Phase. We support the funding of $250,000 to continue work on the feasibility study for the Morro Bay Habitat Restoration project in fiscal year 2005.

Thank you for your actions and support, and for the opportunity to present these requests to your subcommittee on behalf of the citizens of the City of Morro Bay.

PREPARED STATEMENT OF THE PORT OF SACRAMENTO, CALIFORNIA

The Port of Sacramento requests a fiscal year 2005 appropriation of $8.5 million for the continued deepening of the Sacramento River Deep Water Ship Channel.

After a hiatus in construction, the Port has been actively working with the San Francisco District Corps of Engineers to reinvigorate this important project. The fiscal year 2005 appropriation will complete a Limited Re-Evaluation Report and provide funding to continue the deepening of the Ship Channel from 30′ to 35′. This 5 additional feet will greatly expand the accessability of the Port of Sacramento to the world fleet which will allow better service to existing customers and will improve the of diversify cargoes and customers, both which increase the revenues at the Port.

This project is vital to the economic future of the Port of Sacramento, which has provided international waterborne cargo services in the Greater Sacramento region for 40 years. In the future, California will also "re-discover" that its ports, and particularly its inland Ports, are an environmentally friendly alternative to the burgeoning highway traffic. "Short sea shipping" is concept in waterborne transportation that is increasing in application in Europe as a means to reduce highway congestion.

We would greatly appreciate your support of our appropriation request.

PREPARED STATEMENT OF THE WASHINGTON SUBURBAN SANITARY COMMISSION

ARMY CORPS OF ENGINEERS

Project	Request
Middle Potomac River Study	$200,000
Patuxent River Watershed Study	200,000

WASHINGTON SUBURBAN SANITARY COMMISSION

The Washington Suburban Sanitary Commission (Commission or WSSC), established in 1918, is a public, bi-county agency providing water and wastewater services to Montgomery and Prince George's Counties in the Washington Capital region. WSSC is governed by six Commissioners with equal representation from each county and has developed its systems to the point where it is a national leader in the water and sewerage industry. The Commission is the among the ten largest water and wastewater utilities in the country, serving approximately 1.6 million people in a 1,000 square mile service area. In addition, the Commission provides services to 26 key Federal installations and facilities in the Washington area, including such important military facilities as Andrews Air Force Base; the National Imagery and Mapping Agency; the National Naval Medical Center; the Naval Surface Warfare Center; the U.S. Army Research Center. Numerous other State and local security-related installations and offices also receive service from the Commission.

Water treatment and distribution facilities operated by the Commission include three water supply reservoirs; two water filtration plants; 14 water pumping stations; 5,100 miles of water mains; and 54 treated-water storage facilities. Water production at Commission facilities is 166 million gallons per day. In terms of wastewater facilities, the Commission operates six wastewater treatment plants; 41 wastewater pumping stations; and approximately 4,900 miles of sewer mains.

MIDDLE POTOMAC RIVER STUDY

The Commission is committed to ensuring that the residents of the Montgomery and Prince George's Counties continue to have a clean, safe supply of drinking water. Consistent with that commitment is the need to improve that quality of the environment in the regions river basins and increase the ability to store water to meet increasing demand, particularly in times of drought.

The Corps of Engineers' Baltimore District (District) has recently completed a reconnaissance study of the water resources needs of the Middle Potomac River Watershed. The District found that there is a Federal interest in pursuing further study opportunities within the Middle Potomac study area and recommended that the study continue into the feasibility phase to begin the planning process for the

restoration of the Middle Potomac Watershed. One of the objectives identified for the feasibility phase was further study of the status of the region's water resources as they relate to water supply needs. One of the specific recommendations for further study is an effort to identify stresses on the Middle Potomac Watershed ecosystem at varying levels of water flows and the development of sustainable watershed management plans and planning tools. The Corps specifically mentioned WSSC as a potential non-Federal sponsor for this study. The Commission believes that such an effort, including an analysis of opportunities for additional water supply storage in the basin, is critical to the long-term health of the region. The Corps has estimated that the total cost of this feasibility study is $3 million and the Commission supports an initial request of $200,000 in fiscal year 2005 to begin conducting this study.

PATUXENT RIVER WATERSHED STUDY

The Commission owns and operates the Triadelphia and Rocky Gorge Reservoirs on the Patuxent River. Together these reservoirs hold 14 billion gallons of drinking water serving 700,000 people in Montgomery, Howard, and Prince Georges Counties in Maryland. Maintaining and improving the quality of the water in these reservoirs is a major objective of the Commission. The current buffer zones around these two reservoirs are relatively narrow. Expanding and restoring the habitat of these buffer zones would help ensure the long-term quality of the water in the reservoirs and also provide environmental benefits to the entire Patuxent River Basin. Improving the quality of the water in the Patuxent River would also prove beneficial to efforts to restore the health of the Chesapeake Bay.

In July of 1995, the Corps of Engineers completed the "Patuxent River Water Resources Reconnaissance Study", which was authorized by House Committee on Public Works and Transportation Resolution dated September 28, 1994. The purpose of the study was to develop a watershed plan for managing the water and related land resources of the Patuxent River watershed. The watershed plan that was developed addresses multi-purpose environmental solutions for the improvement of riparian, wetland, and aquatic habitat, improvements to water quality, recreation development and flood damage reduction measures. Among the actions recommended for implementation were riparian buffer projects and streambank protection and restoration projects. Such activities would reduce sedimentation and the runoff of pollutants.

The Commission believes that more detailed study of the areas around the Triadelphia and Rocky Gorge Reservoirs would be consistent with the watershed plan developed as part of the Patuxent River Water Resources Reconnaissance Study and could lead to environmental restoration activities that would prove beneficial to the entire region, including Chesapeake Bay. Therefore, the Commission supports a request of $200,000 to conduct a feasibility study.

PREPARED STATEMENT OF THE METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

On behalf of the Metropolitan Water Reclamation District of Greater Chicago (District), I want to thank the subcommittee for this opportunity to present our priorities for fiscal year 2005 and, at the same time, express our appreciation for your support of the District's projects in the years past. The District is the local sponsor for three Corps of Engineers priority projects of the Chicagoland Underflow Plan: the O'Hare, McCook and Thornton Reservoirs. We are requesting the subcommittee's full support for McCook and Thornton Reservoirs, as the O'Hare Reservoir has been completed. Specifically, we request the subcommittee to include a total of $43,300,000 in construction funding for the McCook and Thornton Reservoir projects in the bill. The following text outlines these projects and the need for the requested funding.

THE CHICAGOLAND UNDERFLOW PLAN

The Chicagoland Underflow Plan (CUP) consists of three reservoirs: the O'Hare, McCook and Thornton Reservoirs. These reservoirs are a part of the Tunnel and Reservoir Plan (TARP). The O'Hare Reservoir Project was fully authorized for construction in the Water Resources Development Act of 1986 (Public Law 99–662) and completed by the Corps in fiscal year 1999. This reservoir is connected to the existing O'Hare segment of the TARP. Adopted in 1972, TARP was the result of a multi-agency effort, which included officials of the State of Illinois, County of Cook, City of Chicago, and the District.

TARP was designed to address the overwhelming water pollution and flooding problems of the Chicagoland combined sewer areas. These problems stem from the fact that the capacity of the area's waterways has been overburdened over the years and has become woefully inadequate in both hydraulic and assimilative capacities. These waterways are no longer able to carry away the combined sewer overflow (CSO) discharges nor are they able to assimilate the pollution associated with these discharges. Severe basement flooding and polluted waterways are the inevitable result. More critically, larger storms generate back flows to Lake Michigan and pollute water supply for the six-county area. We point with pride to the fact that TARP was found to be the most cost-effective and socially and environmentally acceptable way for reducing these flooding and water pollution problems. Experience to date has reinforced such findings with respect to economics and efficiency.

The TARP plan calls for the construction of the new "underground rivers" beneath the area's waterways. The "underground rivers" are tunnels up to 35 feet in diameter and 350 feet below the surface. To provide an outlet for these tunnels, reservoirs will be constructed at the end of the tunnel systems. Approximately 101.5 miles of tunnels, constructed at a total cost of $2.2 billion, are operational. The final 7.9 miles of tunnels, costing $168 million, are under construction. The tunnels capture the majority of the pollution load by capturing all of the small storms and the first flush of the large storms. The completed O'Hare CUP Reservoir provides 350 million gallons of storage. This Reservoir has a service area of 11.2 square miles and provides flood relief to 21,535 homes in Arlington Heights, Des Plaines and Mount Prospect. In its first 6 years of operation, O'Hare CUP Reservoir has taken water in 18 storm events, and yielded $62.8 million in flood damage reduction benefits, which exceeds its $44.5 million construction costs. The Thornton and McCook Reservoirs are currently under construction, but until they are completed significant areas will remain unprotected. Without these outlets, the local drainage has nowhere to go when large storms hit the area.

Since its inception, TARP has not only abated flooding and pollution in the Chicagoland area, but has helped to preserve the integrity of Lake Michigan. In the years prior to TARP, a major storm in the area would cause local sewers and interceptors to surcharge resulting in CSO spills into the Chicagoland waterways and during major storms into Lake Michigan, the source of drinking water for the region. Since these waterways have a limited capacity, major storms have caused them to reach dangerously high levels resulting in massive sewer backups into basements and causing multi-million dollar damage to property.

Since implementation of TARP, 741 billion gallons of CSOs have been captured by TARP, that otherwise would have reached waterways. Area waterways are once again abundant with many species of aquatic life and the riverfront has been reclaimed as a natural resource for recreation and development. Closure of Lake Michigan beaches due to pollution has become a rarity. The elimination of CSOs will reduce the quantity of discretionary dilution water needed to keep the area waterways fresh. This water can be used instead for increasing the drinking water allocation for communities in Cook, Lake, Will and DuPage counties that are now on a waiting list to receive such water. Specifically, since 1977, these counties received an additional 162 million gallons of Lake Michigan water per day, partially as a result of the reduction in the District's discretionary diversion since 1980. Additional allotments of Lake Michigan water will be made to these communities, as more water becomes available from reduced discretionary diversion.

With new allocations of lake water, more than 20 communities that previously did not get lake water are in the process of building, or have already built, water mains to accommodate their new source of drinking water. The new source of drinking water will be a substitute for the poorer quality well water previously used by these communities. Partly due to TARP, it is estimated by IDOT that between 1981 and 2020, 283 million gallons per day of Lake Michigan water would be added to domestic consumption. This translates into approximately 2 million additional people that would be able to enjoy Lake Michigan water. This new source of water supply will not only benefit its immediate receivers but will also result in an economic stimulus to the entire Chicagoland area by providing a reliable source of good quality water supply.

THE MCCOOK AND THORNTON RESERVOIRS

The McCook and Thornton Reservoirs of the Chicagoland Underflow Plan (CUP) were fully authorized for construction in the Water Resources Development Act of 1988 (Public Law 100–676). These CUP reservoirs, as previously discussed, are a part of TARP, a flood protection plan that is designed to reduce basement flooding

due to combined sewer back-ups and inadequate hydraulic capacity of the urban waterways.

These reservoirs will provide a storage capacity of 18 billion gallons and will provide annual benefits of $115 million. The total potential annual benefits of these projects are approximately twice as much as their total annual cost. The District, as the local sponsor, has acquired the land necessary for these projects, and will meet its cost sharing obligations under Public Law 99–662.

These projects are a very sound investment with a high rate of return. They will enhance the quality of life, safety and the peace of mind of the residents of this region. The State of Illinois has endorsed these projects and has urged their implementation. In professional circles, these projects are hailed for their farsightedness, innovation, and benefits.

Based on two successive Presidentially-declared flood disasters in our area in 1986 and again in 1987, and dramatic flooding in the last several years, we believe the probability of this type of flood emergency occurring before implementation of the critical flood prevention measure is quite high. As the public agency for the greater Chicagoland area responsible for water pollution control, and as our past sponsorship for flood control projects, we have an obligation to protect the health and safety of our citizens. We are asking your support in helping us achieve this necessary and important goal of construction completion.

We appreciate that the subcommittee has included critical levels of funds for these important projects. We were delighted to see the $19,500,000 in construction funds for the McCook and Thornton Reservoirs included in the Fiscal Year 2004 Energy and Water Development Appropriations Act. In addition, an additional $1,000,000 was included in the Fiscal Year 2004 Consolidated Appropriations bill. However, it is important that we receive a total of $43,300,000 in construction funds in fiscal year 2005 to maintain the schedule of these critical projects. This funding is critical to continue the construction of the McCook Reservoir on schedule, in particular, to complete construction of the grout curtain, distribution tunnels, and pumps and motors and to accelerate the design of the Thornton Reservoir. The community has waited long enough for protection and we need these funds now to move the project in construction. We respectfully request your consideration of our request.

SUMMARY

Our most significant recent flooding occurred on February 20, 1997, when almost 4 inches of rain fell on the greater Chicagoland area. Due to the frozen ground, almost all of the rainfall entered our combined sewers, causing sewerage back-ups throughout the area. When the existing TARP tunnels filled with approximately 1.2 billion gallons of sewage and runoff, the only remaining outlets for the sewers were our waterways. Between 9:00 p.m. and 3:00 a.m., the Chicago and Calumet Rivers rose 6 feet. For the first time since 1981 we had to open the locks at all three of the waterway control points; these include Wilmette, downtown Chicago, and Calumet. Approximately 4.2 billion gallons of combined sewage and stormwater had to be released directly into Lake Michigan.

Given our large regional jurisdiction and the severity of flooding in our area, the Corps was compelled to develop a plan that would complete TARP and be large enough to accommodate the area we serve. With a combined sewer area of 375 square miles, consisting of the city of Chicago and 51 contiguous suburbs, there are 1,443,000 structures within our jurisdiction, which are subject to flooding. The annual damages sustained exceed $150 million. If TARP, including the CUP Reservoirs were in place, these damages could be eliminated. We must consider the safety and peace of mind of the 2 million people who are affected as well as the disaster relief funds that will be saved when these projects are in place. As the public agency in the greater Chicagoland area responsible for water pollution control, and as the regional sponsor for flood control, we have an obligation to protect the health and safety of our citizens. We are asking your support in helping us achieve this necessary and important goal. It is absolutely critical that the Corps' work, which has been proceeding for a number of years, now proceeds on schedule through construction.

Therefore, we urgently request that a total of $43,300,000 in construction funds be made available in the Fiscal Year 2005 Energy and Water Development Appropriations Act to continue construction of the McCook and Thornton Reservoir Projects.

Again, we thank the subcommittee for its support of this important project over the years, and we thank you in advance for your consideration of our request this year.

PREPARED STATEMENT OF THE NAPA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

SUMMARY RECOMMENDATIONS

Project	Funding request
Napa River Flood Control: Construction	$20,000,000
Napa Valley Watershed Management: Feasibility Study	200,000

NAPA RIVER FLOOD CONTROL PROJECT

Background

The project is located in the city and county of Napa, California. The population in the city of Napa, approximately, 67,000 in 1994, is expected to exceed 77,000 this year. Excluding public facilities, the present value of damageable property within the project flood plain is well over $500 million. The Napa River Basin, comprising 426 square miles, ranging from tidal marshes to mountainous terrain, is subject to severe winter storms and frequent flooding. In the lower reaches of the river, flood conditions are aggravated by high tides and local runoff. Floods in the Napa area have occurred in 1955, 1958, 1963, 1965, 1986 (flood of record), 1995, and 1997. In 1998, the river rose just above flood stage on three occasions, but subsided before major property damage occurred. In December of 2002, flooding occurred from the Napa Creek at the transition to the Napa River, resulting in damage to numerous residents and several businesses.

Since 1962, 27 major floods have struck the Valley region, exacting a heavy toll in loss of life and property. The flood on 1986, for example, killed three people and caused more than $100 million in damage. Damages throughout Napa County totaled about $85 million from the January and March 1995 floods. The floods resulted in 27 businesses and 843 residences damaged countrywide. Almost all of the damages from the 1986, 1995, and 1997 floods were within the project area. Congress has authorized a flood control project since 1944, but due to expense, lack of public consensus on the design and concern about environment impacts, a project had never been realized. In mid-1995, Federal and State resource agencies reviewed the plan and gave notice to the Corps that this plan had significant regulatory hurdles to face.

Approved Plan—Project Overview

In an effort to identify a meaningful and successful plan, a new approach emerged that looked at flood control from a broader, more comprehensive perspective. Citizens for Napa River Flood Management was formed, bringing together a diverse group of local engineers, architects, aquatic ecologists, business and agricultural leasers, environmentalists, government officials, homeowners and renters and numerous community organizations.

Through a series of public meetings and intensive debate over every aspect of Napa's flooding problems, the Citizens for Napa River Flood Management crafted a flood management plan offering a range of benefits for the entire Napa region. The Corps of Engineers served as a partner and a resource for the group, helping to evaluate their approach to flood management. The final plan produced by the Citizens for Napa River Flood Management was successfully evaluated through the research, experience and state-of-the-art simulation tools developed by the Corps and numerous international experts in the field of hydrology and other related disciplines. The success of this collaboration serves as a model for the Nation.

Acknowledging the river's natural state, the project utilizes a set of living river strategies that minimize the disruption and alteration of the river habitat, and maximizes the opportunities for environmental restoration and enhancement throughout the watershed.

The Corps has developed the revised plan, which provides 100-year protection, with the assistance of the community and its consultants into the Supplemental General Design Memorandum (SGDM) and its accompanying draft Environmental Impact Statement/Environmental Impact Report (SEIS/EIR). Construction of the project began 3 years ago. The coalition plan now memorialized in the Corps final documents includes the following engineered components: lowering of old dikes, marsh plain and flood plain terraces, oxbow dry bypass, Napa Creek flood plain terrace, upstream and downstream dry culverts along Napa Creek, new dikes, levees and flood walls, bank stabilization, pump stations and detention facilities, and bridge replacements. The benefits of the plan include reducing or elimination of loss of life, property damage, cleanup costs, community disruption due to unemployment

and lost business revenue, and the need for flood insurance. In fact, the project has created an economic renaissance in Napa with new investment, schools and housing coming into a livable community on a living river. As a key feature, the plan will improve water quality, create urban wetlands and enhance wildlife habitats.

The plan will protect over 7,000 people and over 3,000 residential/commercial units from the 100-year flood event on the Napa River and its main tributary, the Napa Creek, and the project has a positive benefit-to-cost ratio under the Corps calculation. One billion dollars in damages will be saved over the useful life of the project. The Napa County Flood Control District is meeting its local cost-sharing responsibilities for the project. A countywide sales tax, along with a number of other funding options, was approved 4 years ago by a two-thirds majority of the county's voters for the local share. Napa is California's highest repetitive loss community. This plan is demonstrative of the disaster resistant community initiative, as well, as the sustainable development initiatives of FEMA and EPA.

Project Synopsis

Fiscal Year 2004 Funding

The Fiscal Year 2004 Energy and Water Development Appropriations Act included $10,000,000 to continue construction of the project. In addition, the Fiscal Year 2004 Consolidated Appropriations bill included $2,750,000 for the project. The funding was sought for demolition of buildings and fixtures on 24 parcels that have been acquired by the non-Federal sponsor, relocation of the Napa Valley Wine Train rail line for an approximate 3-mile distance, as well as relocation of the facilities serving this public utility, removal of 190,000 cubic yards of soil which was contaminated by petroleum products, construction of marsh and flood plain terraces for an approximate 1.5-mile distance. Included in this amount is the reimbursement to the non-Federal sponsor for expenditures in excess of 45 percent of the total project costs to date. The local sponsor has expended $110 million, as compared to Federal sponsor expenditures to date of approximately $35 million.

Necessary Fiscal Year 2005 Funding

Funding for the Napa River Project during 2005 in the amount of $20,000,000 is needed to continue construction of the project. These funds will be used to accomplish the following tasks:

—Complete HTRW remediation along the east side of the river for additional 2 miles involving removal of an additional 200,000 cubic yards of contaminated soil;
—Initiate and complete the Contract 1B excavation work in Kennedy Park;
—Initiate Contract 2East excavation work on the east side of river from Imola to the Bypass;
—Construct two railroad bridges, one over the bypass and one over the Napa River and relocate approximately 3,100 feet of railroad track replacement;
—Continue engineering and design on future contracts;
—Accomplish Construction Management on contract underway;
—Initiate reimbursement of local sponsor with funds not required for the above.

Included in this amount is the reimbursement to the non-Federal sponsor for expenditures in excess of 74 percent of the total project costs to date. By the end of June, 2003 the non-Federal sponsor will have expended $110 million. By the end of June, 2004 the non-Federal sponsor will have spent $130,000,000.

NAPA VALLEY WATERSHED MANAGEMENT

Background

The Napa Valley watershed faces many challenges and stresses to its environmental health and flood management abilities. From a healthy river point of view, the Napa River has been on a recovery path since its low point in the 1960's, when the last of the native salmon were taken from the system by severe water pollution and habitat destruction. Steelhead trout have survived as a remnant population of 200 that is presently in need of higher quality and more extensive spawning areas for recovery to a significant population. Beginning populations of fall run Chinook salmon have taken up residence in the watershed in those few areas available for spawning. While the chemical and wastewater pollution of earlier years has been effectively dealt with, excess sediment is still a critical stress on the salmon population, as it is to the spawning and rearing areas of the river in the estuarine zone upstream of San Pablo Bay, populated by delta smelt, splittail, green sturgeon and striped bass.

The U.S. EPA and Region II Water Quality Control Board have prioritized the River as an impaired water body because of the sediment production. The excess

sediment generated in the watershed suffocates spawning areas, reduces the stream's flood-carrying ability, fills deep pools, increases turbidity in the stream and estuary, carries with it nutrients that bring significant algae blooms during the summer and fall, and changes the morphological balance of the streams and river toward more unstable conditions.

In order to address issues such as encroachment of the river and loss of wetlands and to develop local tools for improving natural resource management, the U.S. Army Corps of Engineers, San Francisco District (Corps) and the Napa County Flood Control and Water Conservation District (NCFCWCD) is currently developing a Napa Valley Watershed Management Plan (WMP) which identifies problems and opportunities for implementing environmentally and economically beneficial restoration in the Napa Valley watershed providing ecosystem benefits, such as flood reduction, erosion control, sedimentation management, and pollution abatement. The plan, which the District is requesting funds for, would include the identification, review, refinement, and prioritization of restoration and flood protection opportunities with an emphasis on restoration of the watershed's ecosystem (e.g.: important plant communities, healthy fish and wildlife populations, rare and endangered habitats and species and wildlife and riparian habitats).

The goal is to complete the WMP by providing technical, planning, and design assistance to the non-Federal interests for carrying out watershed management, restoration and development on the Napa River and its tributaries from Soscol Ridge, located approximately 5 miles south of the city of Napa, to Mt. St. Helena, the northern-most reach of the Napa River watershed, California. A management program incorporating flood protection and environmental restoration would be developed as a result of the watershed plan.

To address the above mentioned and other local, regional, and national watershed concerns, the Napa County Board of Supervisors appointed a Napa County Watershed Task Force (WTF) to identify community based and supported solutions. The WTF submitted their recommendation for further action to the Napa County Board of Supervisors.

The Corps and the NCFCWCD developed the Napa Valley Watershed Project Management Plan with input from the Napa County Planning Department (NCPD), Napa County Up-Valley Cities, Napa County Watershed Task Force (WTF), Napa County Resource Conservation District (RCD), Regional Water Quality Control Board (RWQCB), the San Francisco Estuary Institute (SFEI), and other regional and local stakeholders.

In an effort to identify problems and opportunities for implementing beneficial restoration in the Napa Valley Watershed, the Napa County Flood Control District is requesting the Napa Valley Watershed Management Study be continued by the Corps of Engineers. The authority for this study is the Northern California Streams Study Authority stemming from the Rivers and Harbors Act of 1962, Public Law 87–874. Specifically, the Napa County Flood Control District is working closely with the Corps in the feasibility report to examine the watershed management needs, including flood control, environmental restoration, erosion control, storm water retention, storm water runoff management, water conservation and supply, wetlands restoration, sediment management and pollution abatement in the Napa Valley, including the communities of Napa, Yountville, St. Helena, Calistoga and the unincorporated areas of Napa County.

Project Synopsis

Fiscal Year 2004 Budget Funding

The fiscal year 2004 Energy and Water Development Appropriations Act included $200,000 to continue the Napa Valley Watershed Management Study. Funds are being used for data evaluation and outreach and to create a data monitoring framework for the watershed. This framework, known as the Watershed Information Center (WIC), will serve as a coordinating body and data-monitoring framework for the watershed. The WIC will serve as a library for existing biological and physical data on the watershed. It can serve as a forum for the multiple agencies, academic researcher and non-profit organizations engaged in monitoring in the watershed.

Necessary Fiscal Year 2005 Funding

Funding for the Napa Valley Watershed Management Study during fiscal year 2005 in the amount of $200,000 is needed to continue work on the Napa Valley Watershed Resource Analysis & Report. The purpose of this work is to provide a foundation assessment for resource allocation that improves the habitat and water quality in the Napa River watershed. This program was begun in fiscal year 2004. Prior year activities have included aerial photography/mapping of the watershed. This work has been successfully completed and is in use by Napa County, its residents,

resource groups and interested parties. It provides a Geographical Information System (GIS) base for the management of watershed information. Also previous watershed funding has developed an internet based information system, the Watershed Information Center (WIC). This web based communication allows the resources of watershed studies to be available to all interested persons. The system has been developed and is currently being put online for general use. These first activities of the Napa Valley Watershed Management Study are cornerstones of future watershed planning and enhancement.

PREPARED STATEMENT OF THE CITY OF ST. HELENA, CALIFORNIA

Project	Request
St. Helena NAPA River Restoration Project: (Section 206 Aquatic Ecosystem Restoration Program)	$800,000
York Creek Dam Removal and Restoration Project: (Section 206 Aquatic Ecosystem Restoration Program) ...	800,000

CITY OF ST. HELENA

The City of St. Helena is located in the center of the wine growing Napa Valley, 65 miles north of San Francisco. The area was settled in 1834 as part of General Vallejo's land grant. The City of St. Helena was incorporated as a City on March 24, 1876 and reincorporated on May 14, 1889.

The City from its inception has served as a rural agricultural center. Over the years, with the growth and development of the wine industry, the City has become an important business and banking center for the wine industry. The City also receives many tourists as a result of the wine industry. While, the main goal of the City is to maintain a small-town atmosphere and to provide quality services to its citizens, this is becoming increasingly difficult. Regulatory, administrative and resource requirements placed on the City through the listing of threatened and endangered species under the Endangered Species Act on the Napa River, as well as significant Clean Water Act requirements require the City with a small population base to face significant financial costs.

The City of St. Helena is a General Law City and operates under the Council-City Manager form of government. The City Council is the governing body and has the power to make and enforce all laws and set policy related to municipal affairs. The official population of the City of St. Helena as of January 1, 2002 is 6,041. St. Helena is a full service City and encompasses an area of 4 square miles. Because of its size and its rural nature, St. Helena has serious infrastructure, as well as, flood protection and environmental needs that far exceed its financial capabilities.

The Napa River flows along the north boundary of the City of St. Helena in northern Napa County. The overall Napa River Watershed historically supported a dense riparian forest and significant wetland habitat. Over the last 200 years, approximately 6,500 acres of valley floor wetlands have been filled in and 45,700 acres of overall watershed have been converted to urban and agricultural uses. This degradation of natural habitats has had a significant effect on water quality, vegetation and wildlife, and aquatic resources within the Napa River Watershed.

Surface water quality of the Napa River is dependent upon the time of year, runoff from York and Sulphur Creeks, and urban area discharges. During the winter months when streamflow is high, pollutants are diluted; however, sedimentation and turbidity is high as well. During the summer months when streamflow is low, pollutants are concentrated and oxygen levels are low, thereby decreasing water quality. Agricultural runoff adds pesticides, fertilizer residue, and sometimes sediment. Discharges from urban areas can include contaminated stormwater runoff and treated city wastewater. The Napa River has been placed on the Clean Water Act 303(d) List and TMDL Priority Schedule due to unacceptable levels of bacteria, sedimentation, and nutrients. It is against this backdrop that the City of St. Helena faces its biggest challenges.

ST. HELENA NAPA RIVER RESTORATION PROJECT

The Napa River and its riparian corridor are considered Critical Habitat for Steelhead and Salmon Recovery. The Steelhead is one of 6 federally listed threatened and endangered species within the Napa River and its adjoining corridor which requires attention. Current conditions are such that natural habitats and geomorphic processes of the Napa River are highly confined with sediment transport and geomorphic work occurring in a limited area of the streambed and channel banks. Napa River's habitat for the steelhead is limited in its ability to provide prime spawning habitat. Limitations include: (1) urbanization removing significant

amounts of shading and cover vegetation within and adjacent to the river; and (2) a detrimental lack of pool habitat. Encroachment and channelization of Napa River have degraded riparian habitat for rearing, resident, and migratory fish and wildlife. The lack of riparian cover, increasing water temperature and sedimentation in the river, has resulted in poor water quality. These changes have reduced the project area's ability to support the re-establishment of listed species.

In an effort to address these Federal environmental issues, the St. Helena Napa River Restoration Project, a Section 206 Aquatic Ecosystem Restoration Project, was identified in the Napa Valley Watershed Management Feasibility Study in April of 2001 as a specific opportunity for restoration. The project would restore approximately 3 miles (20 acres) of riparian habitat and improve the migratory capacity of federally listed threatened and endangered species, providing greater access to rearing, resident and migratory habitats in the 80-square-mile watershed above the project area.

The project will interface with and complement the City of St. Helena's multiple objective flood project, the St. Helena Flood Protection and Flood Corridor Restoration Project, which will provide flood damage reduction through restoration and re-establishment of the natural floodplain along the project reach, setting back levees and the re-creation and restoration of a natural floodway providing high value riparian forest.

This Section 206 project is necessary to ensure and improve the viability of Federal and State listed species by providing rearing, resident and migratory habitat in the project's 3-mile stream corridor. The project will also work to improve area habitat to benefit the migration of steelhead to high value fisheries habitat in upper watershed channel reaches. In an effort to build on recent geomorphic and riparian studies on the Napa River, the Corps will use these efforts from Swanson Hydrology and Geomorphology and Stillwater Science to secure baseline information for this project.

The City of St. Helena respectfully requests the committee's support for $800,000 for completing the Detailed Project Report and initiating plans and specifications for the St. Helena Napa River Restoration Project under the Corps' Section 206 Aquatic Ecosystem Restoration Program.

YORK CREEK DAM REMOVAL AND RESTORATION PROJECT

York Creek originates from the Coast Range on the western side of the Napa Valley Watershed at an elevation of approximately 1,800 feet and flows through a narrow canyon before joining the Napa River northeast of St. Helena. York Creek Dam on York Creek has been identified as a significant obstacle to passage for federally listed Steelhead in the Central California Coast. In fact, it has been determined that York Creek Dam is a complete barrier to upstream fish migration. In addition, since the City of St. Helena has owned York Creek Dam, there have been a number of silt discharges from the dam into York Creek that have caused fish kills.

Under the Corps of Engineers' Section 206 Authority, a study is underway to remove the dam structure and to restore the creek in an effort to improve fish passage and ecological stream function for this Napa River tributary. Alternatives to be investigated and pursued include complete removal of York Creek Dam, appurtenances and accumulated sediment, re-grading and restoring the creek through the reservoir area. Rather than merely removing the dam and accumulated sediments, alternatives under consideration would use a portion of the material to re-grade the reservoir area to simulate the configuration of the undisturbed creek channel upstream. Material could also be used to fill in and bury the spillway and to fill in the scour hole immediately downstream of the spillway. Use of material on site will greatly reduce hauling and disposal costs, as well as recreating a more natural creek channel through the project area.

The revegetation plan for the site following removal of the earthen dam will restore a self-sustaining native plant community that is sufficiently established to exclude nonnative invasive plants. Revegetation will replace vegetation that is removed due to construction and stabilize sediments in the stream channel riparian corridor and upper bank slopes. The species composition of the revegetated site will be designed to match that of (relatively) undisturbed sites both above and below the project site. In terms of expected outcomes for the project, the removal of York Creek Dam will open an additional 2 miles of steelhead habitat upstream of the dam, and the channel restoration will reestablish natural channel geomorphic processes and restore riparian vegetation.

The City of St. Helena respectfully requests the committee's support for $800,000 in appropriations under the Corps of Engineers' Section 206 Aquatic Ecosystem Restoration Program, so that the efforts to allow the continuation of the Detailed

Project Report can stay on schedule for the York Creek Dam Removal and Restoration Project.

PREPARED STATEMENT OF THE CALAVERAS COUNTY WATER DISTRICT

Project	Request
CALAVERAS COUNTY WATERSHEDS STUDY	$1,500,000

CALAVERAS COUNTY WATER DISTRICT

Calaveras County (County) is located in the central Sierra Nevada foothills about 25 miles east of the Sacramento-San Joaquin Delta (Delta). Ground elevations within the County increase from 200 feet above mean sea level near the northwest part of the County to 8,170 feet near Alpine County. It is a predominately rural county with a relatively sparse but rapidly developing population and limited agricultural and industrial development. Calaveras County is located within the watersheds of the Mokelumne, Calaveras, and Stanislaus Rivers. All three rivers flow west, through San Joaquin County into the Delta. Most of the County is underlain by the igneous and metamorphic rocks of the Sierra Nevada. Alluvial deposits of the Central Valley, which overlie the westward plunging Sierra Nevada, are present along an 80 square-mile area located along the western edge of the county and are part of the Eastern San Joaquin County Groundwater Basin (ESJCGB). This on-going Calaveras County Watersheds Study under the authority of the Corps of Engineers' Sacramento and San Joaquin Comprehensive Basin Study is focused on the western part of Calaveras County.

In the fall of 1946, the Calaveras County Water District (CCWD) was organized under the laws of the State of California as a public agency for the purpose of developing and administering the water resources in Calaveras County. Therefore, CCWD is governed by the California Constitution and the California Government and Water Codes. CCWD is not a part of, or under the control of, the County of Calaveras. CCWD was formed to preserve and develop water resources and to provide water and wastewater service to the citizens of Calaveras County.

Under State law, CCWD, through its Board of Directors, has general powers over the use of water within its boundaries. These powers include, but are not limited to: the right of eminent domain, authority to acquire, control, distribute, store, spread, sink, treat, purify, reclaim, process and salvage any water for beneficial use, to provide sewer service, to sell treated or untreated water, to acquire or construct hydroelectric facilities and sell the power and energy produced to public agencies or public utilities engaged in the distribution of power, to contract with the United States, other political subdivisions, public utilities, or other persons, and subject to the California State Constitution, levy taxes and improvements.

CALAVERAS COUNTY WATERSHEDS STUDY—UNDER THE AUTHORITY OF THE SACRAMENTO AND SAN JOAQUIN COMPREHENSIVE BASIN STUDY

Project Need

The Calaveras County Watersheds Study CCWD is being pursued through the Corps of Engineers' program under the authority of the Sacramento and San Joaquin Comprehensive Basin Study and includes a review of project needs and opportunities within the Mokelumne River, Calaveras River and Stanislaus River Watersheds.

CCWD is responsible for developing and administering the water resources of Calaveras County. Historically, a significant portion of the water needs of Calaveras County have been met mostly with surface water from the Mokelumne, Calaveras or Stanislaus Rivers. One of the overriding themes of the watershed study is to identify and maximize the use of District surface water resources on the Mokelumne, Calaveras and Stanislaus Rivers in conjunction with the groundwater supply to improve supply reliability.

Historically, groundwater has been used only to meet demands of scattered single family homes. This study area, which is part of the Eastern San Joaquin County Groundwater Basin (ESJCGB), has been identified by the State of California as being in a state of overdraft. The California Department of Water Resources water level data for wells near the Calaveras-San Joaquin County line, have recorded water level declines ranging from 0.6 to 1.5 feet per year over the last 40 years. Without programs to mitigate the groundwater overdraft, groundwater levels will continue to decline in the groundwater basin.

In an effort to gain better understanding of the condition of the water sources, and issues and opportunities including flooding and the use of return flows, water supply and conjunctive use, as well as, the surrounding environment, the comprehensive watershed approach is being pursued.

While this is a watershed study, the approach is to focus in on the CCWD's stated priority areas to develop project resolutions. The first three critical project areas to be studied include the following: Cosgrove Creek, Wallace Lake Estates and the Burson area.

Cosgrove Creek

Cosgrove Creek is an intermittent stream within the Calaveras River watershed. The creek enters the lower Calaveras River downstream from the spillway of New Hogan Lake. During average precipitation years, stream flow is present from late fall through early to mid-summer.

Cosgrove is approximately 9.8 miles long and has a drainage area of 21 square miles. The upper two-thirds of the Cosgrove Creek watershed is used for grazing and the lower third has been subject to urban development. A portion of this lower reach, which passes through the adjacent communities of Valley Springs, La Contenta and Rancho Calaveras, has experienced many incidents of flooding and resulting damage to residential properties.

The objective of this effort is to produce a feasibility study on project alternatives for diverting Cosgrove Creek during peak flow periods to provide for flood protection while putting the diverted water to beneficial use. The solution will be a unique multiple purpose project in that it would both divert flood flows and put the yield to beneficial use for higher community needs such as creating wetlands and environmental restoration, and developing complementary recreational uses, such as ball fields and hiking or equestrian trails.

Wallace Lake Estates

Wallace Lake is located near the western edge of Calaveras County, just north of Highway 26. The lake is part of the Wallace Lake Estates subdivision.

Wallace Lake is also situated between East Bay Municipal Utility District's (EBMUD's) Camanche Reservoir and Mokelumne aqueduct. Qualitative observations have noted that, after filling, lake volume appears to diminish far more rapidly than would be expected. The Wallace Lake Community Services District would like to maintain the lake at full capacity all year. It is reported that pumping well water into the lake does not maintain desired levels. This has led to speculation regarding the possibility that, if the lake is percolating into the local groundwater table, this could be an attribute that could intentionally be put to use to facilitate groundwater recharge and development of a conjunctive use project.

The primary focus of this study is to assess both the local hydrogeological conditions with respect to using the lake for groundwater recharge and the means of transporting Mokelumne River water to the lake.

The objective of this investigation is to produce an assessment and feasibility study as a basis for developing project alternatives for bringing Mokelumne water to Wallace Lake and the viability of utilizing the lake for the purpose of demonstrating a groundwater infiltration gallery, as well as environmental restoration.

Burson Area

Most of the area within Calaveras County north of Highway 12 and south of the Mokelumne River, including the Burson area, is currently wholly dependent upon groundwater and has experienced critical water shortages for the last 20 years. Issues include low volume or no water at all in some wells and degradation of water quality involving taste, smell and chemical contamination. The problems have continued to worsen.

One possible alternative project solution is conjunctive use of Mokelumne River water to recharge the groundwater basin with high quality surface water. (It appears unlikely that use of Wallace Lake for recharge purposes will assist this particular area of need.)

A second alternative is to investigate the possible presence of and potential use for high yielding zones, including an ancient underground river within the defined aquifer area, that could be tapped without detrimentally impacting existing users. These project alternatives would include an environmental restoration component. The objective of this investigation is to produce an assessment and feasibility study as a basis for developing a drinking water system for the Burson area of Calaveras County.

CCWD is working closely with the Sacramento Corps District in the development of a Feasibility Cost Sharing Agreement in order for the Calaveras County Watersheds Study to advance and for these projects to proceed. In an effort for the feasi-

bility study to move towards project formulation, CCWD is seeking $1.5 million for the Calaveras County Watersheds Study, as a separately identified effort under the authority of the Sacramento and San Joaquin Comprehensive Basin Study, in the Fiscal Year 2005 Energy and Water Development Appropriations Bill.

PREPARED STATEMENT OF CAMERON COUNTY, TEXAS

We express full support of the inclusion in the fiscal year 2005 budget for the full capability of the USACE for $831,000.

HISTORY AND BACKGROUND

On September 15, 2001, a tugboat and several barges struck the Queen Isabella Causeway on the Gulf Intracoastal Waterway at the mouth of the Brownsville Ship Channel east of Port Isabel. The accident took the lives of eight people.

A January 1997 Reconnaissance Report of the Gulf Intracoastal Waterway-Corpus Christi Bay to Port Isabel, Texas (Section 216), was conducted by the United States Army Corps of Engineers. The study was initiated to determine the Federal interest in rerouting the GIWW. The information available at the time indicated a less than favorable benefit to cost ratio for the proposed realignment. Since the September 15 incident, the Corps, Cameron County officials, and a number of local entities and residents of the County have reopened discussion of the rerouting of the GIWW. The Corps of Engineers agrees that new facts regarding the safety of the current alignment warrants a revisiting of the issue to determine the viability of rerouting the channel in a direct line from the point where the waterway crosses underneath the causeway to the point where it reaches the Brazos Santiago Pass and the Brownsville Ship Channel. The route in question is the exact one traveled by the tugboat and barges that struck the bridge on September 15, killing eight people. The tugboat captain failed to negotiate the sharp turn after it passed through the Long Island Swing Bridge. This particular turn is one of the most dangerous on the entire waterway.

PROJECT DESCRIPTION

The reconnaissance study would allow the Corps to reopen the examination of the rerouting of the GIWW on the basis of safety. The measure would seek to eliminate safety hazards to Port Isabel and Long Island residents created by barges that move large quantities of fuel and other potentially dangerous explosive chemicals through the existing route under the Queen Isabella Causeway. The overall goal of the study would be to enhance safety and transportation efficiency on this busy Texas waterway by removing the treacherous turn tug and barge operators are forced to make as they navigate the passage through the Long Island Swing Bridge. In addition to the hazardous curve, the winding and congested course taken by the waterway through the City of Port Isabel adds needless distance and time to the transportation of goods to and from Cameron County ports. These costs are borne not only by commercial operators using the waterway, but also by consumers and businesses all across Texas and the Nation. The rerouting would also seek to correct the adverse impact of waterway traffic on Cameron County residents. Apart from the obvious potential for damage to the Queen Isabella Causeway, adverse impacts are created by waterway traffic in the form of traffic delays associated with the Long Island Swing Bridge and the transportation of hazardous materials within several hundred feet of densely populated areas in Port Isabel and Long Island. Currently, a 1950's era swing bridge that floats in the waterway channel connects Long Island and the City of Port Isabel. As waterborne traffic approaches the bridge, cables are used to swing it from the center of the channel and then swing it back into place. This costly and time-consuming process, which frequently backs up traffic into the downtown business district of Port Isabel, is estimated to drain hundreds of dollars a year from the economy of this economically distressed area. More serious problems are created when the heavily used cables or winch motors on the swing bridge fail, leaving the bridge stuck in an open or closed position. Equipment failures often cause delays for several days and leave Long Island residents cut-off from vehicle access or the ports of Port Isabel and Brownsville cut-off from in-bound and outbound barge traffic. During these times, supplies of vital commodities are halted all across the Rio Grande Valley as stocks dwindle and produce and finished goods begin to pile up.

IMPACT OF THE GULF INTRACOASTAL WATERWAY

The Gulf Intracoastal Waterway is an integral part of the inland transportation system of the United States. Stretching across more than 1,300 coastal miles of the Gulf of Mexico, this man-made, shallow-draft canal moves a large variety and great number of vessels and cargoes. The 426 miles of the waterway running through Texas makes it possible to supply both domestic and foreign markets with chemicals, petroleum and other essential goods. Barge traffic is essential to many of the port economies from Texas to Great Lakes ports, indeed, throughout the entire GIWW. Some ports feel their future strategic plans are closely linked to the efficient operation of the GIWW. This is true for ports that rely almost entirely on barge traffic as well as ports that function primarily as recreational facilities. Most of the cargo moved along Texas waterways is petroleum and petroleum products. The GIWW is well suited for the movement of such cargo, and, therefore, has allowed many of the smaller, shallow-draft facilities to engage in both interstate and international trade. Commercial fishing access via the GIWW has had a significant impact on these port economies as well.

CONCLUSION

A 1995 Lyndon Baines Johnson School of Public Affairs report entitled "The Texas Seaport and Inland Waterway System" warned of concern with the safe operation of barges on the GIWW citing, "a serious accident perhaps involving a collision between two barges carrying hazardous materials could force closure of the waterway". No one could foresee the terrible accident that occurred on September 15. The lives of eight people came to an end and the lives of their loved ones was irrevocably changed forever. This important waterway must be improved to prevent another tragedy. The $831,000 that must be added to the fiscal year 2005 appropriations bill will allow the Corps of Engineers to continue to study a preferred plan to remedy this dangerous situation. The government has already invested $400,000 to move this project forward. Cameron County, the users of the GIWW, and the residents of the area respectfully requests the addition of this much-needed appropriation.

PREPARED STATEMENT OF THE BRAZOS RIVER HARBOR NAVIGATION DISTRICT

We express full support of the inclusion in the fiscal year 2005 budget for the full capability of the USACE of $700,000.

President's budget included $300,000.

Additional funds needed for fiscal year 2005 $400,000.

HISTORY AND BACKGROUND

Port Freeport is an autonomous governmental entity authorized by an act of the Texas Legislature in 1925. It is a deep-draft port, located on Texas' central Gulf Coast, approximately 60 miles southwest of Houston, and is an important Brazos River Navigation District component. The port elevation is 3 to 12 feet above sea level. Port Freeport is governed by a board of six commissioners elected by the voters of the Navigation District of Brazoria County, which currently encompasses 85 percent of the county. Port Freeport land and operations currently include 186 acres of developed land and 7,723 acres of undeveloped land, 5 operating berths, a 45-inch deep Freeport Harbor Channel and a 70-foot deep sink hole. Future expansion includes building a 1,300-acre multi-modal facility, cruise terminal and container terminal. Port Freeport is conveniently accessible by rail, waterway and highway routes. There is direct access to the Gulf Intracoastal Waterway, Brazos River Diversion Channel, and, State Highways 36 and 288. Located just 3 miles from deep water, Port Freeport is one of the most accessible ports on the Gulf Coast.

PROJECT DESCRIPTION

The fiscal year 2002 Energy and Water appropriations signed into law included a $100,000 appropriation to allow the United States Army Corps of Engineers (USACE) to conduct a reconnaissance study to determine the Federal interest in an improvement project for Freeport Harbor, Texas. The USACE, in cooperation with the Brazos River Harbor Navigation District as the local sponsor, has completed that study. The report indicates that "transportation savings in the form of National Economic Development Benefits (NED) appear to substantially exceed the cost of project implementation", thus confirming "a strong Federal interest in conducting the feasibility study of navigation improvements at Freeport Harbor". In fact, the Corps anticipates a benefit to cost ratio of the project to be at an impressive more

than 20 to 1 benefit to cost. The fiscal year 2003 budget fully funded the Corps capability of $500,000 to begin the feasibility study. The fiscal year 2004 budget included $250,000 with an additional $250,000 reprogrammed by the USACE to continue the feasibility study without delay.

Port Freeport has the opportunity to solidify significant new business for Texas with this improvement project. In addition, the improvement to the environment by taking a huge number of trucks off of the road, transporting goods more economically and environmentally sensitive by waterborne commerce is infinitely important to the community, the State, and the Nation. Moreover, the enhanced safety of a wider channel cannot be overstated.

ECONOMIC IMPACT OF PORT FREEPORT

Port Freeport is sixteenth in foreign tonnage in the United States and twenty-fourth in total tonnage. The port handled over 25 million tons of cargo in 2003 and an additional 75,000 T.E.U.'s of containerized cargo. It is responsible for augmenting the Nation's economy by $7.06 billion annually and generating 30,000 jobs. Its chief import commodities are bananas, fresh fruit and aggregate while top export commodities are rice and chemicals. The port's growth has been staggering in the past decade, becoming one of the fastest growing ports on the Gulf Coast. Port Freeport's economic impact and its future growth is justification for its budding partnership with the Federal Government in this critical improvement project.

DEFENSE SUPPORT OF OUR NATION

Port Freeport is a strategic port in times of National Defense of our Nation. It houses a critically important petroleum oil reserve—Bryan Mound. It also is the only port in Texas that is being considered by the United States Navy and General Dynamics as the site for the building of Amphibious Assault Vehicles. Its close proximity to State Highways 36 and 288 make it a convenient deployment port for Fort Hood. In these unusual times, it is important to note the importance of our ports in the defense of our Nation and to address the need to keep our Federal waterways open to deep-draft navigation.

COMMUNITY AND INDUSTRY SUPPORT

This proposed improvement project has wide community and industry support. The safer transit and volume increase capability is an appealing and exciting prospect for the users of Freeport Harbor and Stauffer Channel. The anticipated more than 20 to 1 benefit to cost ratio that was indicated from the Corps of Engineers reconnaissance study firmly solidified the Federal interest.

WHAT WE NEED FROM THE SUBCOMMITTEE IN FISCAL YEAR 2005

The administration's budget included $300,000 for the continuation of the feasibility study, which will be conducted at a 50/50 Federal Government/local sponsor share. The Corps had indicated a capability for fiscal year 2005 of $700,000 to continue the feasibility study and keep this project on an optimal and most cost-efficient time frame for the Federal Government and the local sponsor. We respectfully request the additional $400,000 for fiscal year 2005. Most Corps projects indicate a 10 to 1 and below benefit to cost ratio. This project estimates nearly twice that benefit to cost ratio and deserves to be tagged a "priority project".

PREPARED STATEMENT OF THE CHAMBERS COUNTY-CEDAR BAYOU NAVIGATION DISTRICT

We express full support of the inclusion of the full capability of the USACE for fiscal year 2005 to complete PED for the project to deepen and widen Cedar Bayou, Texas.

President's Budget Included $135,000.

Additional Funds Needed in Fiscal Year 2005 $311,000.

HISTORY AND BACKGROUND

The Rivers and Harbor Act of 1890 originally authorized navigation improvements to Cedar Bayou. The project was reauthorized in 1930 to provide a 10 ft. deep and 100 ft. wide channel from the Houston Ship Channel to a point on Cedar Bayou 11 miles above the mouth of the bayou. In 1931, a portion of the channel was constructed from the Houston Ship Channel to a point about 0.8 miles above the mouth of Cedar Bayou, approximately 3.5 miles in length. A study of the project in 1971

determined that an extension of the channel to project Mile 3 would have a favorable benefit-to-cost ratio. This portion of the channel was realigned from mile 0.1 to mile 0.8 and extended from mile 0.8 to Mile 3 in 1975. In October 1985, the portion of the original navigation project from project Mile 3 to 11 was deauthorized due to the lack of a local sponsor. In 1989, the Corps of Engineers, Galveston District completed a Reconnaissance Report dated June 1989, which recommended a 12 ft. by 125 ft. channel from the Houston Ship Channel Mile 3 to Cedar Bayou Mile 11 at the State Highway 146 Bridge. The Texas Legislature created the Chambers County-Cedar Bayou Navigation District in 1997 as an entity to improve the navigability of Cedar Bayou.

The district was created to accomplish the purpose of Section 59, Article XVI, of the Texas Constitution and has all the rights, powers, privileges and authority applicable to Districts created under Chapters 60, 62, and 63 of the Water Code—Public Entity. The Chambers County-Cedar Bayou Navigation District then became the local sponsor for the Cedar Bayou Channel.

PROJECT DESCRIPTION AND REAUTHORIZATION

Cedar Bayou is a small coastal stream, which originates in Liberty County, Texas, and meanders through the urban area near the eastern portion of the City of Baytown, Texas, before entering Galveston Bay. The bayou forms the boundary between Harris County on the west and Chambers County on the east. The project was authorized in Section 349 of the Water Resources Development Act 2000, which authorized a navigation improvement of 12 feet deep by 125 feet wide from mile 2.5 to mile 11 on Cedar Bayou.

JUSTIFICATION AND INDUSTRY SUPPORT

First and foremost, the channel must be improved for safety. The channel is the home to a busy barge industry. The most cost-efficient and safe method of conveyance is barge transportation. Water transportation offers considerable cost savings compared to other freight modes (rail is nearly twice as costly and truck nearly four times higher). In addition, the movement of cargo by barge is environmentally friendly. Barges have enormous carrying capacity while consuming less energy, due to the fact that a large number of barges can move together in a single tow, controlled by only one power unit. The result takes a significant number of trucks off of Texas highways. The reduction of air emissions by the movement of cargo on barges is a significant factor as communities struggle with compliance with the Clean Air Act.

Several navigation-dependent industries and commercial enterprises have been established along the commercially navigable portions of Cedar Bayou. Several industries have docks on at the mile markers that would be affected by this much-needed improvement. These industries include: Reliant Energy, Bayer Corporation, Koppel Steel, CEMEX, US Filter Recovery Services and Dorsett Brothers Concrete, to name a few.

PROJECT COSTS AND BENEFITS

Congress appropriated $100,000 in fiscal year 2001 for the Corps of Engineers to conduct the feasibility study to determine the Federal interest in this improvement project. The study indicated a benefit to cost ratio of the project of 2.8 to 1. The estimated total cost of the project is $16.8 million with a Federal share estimated at $11.9 million and the non-Federal sponsor share of approximately $4.9 million. Total annual benefits are estimated to be $4.8 million, with a net benefit of $3 million. Congress appropriated $400,000 each in fiscal year 2002 and fiscal year 2003 and $374,000 in fiscal year 2004 to support the feasibility study. This project is environmentally sound and economically justified. We would appreciate the subcommittee's support of the required add of the $311,000 appropriation needed by the Corps of Engineers to complete the plans and specifications of the project so that it can move forward at an optimum construction schedule. The users of the channel deserve to have the benefits of a safer, most cost-effective Federal waterway.

PREPARED STATEMENT OF THE NATURE CONSERVANCY

Mr. Chairman and members of the subcommittee, I appreciate this opportunity to present The Nature Conservancy's recommendations for the Army Corps of Engineers and Bureau of Reclamation's fiscal 2005 appropriations. We understand and appreciate that the subcommittee's ability to fund programs within its jurisdiction

is limited by the tight budget situation but appreciate your consideration of these important programs.

The Nature Conservancy is an international, non-profit organization dedicated to the conservation of biological diversity. Our mission is to preserve the plants, animals and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive. The Conservancy has more than 1,000,000 individual members and 1,900 corporate associates. We have programs in all 50 States and in 27 foreign countries. We have protected more than 15 million acres in the United States and approximately 102 million acres with local partner organizations worldwide. The Conservancy owns and manages 1,400 preserves throughout the United States—the largest private system of nature sanctuaries in the world. Sound science and strong partnerships with public and private landowners to achieve tangible and lasting results characterize our conservation programs.

The Conservancy urges the subcommittee to support the following appropriation levels in the fiscal 2005 Energy and Water Development Appropriation bill:

CONSTRUCTION GENERAL PRIORITIES

Section 1135: Project Modification for the Improvement of the Environment.—The Section 1135 Program authorizes the Army Corps of Engineers (Corps) to restore areas damaged by existing Corps projects. This program permits modification of existing dams and flood control projects to increase habitat for fish and wildlife without interrupting a project's original purpose. The Conservancy is the non-Federal cost share partner on nine Section 1135 projects including Spunky Bottoms, a floodplain restoration/reconnection project on the Illinois River, for which we seek an earmark in the amount of $200,000 in fiscal 2005. This program is in extremely high demand and severely oversubscribed in fiscal 2004 with millions of dollars of requests beyond what was appropriated. This financial shortfall has stopped many projects. The Conservancy strongly encourages full funding of $25 million for the Section 1135 program in fiscal 2005, an increase over the President's $13.5 million request.

Section 206: Aquatic Ecosystem Restoration.—Section 206 is a newer Corps program that authorizes the Corps to restore aquatic habitat regardless of past activities. The Conservancy is the non-Federal cost-share partner on four Section 206 projects. These projects restore important fish and wildlife habitats, including a $5 million project at Mad Island in Texas, and a $1.4 million riparian habitat restoration project at Bootheel Creek in Florida. This program is in extremely high demand and severely oversubscribed in fiscal 2004 with millions of dollars of requests beyond what was appropriated. This financial shortfall has stopped many projects. The Conservancy strongly encourages full funding of $25 million for this valuable program in fiscal 2005, an increase over the President's $10 million request.

Upper Mississippi River System Environmental Management Program.—The Environmental Management Program (EMP) is an important Corps program that constructs habitat restoration projects and conducts long-term resource monitoring of the Upper Mississippi and Illinois Rivers. The EMP operates as a unique Federal-State partnership affecting five States (Illinois, Iowa, Minnesota, Missouri, and Wisconsin). The EMP was reauthorized in WRDA 1999 with an increased authorization in the amount of $33.2 million. The Conservancy supports full funding of $33.2 million for fiscal 2005, an increase over the President's $28 million request.

Estuary Habitat Restoration Program.—The Estuary Habitat Restoration Program was established with the intent to restore 1 million acres of estuary habitat by 2010. This multi-agency program will promote projects that result in healthy ecosystems that support wildlife, fish and shellfish, improve surface and groundwater quality, quantity, and flood control; and provide outdoor recreation. The Conservancy supports $10 million in fiscal 2005. This program was not included in the President's budget.

Florida Keys Water Quality Program.—The Florida Keys Water Quality Program is a unique restoration program designed to protect the Florida Keys' fragile marine and coral ecosystem. This nationally significant marine ecosystem is being impacted by excessive nutrients due to storm and waste water pollution. This program is cost shared with State and local interests to repair and improve the storm and wastewater treatment facilities on the Florida Keys to reduce the harmful levels of nutrient pollution. The Nature Conservancy, and its partners the State of Florida, Florida Keys Aqueduct Authority, Monroe County, City of Islamorada, City of Layton, City of Key Colony Beach, City of Marathon, and City of Key West, support $30 million for fiscal 2005. This program was not included in the President's budget.

Missouri River Fish and Wildlife Mitigation.—Created in WRDA 1986, the Missouri River Fish and Wildlife Mitigation Project is designed to reverse the negative environmental impacts of lower river channelization and bank stabilization through land acquisition from willing sellers. The Mitigation Project allows the Corps to restore chutes, side channels, and other off-channel floodplain habitat for river wildlife. The Conservancy supports the President's $69 million request for fiscal 2005.

GENERAL INVESTIGATION PRIORITIES

Middle Potomac River Watershed Study.—The preliminary Middle Potomac Watershed Section 905(b) analysis identified 14 feasibility studies to address flood control needs and environmental restoration opportunities within the Middle Potomac Watershed. The study team identified three study goals for the development of project management plans: (1) to conserve, restore, and revitalize the Potomac River basin; (2) to develop sustainable watershed management plans; and (3) to cooperate with and support public and private entities in developing watershed management plans. The Conservancy supports $1 million in fiscal 2005 to continue the development of these plans. This study was not included in the President's budget.

Savannah Basin Comprehensive Water Resources Study.—The Savannah Basin Comprehensive Water Resources Study will enable the Corps and other partners to gain a better understanding of the influence of hydrologic processes such as timing, duration, frequency, magnitude, and rate of change of river flows on the river's ecology. The Nature Conservancy, under a cooperative agreement funded by the Corps and its cost share partners Georgia and South Carolina, developed a set of ecosystem flow recommendations for the Savannah River Basin. A test release of the new flow recommendation was conducted March 15–18, 2004. The Conservancy supports $436,000 in fiscal 2005, an increase over the President's $250,000 request.

REGULATORY PROGRAM PRIORITIES

Southern California Special Area Management Plan (SAMP).—For the past 4 years, the Army Corps has been working with three Southern California counties to develop region-wide Special Area Management Plans that identify, delineate and plan for the conservation of wetlands within their jurisdictions. These SAMPs are a critical part of the regional effort to protect significant natural resources and to plan for continued economic growth in Southern California. They are emerging as an important planning tool that addresses streamlining of Federal wetlands regulations while promoting more effective wetlands conservation and providing long-term certainty for economic interests in the region. The Southern California SAMP process is being evaluated as a model for wetlands planning in other areas. The Conservancy supports a $2 million earmark within the Corps' regulatory program for fiscal 2005.

BUREAU OF RECLAMATION PRIORITIES

Recovery Implementation Program for Colorado Endangered Fish Species.—The Recovery Program is in its fourteenth year of working for the recovery of endangered fish species in the Upper Colorado River Basin. The Recovery Program serves as a model of successful cooperation between three States (Colorado, Utah, and Wyoming), Federal agencies, water development interests, power users and the environmental community in the recovery of four endangered fish species. The Conservancy supports $4 million in fiscal 2005 for the Bureau of Reclamation's portion of this multiagency program.

Thank you for the opportunity to present The Nature Conservancy's comments on the Energy and Water Appropriations bill. We recognize that you receive many worthy requests for funding each year and appreciate your consideration of these requests and the generous support you have shown for these and other conservation programs in the past. If you have any further questions, please do not hesitate to contact me.

DEPARTMENT OF THE INTERIOR

BUREAU OF RECLAMATION

PREPARED STATEMENT OF THE COLORADO RIVER BOARD OF CALIFORNIA

Your support and leadership are needed in securing adequate fiscal year 2004 funding for the Department of the Interior with respect to the Federal/State Colorado River Basin Salinity Control Program. Congress has designated the Depart-

ment of the Interior, Bureau of Reclamation (Reclamation) to be the lead agency for salinity control in the Colorado River Basin. This successful and cost effective program is carried out pursuant to the Colorado River Basin Salinity Control Act and the Clean Water Act. California's Colorado River water users are presently suffering economic damages in the hundreds of million of dollars per year due to the river's salinity.

The Colorado River Board of California (Colorado River Board) is the State agency charged with protecting California's interests and rights in the water and power resources of the Colorado River System. In this capacity, California along with the other six Basin States through the Colorado River Basin Salinity Control Forum (Forum), the interstate organization responsible for coordinating the Basin States' salinity control efforts, established numeric criteria in June 1975, for salinity concentrations in the River. These criteria were established to lessen the future damages in the Lower Basin States, as well as, assist the United States in delivering water of adequate quality to Mexico in accordance with Minute 242 of the International Boundary and Water Commission. The goal of the Colorado River Basin Salinity Control Program is to offset the effects of water resource development in the Colorado River Basin after 1972 rather than to reduce the salinity of the River below levels that were caused by natural variations in river flows or human activities prior to 1972. To maintain these levels, the salinity control program must remove 1,800,000 tons of salt loading from the River by the year 2020. In the Forum's last report entitled 2002 Review, Water Quality Standards for Salinity, Colorado River System (2002 Review) released in October 2002, the Forum found that additional salinity control measures that remove salt from the River in the order of 1,000,000 tons are needed to meet the implementation plan. The plan for water quality control of the River has been adopted by the States and approved by the Environmental Protection Agency. To date, Reclamation has been successful in implementing projects for preventing salt from entering the River system; however, many more potential projects for salt reduction have been identified that can be controlled with Reclamation's Basin-wide Salinity Control Program. The Forum has presented testimony to Congress in which it has stated that the rate of implementation of the program beyond that which has been funded in the past is necessary.

In 2000, Congress reviewed the salinity control program as authorized in 1995. Following hearings, and with the administration's support, the Congress passed legislation that increased the ceiling authorization for this program by $100 million. Reclamation has received proposals to move the program ahead and the seven Basin States have agreed to up-front cost sharing on an annual basis, which adds 43 cents for every Federal dollar appropriated.

In previous years, the President has supported, and Congress has funded the Bureau of Reclamation's Basinwide Salinity Control Program at about $12 million. The Forum has indicated that the President's request for funding for fiscal year 2005 in the amount of $9,064,000 is inappropriately low. The Forum has requested a total of $17.5 million for fiscal year 2005 to implement the needed and authorized program. The Colorado River Board supports the Forum's recommendation and believes that failure to appropriate these funds may result in significant economic damages in the United States and Mexico. Water quality commitments to downstream U.S. and Mexican users must be honored while the Basin States continue to develop their Compact apportioned waters from the Colorado River. For every 30 mg/l increase in salinity concentration in the River, there is $75 million in additional damages in the United States.

Based upon past appropriations, implementation of salinity control measures has fallen behind the needed pace to prevent salinity concentration levels from exceeding the numeric criteria adopted by the Forum and approved by the EPA. The seven Colorado River Basin States have carefully evaluated the Federal funding needs of the program and have concluded that an adequate budget is needed for the plan of implementation to maintain the salinity standards for the River. With the newly authorized USDA EQIP program, more on-farm funds are available and adequate funds for Reclamation are needed to maximize Reclamation's effectiveness. The Forum, at its meeting in San Diego, California, in October 2002, recommended a funding level of $17,500,000 for Reclamation's Basinwide Salinity Control Program to continue implementation of needed projects and begin to reduce the "backlog" of projects.

In addition, the Colorado River Board recognizes that the Federal Government has made significant commitments to the Republic of Mexico and to the seven Colorado River Basin States with regard to the delivery of quality water to Mexico. In order for those commitments to be honored, it is essential that in fiscal year 2005 and in future fiscal years, that Congress provide funds to the Bureau of Reclamation for the continued operation of completed projects.

The Colorado River is, and will continue to be, a major and vital water resource to the 17 million residents of southern California. Preservation of its water quality through an effective salinity control program will avoid the additional economic damages to users in California.

The Colorado River Board greatly appreciates your support of the Federal/State Colorado River Basin Salinity Control Program and again asks for your assistance and leadership in securing adequate funding for this program.

PREPARED STATEMENT OF THE DEPARTMENT OF NATURAL RESOURCES, STATE OF UTAH

As the Governor of Utah's representative on Colorado River Issues and the senior Utah member of the Colorado River Salinity Control Forum, I wish to convey Utah's support for funding the Salinity Title II Program, authorized in 1995 (Public Law 104–20) at the level of $17,500,000 for 2005 for the United States Bureau of Reclamation (BOR). In addition, Utah requests funds be provided the BOR for General Investigations and the Operation and Maintenance of salinity facilities at sufficient funding levels to meet the objectives of the Salinity Control Act as amended.

This vital program has been a mainstay in improving water use efficiency in the Colorado River Basin of Utah. During the past 5 years of drought, the facilities funded by the BOR program have been a significant reason for agriculture in the Uinta and Price/San Raphael basins maintaining productivity and stimulating these rural economies.

In addition, the Salinity Control Program helped to meet the salinity related water quality standards for the Colorado River and U.S. treaty obligation with Mexico. This important program helps meet national and international obligations and needs to be funded at the $17,500,000 level with additional funds for investigations and operation and maintenance.

Thank you.

PREPARED STATEMENT OF THE IRRIGATION & ELECTRICAL DISTRICTS' ASSOCIATION OF ARIZONA

We are pleased to present this written testimony on behalf of our 25 members and associate members which serve water and power from the Colorado River and other sources to rural and urban Arizona communities, farms and businesses. Our comments are directed to the budgets of the U.S. Bureau of Reclamation (Reclamation) and the Western Area Power Administration (Western), whose budget requests we generally support with certain specific reservations, which we will note.

BUREAU OF RECLAMATION

We do not support the proposed Reclamation budget as to four specific items: Security Costs, Animas-La Plata, Yuma Desalter, and Central Arizona Project Tucson Reliability Division.

Security Costs.—We oppose the shift of approximately $12 million for guards and surveillance to reimbursable status. Congress has approved this post-9/11 expense increase as non-reimbursable for the last 2 years. This change unfairly saddles local power and water users in some projects with the costs of this national obligation. If the Homeland Security budget can provide in excess of $3 billion (fiscal year 2004) for the Nation's airports, surely the West's premier Reclamation dams deserve the same treatment. We endorse and support the testimony of the Colorado River Energy Distributors' Association (CREDA) on this subject.

Animas-La Plata.—This project requires some $10 million for electric transmission system construction. We join CREDA in requesting that this amount not be imposed on Colorado River Storage Project power contractors whose customers will derive no benefit from this facility. Forcing them to pay for this non-irrigation use facility will constitute a serious departure from over 100 years of Reclamation law.

Yuma Desalter and Tucson Reliability Division.—We support the testimony of the Central Arizona Water Conservation District (CAWCD) generally, and specifically on these subjects. Without the Desalter, Central Arizona's 4.5 million people will continue to be penalized some 100,000 acre-feet per year of water supply due to the Central Arizona Project's junior status as a Colorado River water user. Additionally, Reclamation needs to request Tucson Reliability Division funds only after consultation with CAWCD and not jeopardize its pending lawsuit settlement and the associated Gila River Indian Settlement.

WESTERN AREA POWER ADMINISTRATION

Our comments on Western's budget will track the order in which the subjects appear in Western's budget justification document.

Use of Receipts.—We oppose Use of Receipts authority for Western at this time. Western has offered no check and balance proposal to substitute for reduced Congressional oversight. Retail competition in the West is problematic, to say the least, and the bare notice and comment Western rate process has never generated effective cost control. Moreover, Western believes it has the authority to require advance funding in its contracts (Federal Register 5/5/03). If true, contract renewals and amendments will gradually shift Western totally off-budget.

Security Costs.—Western's $1.4 million in security costs should be non-reimbursable for the same reasons that Reclamation's should be. As a dichotomy of a former uniform Reclamation program, Western's role is tied to Reclamation's. It is hard to believe that over 17,000 miles of Federal transmission system do not rise in importance to a national obligation, given the essential place this system occupies in 15 Western States.

Quartzsite Line Relocation.—We oppose this expenditure at this time. There is no electrical need for this action. Alternative routes are still being negotiated with the Bureau of Land Management and the necessary environmental clearance processes haven't even started. The encroachments have existed for many years without incident. This project should be postponed until Western identifies an electrical need, a negotiated route, and a true cost estimate based on that route.

Transmission Lines.—The Black Point Mesa—Blythe No. 1 request may be insufficient since the Fish and Wildlife Service is insisting that Western purchase land for the Desert Tortoise in southeastern California because Western wants to replace aging wood poles (a routine operation and maintenance function) in an area that is not critical habitat for this species.

South of Phoenix.—We vigorously support work programmed for substations in this portion of Western's Parker-Davis Project transmission system. The area in question is growing like Topsy and Western's integrated facilities are aged and undersized. Congress has earmarked funds for this work for the last 3 years.

Davis-Mead, Davis-Topock.—We would oppose the addition of any reimbursable construction funding for this line replacement using the 3M aluminum matrix composite conductor. Adding this cost would more than double Western's rehabilitation and construction budget. We anticipate a request for this expenditure. If done as a non-reimbursable experiment, we would not object. We note, however, that replacing one line yields little extra capacity since reliability standards require the new line to carry no more power than the second adjacent line could absorb in a first line outage.

Purchase Power and Wheeling.—Once again, Western proposes chopping funding for this vital activity even though Congress has repeatedly provided the funding. The scoring problem has been fixed. There is no sound policy reason for not funding this activity. The position that somehow small public power, Indian and other customers can magically find over $200 million to borrow and/or advance fund this critical firming program is absurd. Most of Western's customers are small and resource limited. Western can't be allowed to summarily abandon them to their fate.

Thank you for the opportunity to present our views. Please feel free to get in touch with us if we can be of any further service, answer any questions, or supply additional detail on our comments.

PREPARED STATEMENT OF THE GARRISON DIVERSION CONSERVANCY DISTRICT

Mr. Chairman and members of the committee, my name is Dave Koland; I serve as the manager of the Garrison Diversion Conservancy District. The mission of the District is to provide a reliable, high quality and affordable water supply to the areas of need in North Dakota. Over 77 percent of our State residents live within the boundaries of the District. I would like to comment on the impact the President's fiscal year 2005 budget request for the Garrison Diversion Unit has on the effort to provide reliable, high quality and affordable water supplies to the citizens of North Dakota.

The President's fiscal year 2005 budget request was pitifully inadequate in meeting the commitments the Federal Government has made to North Dakota. In return for accepting a permanent flood on 500,000 acres of prime North Dakota river valley the Federal Government promised the State and tribes that they would be compensated as the dams were built. The dams were completed 50 years ago and still we wait for the promised compensation. At the rate of payment the President's

budget proposes the Federal Government will not even be able to stay current with the indexing applied by law on their commitment to North Dakota.

The MR&I program was started in 1986 after the Garrison Diversion Unit was reformulated from a million-acre irrigation project into a multipurpose project with emphasis on the development and delivery of municipal and rural water supplies. The State-wide MR&I program has focused on providing grant funds for water systems that provide water service to previously unserved areas of the State. The State has followed a policy of developing a network of regional water systems throughout the State. Every rural water system that has been built in North Dakota is still operating. They are providing safe, clean water to their members, reducing their debt, putting money in reserve, complying with every State and Federal regulation, and doing so with a stable, prudent rate structure.

NORTH DAKOTA'S SUCCESS STORY

More importantly, people are living on farmsteads with a rural water connection, while farmsteads without decent water stand empty. For instance, Sheridan County lost 20.4 percent of its population between 1990 and 2000, yet the rural water system serving that county hardly lost a connection. Good water does make a difference as to where people choose to live. Rural communities offer the experiences and lifestyle many people seek to raise their family.

The key to providing water to small communities and rural areas has been the Grant and Loan program of Rural Development and the MR&I program jointly operated by the Garrison Diversion Conservancy District and the State Water Commission. Without the assistance of these two grant programs, the exodus from the rural areas would have been a stampede.

Rural water systems are being constructed using a unique blend of local expertise, State financing, rural development loans, MR&I grant funds to provide an affordable rate structure, and the expertise of the Bureau of Reclamation to deal with design and environmental issues. The projects are successful because they are driven by a local need to solve a water quantity or quality problem. The solution to the local problem is devised by the community being affected by the problem. The early, local buy-in helps propel the project through the tortuous pre-construction stages.

The MR&I program has been so successful and so important to North Dakota that the North Dakota Legislature loaned the program $15 million to help deal with the severe lag time that has developed in the Federal appropriations process.

The desperate need for clean, safe water is evidenced by the willingness of North Dakota's rural residents to pay water rates well above the rates EPA considers affordable. The EPA Economic Guidance Workbook states that rates greater than 1.5 percent of the median household income (MHI) are not only unaffordable, but also "may be unreasonable".

The average monthly cost on a rural water system for 6,000 gallons of water is currently $48.97. The water rates in rural North Dakota would soar to astronomical levels without the 75 percent grant dollars in the MR&I program. For instance, current rates would have to average a truly unaffordable $134.19/month or a whopping 3.8 percent of the MHI. Rates would have ranged as high as $190.80/month or a prohibitive 5.3 percent of MHI without the assistance of the MR&I program.

The people waiting for water in our rural communities are willing to pay far more than what many consider an affordable, or even reasonable, price for clean, safe water.

ENVIRONMENTAL LAWS

The Bureau of Reclamation plays a vital role by ensuring compliance with the National Environmental Policy Act of 1969 (NEPA), providing system design oversight and dealing with international issues. Such is the case with the Northwest Area Water Supply Project (NAWS). Canada and the province of Manitoba have filed a lawsuit protesting the very thorough Final Environmental Assessment and the subsequent Finding of No Significant Impact on the NAWS project.

One reason for the success of the North Dakota program is the reliance on local control. Decision-making is accomplished at the lowest level possible. The decision on who the system can afford to provide service to and the rate structure is made by a local board of directors composed of members who will be served by the water system. Volunteer involvement and low administrative costs are hallmarks of the program. Engineering services are typically provided by local firms that have experience in designing and constructing systems in North Dakota.

Across North Dakota, we have seen the impact of providing high quality water to rural areas and witnessed the dramatic change in small communities. Homes

once occupied by aging widows are soon rented or sold to young adults, while houses and farmsteads without rural water stand empty.

Good drinking water is just a dream in many rural North Dakota communities. Turning on the tap each morning brings brown, smelly water instead of the clear, fresh water a majority of people in North Dakota enjoy.

The opportunity to have an impact in rural North Dakota is now. If we do nothing, it is easy to predict what will occur in rural North Dakota. We only need to look at counties without good water.

It is in the best interest of North Dakota and the 150+ local communities not yet served by a regional system that we build every piece of rural infrastructure that is feasible. We must continue to build on what has proven so successful in the past.

Providing a reliable source of good, clean water in rural areas has worked to stabilize the rural economy in North Dakota. The combination of leveraging Rural Development loan funds with MR&I grant dollars has provided a cost efficient, long-term solution to the rural communities in North Dakota.

If we act now, we can make a difference in rural North Dakota. Providing for healthy, vibrant rural communities is good for North Dakota and good for our Nation. We know from past experience that providing good water for rural communities is one sure way of helping people change the future.

Indeed the MR&I program in North Dakota would serve as an outstanding example of a successful program that could be implemented in other States.

DISCUSSION OF OVERALL BUREAU OF RECLAMATION BUDGET

It is important to recognize that the fiscal year 2005 budget submission of $828.5 million for the Bureau of Reclamation's Water and Related Resources program is $57.5 million better than their request for fiscal year 2004. It is $171.5 million less than has been called for by the "Invest in the West" Coalition, a coalition of nine western water organizations that are involved in the full array of western water issues.

The "Invest in the West" goal, one with which I agree, is to raise the Bureau's Water and Related Resources Budget to $1 billion by the end of fiscal year 2005. This is simply a goal to restore the budget to previous levels. The erosion of the Bureau's budget during the 1990's has created problems across the west for virtually all of its constituents.

BUDGET IMPACTS ON GARRISON DIVERSION UNIT

At this point, I would like to shift to the particulars of the budget as it impacts the Garrison Diversion program and some specific projects within the State of North Dakota. Let me begin by reviewing the various elements within the current budget request and then discuss the impacts that the current level of funding will have on the current program.

Attachment 1 shows the funding history over the last 8 years for the Garrison Diversion Unit. The average is approximately $26.6 million. The President's budget request for fiscal year 2005 is $22.1 million. A continuation of that trend is a formula for disaster. The President's budget request does not even maintain the historic funding level and ignores the needs of the current programs and does not keep up with the price increases expected in the major programs as delays occur. Fortunately, Congress saw fit to provide that the unexpended authorization ceilings would be indexed annually to adjust for inflation in the construction industry. The proposed allocation to the indexed programs in the President's budget is $6.9 million. If a modest 2 percent inflation factor is assumed, the increase will be $8 million for MR&I and $2 million for the Red River Valley phase. Simply put, with the current request, we will lose ground on the completion of these projects.

This year, the District is asking the Congress to appropriate a total of $77.3 million for the Project. Attachment 2 is a breakdown of the elements in the District's request. To discuss this in more detail, I must first explain that the Garrison budget consists of several different program items. For ease of discussion, I would like to simplify the breakdown into three major categories. The first I would call the base operations portion of the budget request. Attachment 3 contains a breakdown of the elements in that portion of the budget. This amount is nominally $22 million annually when you include underfinancing. However, as more Indian MR&I projects are completed, the operation and maintenance costs for these projects will increase and create a need that will need to be addressed.

The second element of the budget is the MR&I portion. This consists of both Indian and non-Indian funding. The Dakota Water Resources Act contains an additional $200 million authorization for each of these programs. It is our intent that

each program reaches the conclusion of the funding authorization at the same time. We believe this is only fair.

The MR&I program consists of a number of medium-sized projects that are independent of one another. They generally run in the $20 million category. Some are, of course, smaller and others somewhat larger, but one that is considerably larger is the Northwest Area Water Supply Project (NAWS). The first phase of that project is under construction. The optimum construction schedule for completion of the first phase has been determined to be 5 years. The total cost of the first phase is $66 million. At a 65 percent cost share, the Federal funding needed to support that program is $43 million. On the average, the annual funding for that project alone is over $8 million. Four other projects have been approved for future funding and numerous projects on the reservations are ready to begin construction. These requests will all compete with one another. It will be a delicate challenge to balance these projects. Nevertheless, we believe that once a project is started, it needs to be pursued vigorously to completion. If it is not, we simply run the cost up and increase the risk of incompatibility among the working parts.

An example of the former would be the certain impact of the increased cost of construction over time through inflation but also by protracting the engineering and administration costs and "interest-during-construction" costs.

The third element of the budget is the Red River Valley Water Supply Project (RRV) construction phase. The Dakota Water Resources Act authorized $200 million for the construction of facilities to meet the water quality and quantity needs of the Red River Valley communities. It is my belief that the final plans and authorizations, if necessary, should be expected in approximately 5 years. This will create an immediate need for greater construction funding.

This major project, once started, should be pursued vigorously to completion. The reasons are the same as for the NAWS project and relate to good engineering construction management. Although difficult to predict at this time, it is reasonable to plan that the RRV project features, once started, should be completed in approximately 7 years. This creates a need for an additional $25 million. Fortunately, it appears the RRV project start will probably follow the completion of the NAWS first phase.

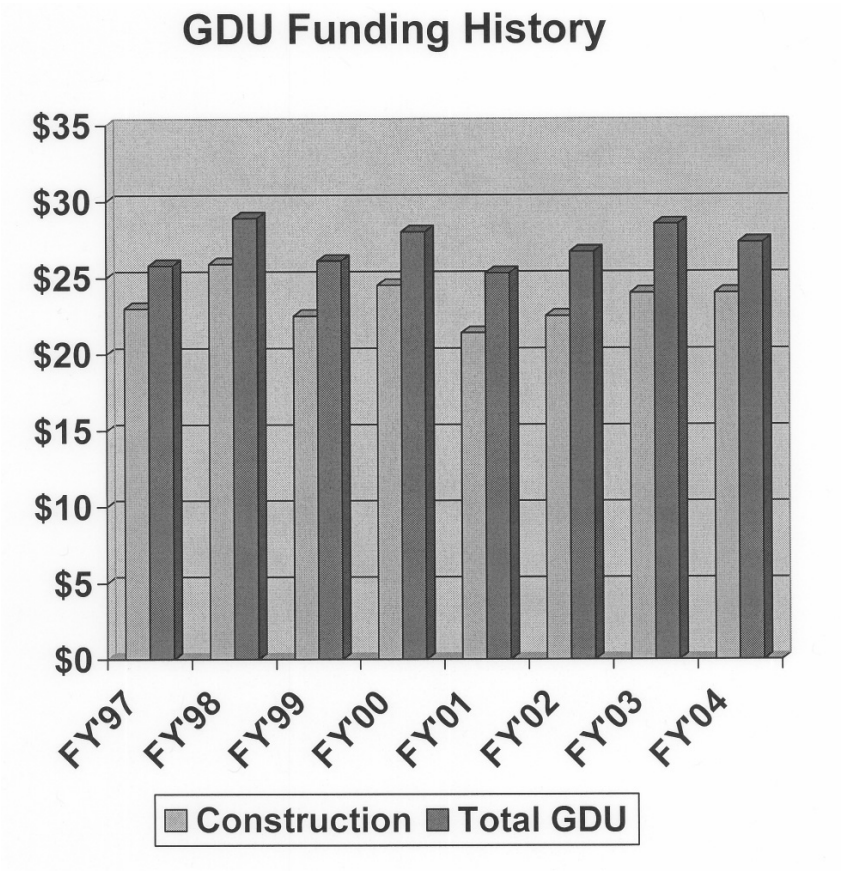
Using these two projects as examples frames the argument for a steadily increasing budget. First, to accelerate the MR&I program in early years to assure the timely completion of the NAWS project and then to ready the budget for a smaller MR&I allocation when the RRV project construction begins.

Attachment 4 illustrates the level of funding for the two major items, MR&I and RRV. It is quickly apparent that if a straight-line appropriation is used for each, a funding spike will occur in the sixth year. That is when an additional $25 million will suddenly be needed for the RRV program. It is simply good management to blend these needs to avoid drastic hills and valleys in the budget requests. By accelerating the construction of NAWS and other projects which are ready for construction during the early years, some of the pressure will be off when the RRV project construction funding is needed. A smoother, more efficient construction program over time will be the result.

Attachment 5 shows such a program. It begins with a $77.3 million budget this year and gradually builds over time to over $140 million when the RRV construction could be in full swing (fiscal year 2010). Mr. Chairman, this is why we believe it is important that the budget resolution recognize that a robust increase in the budget allocation is needed for the Bureau of Reclamation. We hope this testimony will serve as at least one example of why we fully support the efforts of the "Invest in the West" campaign to increase the overall allocation by $171.4 million in fiscal year 2005 to a total of $1 billion.

The Bureau of Reclamation, Rural Development, Garrison Diversion Conservancy District, State Water Commission and local rural water districts have formed a formidable alliance to deal with the lack of a high quality, reliable water source throughout much of North Dakota. This cost-effective partnership of local control, State-wide guidance and Federal support have combined to provide safe, clean, potable water to hundreds of communities and thousands of homes across North Dakota.

ATTACHMENT 1



ATTACHMENT 2.—GARRISON DIVERSION UNIT (GDU) JUSTIFICATION FOR $77.3 MILLION APPROPRIATION FISCAL YEAR 2005

North Dakota's Municipal, Rural and Industrial (MR&I) water program funds construction projects State-wide under the joint administration of the Garrison Diversion Conservancy District (GDCD) and the State Water Commission (SWC).

Northwest Area Water Supply Project (NAWS) is under construction after 15 years of study and diplomatic delay. Construction costs are estimated to be $81 million.

Designs are based on a 5-year construction period; thus, over $16 million is needed for NAWS alone. Indian MR&I programs are also under construction. Tribal and State leaders have agreed to split the Indian and non-Indian MR&I allocation on a 50/50 basis.

Williston Water Treatment Plant, Williams Rural Water and Tribal MR&I programs are under construction.

[In millions of dollars]

	Amount
Operation and Maintenance of Indian MR&I Systems plus Jamestown Dam	3.4
Breakdown of $73.9 million Construction Request:	
Operation and Maintenance of existing GDU system	5.0
Wildlife Mitigation & Natural Resources Trust	6.0
Red River Valley Special Studies and EIS	2.6

[In millions of dollars]

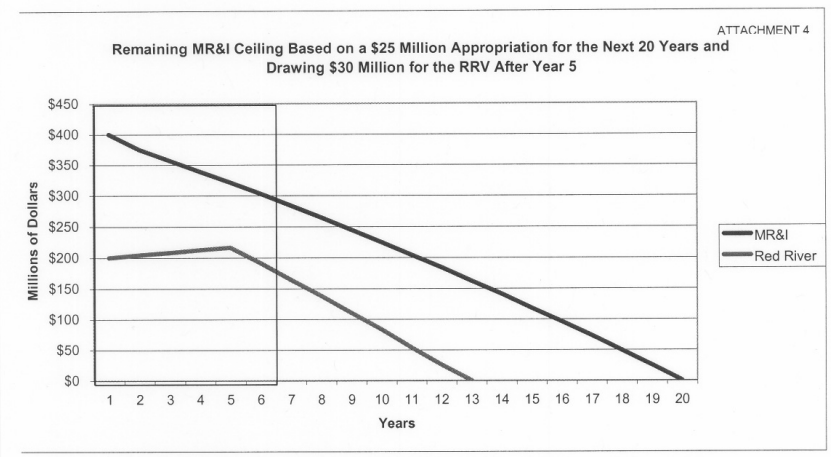
	Amount
Indian and non-Indian MR&I	50.0
Indian Irrigation	2.7
Recreation	0.6
Under financing 10 percent	7.0
Total for Construction	73.9
Grand Total	77.3

ATTACHMENT 3.—ELEMENTS OF THE BASE OPERATIONS PORTION OF THE GARRISON DIVERSION UNIT BUDGET FISCAL YEAR 2005

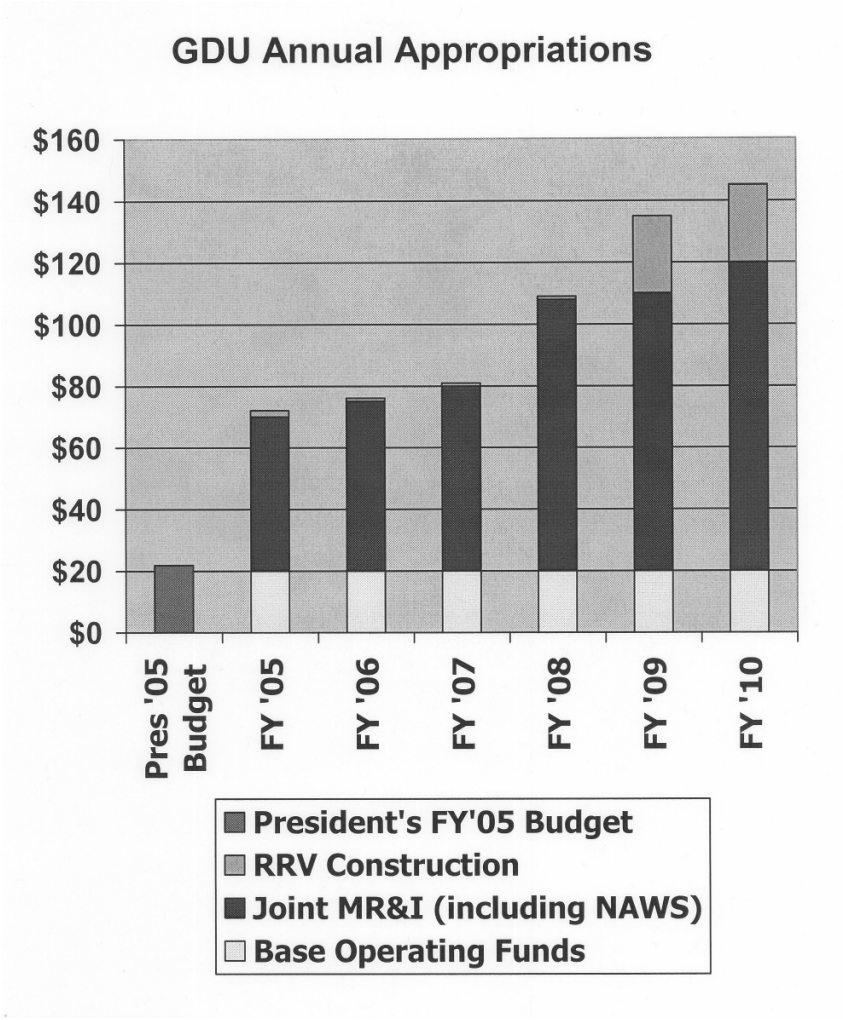
[In millions of dollars]

	Amount
Operation and Maintenance of Indian MR&I systems and Jamestown Dam	3.4
Operation and Maintenance of Existing GDU facilities	5.0
Wildlife Mitigation & Natural Resources Trust	6.0
Red River Valley Special Studies and EIS	2.6
Indian Irrigation	2.7
Recreation	0.6
Under financing at 10 percent	2.0
Total	22.3

ATTACHMENT 4



ATTACHMENT 5



PREPARED STATEMENT OF THE PROVO RIVER WATER USERS ASSOCIATION

Chairman Domenici and Senator Reid, I am writing to request your support for an appropriation in fiscal year 2005 of $5,234,000 to the Bureau of Reclamation within the budget line item entitled "Endangered Species Recovery Implementation Program" for the Upper Colorado River Region. The President's recommended budget for fiscal year 2005 includes this line-item amount. Of these funds, I respectfully request the designation of $4,008,000 for the Upper Colorado River Endangered Fish Recovery Program; $691,000 for the San Juan River Basin Recovery Implementation Program and $535,000 for Fish and Wildlife Management and Development, consistent with the President's budget request. The requested fiscal year 2005 appropriation will allow construction of fish passage, floodplain restoration activities, screening of existing diversion canals, propagation facilities, endangered fish stocking, and non-native fish management.

These funds are authorized by Public Law 106–392. Substantial non-Federal cost sharing funds are provided by the States of Colorado, Wyoming, Utah, and New Mexico, power users, and water users in support of these recovery programs. These programs are carried out consistent with State law and interstate water compacts.

The past support and assistance of your subcommittee has greatly facilitated the success of these multi-State, multi-agency programs. I request the subcommittee's assistance relative to fiscal year 2005 funding to ensure the Bureau of Reclamation's continuing financial participation in these vitally important programs.

PREPARED STATEMENT OF THE DUCHESNE COUNTY WATER CONSERVANCY DISTRICT

I am writing to request your support for an appropriation in fiscal year 2005 of $5,234,000 to the Bureau of Reclamation within the budget line item entitled "Endangered Species Recovery Implementation Program" for the Upper Colorado River Region. The President's recommended budget for fiscal year 2005 includes this line-item amount. Of these funds, I respectfully request the designation of $4,008,000 for the Upper Colorado River Endangered Fish Recovery Program; $691,000 for the San Juan River Basin Recovery Implementation Program and $535,000 for Fish and Wildlife Management and Development, consistent with the President's budget request. The requested fiscal year 2005 appropriation will allow construction of fish passage, floodplain restoration activities, screening of existing diversion canals, propagation facilities, endangered fish stocking, and non-native fish management.

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PREPARED STATEMENT OF THE JORDAN VALLEY WATER CONSERVANCY DISTRICT

I am writing to request your support for an appropriation in fiscal year 2005 of $5,234,000 to the Bureau of Reclamation within the budget line item entitled "Endangered Species Recovery Implementation Program" for the Upper Colorado River Region. The President's recommended budget for fiscal year 2005 includes this line-item amount. Of these funds, I respectfully request the designation of $4,008,000 for the Upper Colorado River Endangered Fish Recovery Program; $691,000 for the San Juan River Basin Recovery Implementation Program and $535,000 for Fish and Wildlife Management and Development, consistent with the President's budget request. The requested fiscal year 2005 appropriation will allow construction of fish passage, floodplain restoration activities, screening of existing diversion canals, propagation facilities, endangered fish stocking, and non-native fish management.

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PREPARED STATEMENT OF COLORADO SPRINGS UTILITIES

I am writing to request your support for an appropriation in fiscal year 2005 of $5,234,000 to the Bureau of Reclamation within the budget line item entitled "Endangered Species Recovery Implementation Program" for the Upper Colorado River Region. The President's recommended budget for fiscal year 2005 includes this line-item amount. Of these funds, I respectfully request the designation of $4,008,000 for the Upper Colorado River Endangered Fish Recovery Program; $691,000 for the San Juan River Basin Recovery Implementation Program and $535,000 for Fish and Wildlife Management and Development, consistent with the President's budget request. The requested fiscal year 2005 appropriation will allow construction of fish passage, floodplain restoration activities, screening of existing diversion canals, propagation facilities, endangered fish stocking, and non-native fish management.

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PREPARED STATEMENT OF THE DOLORES WATER CONSERVANCY DISTRICT

I am writing to request your support for an appropriation in fiscal year 2005 of $5,234,000 to the Bureau of Reclamation within the budget line item entitled "Endangered Species Recovery Implementation Program" for the Upper Colorado River Region. The President's recommended budget for fiscal year 2005 includes this line-item amount. Of these funds, I respectfully request the designation of $4,008,000 for the Upper Colorado River Endangered Fish Recovery Program; $691,000 for the San Juan River Basin Recovery Implementation Program and $535,000 for Fish and Wildlife Management and Development, consistent with the President's budget request. The requested fiscal year 2005 appropriation will allow construction of fish passage, floodplain restoration activities, screening of existing diversion canals, propagation facilities, endangered fish stocking, and non-native fish management.

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PREPARED STATEMENT OF THE PERKINS COUNTY RURAL WATER SYSTEM, INC.

Perkins County Rural Water System, Inc. respectfully submits this written testimony to the Appropriations Subcommittee on Energy and Water Development for appropriations of $5.0 million for fiscal year 2005. This project was authorized under Public Law 106–136.

Perkins County Rural Water System, (PCRWS) has the approval of the Office of Management and Budget and the Bureau of Reclamation to proceed with construction in 2004. We have been appropriated $7.6 million in years 2002 and 2003. We were appropriated $1.0 million in 2004. The administration has approved us in the budget for $500,000 for fiscal year 2005. We would not be able to keep our construction on schedule if we are appropriated this amount of money. Cost share for the system is 75 percent Federal, 15 percent local and 10 percent State. The State of South Dakota has offered to loan PCRWS the local share for 40 years at 3 percent interest to keep costs down to the customer.

Breakdown for the project for 2005 is as follows:

2005 BUDGET

	Amount
Income:	
Bureau of Reclamation	$5,000,000
State of South Dakota	1,250,000
Misc	75,000
Total	6,325,000
Expense:	
Mainline to Bison	1,300,000
Mainline to Lemmon	1,200,000
North Dakota State Water Comm	1,000,000
Reservoir	500,000
Lemmon Rural Pipe	280,000
Bison & Prairie City Rural	1,500,000

2005 BUDGET—Continued

	Amount
Administration, Engineering	545,000
Total	6,325,000

PCRWS will need $5.0 million for each of the next 3 years to complete our project on time. This consists of 550 miles of various size pipes ranging from 8 inches to 1.5 inches, one pump station capable of moving 800 gallons per minute, a 1.0 million gallon tank and telemetry to operate the whole system from one localized location.

The quality of water in Northwest South Dakota is the main concern for the health and well being of the people. Although the water typically meets primary standards established by the USEPA, most of the chemicals in the water are exceedingly high by the State of South Dakota standards. Water quality and quantity in Perkins County has been a plague for the county over many years. Droughts, both long and short term, are a fact of life for the people in this area. Being able to obtain quality water during these periods and having a backup system for other times would make life a lot easier for those in the rural area. Due to the isolation from major water supplies, this may be our only chance to obtain water at an affordable cost.

On the behalf of the Board of Directors of PCRWS and the people of Perkins County, South Dakota, thank you for allowing us to enter this testimony in the subcommittee's report.

Prepared Statement of the Northern Colorado Water Conservancy District

Chairman Domenici and Senator Reid, I am writing to request your support for an appropriation in fiscal year 2005 of $5,234,000 to the Bureau of Reclamation within the budget line item entitled "Endangered Species Recovery Implementation Program" for the Upper Colorado River Region. The President's recommended budget for fiscal year 2005 includes this line-item amount. Of these funds, I respectfully request the designation of $4,008,000 for the Upper Colorado River Endangered Fish Recovery Program; $691,000 for the San Juan River Basin Recovery Implementation Program and $535,000 for Fish and Wildlife Management and Development, consistent with the President's budget request. The requested fiscal year 2005 appropriation will allow construction of fish passage, floodplain restoration activities, screening of existing diversion canals, propagation facilities, endangered fish stocking, and non-native fish management.

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The past support and assistance of your subcommittee has greatly facilitated the success of these multi-State, multi-agency programs. I request the subcommittee's assistance relative to fiscal year 2005 funding to ensure the Bureau of Reclamation's continuing financial participation in these vitally important programs.

Prepared Statement of the Four Corners Power Plant

Chairman Domenici and Senator Reid, I am writing to request your support for an appropriation in fiscal year 2005 of $5,234,000 to the Bureau of Reclamation within the budget line item entitled "Endangered Species Recovery Implementation Program" for the Upper Colorado River Region. The President's recommended budget for fiscal year 2005 includes this line-item amount. Of these funds, I respectfully request the designation of $4,008,000 for the Upper Colorado River Endangered Fish Recovery Program; $691,000 for the San Juan River Basin Recovery Implementation Program and $535,000 for Fish and Wildlife Management and Development, consistent with the President's budget request. The requested fiscal year 2005 appropriation will allow construction of fish passage, floodplain restoration activities, screening of existing diversion canals, propagation facilities, endangered fish stocking, and non-native fish management.

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PREPARED STATEMENT OF THE PUBLIC SERVICE COMPANY OF NEW MEXICO

I am writing to request your support for an appropriation in fiscal year 2005 of $5,234,000 to the Bureau of Reclamation within the budget line item entitled "Endangered Species Recovery Implementation Program" for the Upper Colorado River Region. The President's recommended budget for fiscal year 2005 includes this line-item amount. Of these funds, I respectfully request the designation of $4,008,000 for the Upper Colorado River Endangered Fish Recovery Program; $691,000 for the San Juan River Basin Recovery Implementation Program and $535,000 for Fish and Wildlife Management and Development, consistent with the President's budget request. The requested fiscal year 2005 appropriation will allow construction of fish passage, floodplain restoration activities, screening of existing diversion canals, propagation facilities, endangered fish stocking, and non-native fish management.

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PREPARED STATEMENT OF THE GRAND VALLEY WATER USERS ASSOCIATION

I am writing to request your support for an appropriation in fiscal year 2005 of $5,234,000 to the Bureau of Reclamation within the budget line item entitled "Endangered Species Recovery Implementation Program" for the Upper Colorado River Region. The President's recommended budget for fiscal year 2005 includes this line-item amount. Of these funds, I respectfully request the designation of $4,008,000 for the Upper Colorado River Endangered Fish Recovery Program; $691,000 for the San Juan River Basin Recovery Implementation Program and $535,000 for Fish and Wildlife Management and Development, consistent with the President's budget request. The requested fiscal year 2005 appropriation will allow construction of fish passage, floodplain restoration activities, screening of existing diversion canals, propagation facilities, endangered fish stocking, and non-native fish management.

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PREPARED STATEMENT OF THE COLORADO RIVER BASIN SALINITY CONTROL FORUM

Colorado River Basin Salinity Control Forum's Recommendation:

—Title II Program Authorized in 1995 (Public Law 104–20)—$17,500,000.

—General Investigation Funds—Adequate Funding.

—Operation and Maintenance—Adequate Funding.

This testimony is in support of funding for the Title II Colorado River Basin Salinity Control Program (Program). Congress has designated the Department of the Interior, Bureau of Reclamation (Reclamation), to be the lead agency for salinity control in the Colorado River Basin. This role and the authorized program were refined and confirmed by the Congress when Public Law 104–20 was enacted. A total of $17,500,000 is requested for fiscal year 2005 to implement the needed and authorized program. Failure to appropriate these funds will result in significant economic damage in the United States and Mexico.

In previous years, the President has supported, and Congress has funded, a program at about $12 million. In recent years, the President's requests have dropped and this year's request, in the judgment of the Colorado River Basin Salinity Con-

trol Forum (Forum), is inappropriately low. This year's administration request is for $9,064,000. Water quality commitments to downstream U.S. and Mexican water users must be honored while the Basin States continue to develop their Compact apportioned waters of the Colorado River. Concentrations of salts in the river cause hundreds of millions of dollars in damage in the United States and result in poorer quality water being delivered by the United States to Mexico. For every 30 mg/l increase in salinity concentrations, there is $75 million in additional damages in the United States. The Forum, therefore, believes implementation of the Program needs to be accelerated to a level beyond that requested by the President.

The Program, authorized by the Congress in 1995, has proven to be very successful and very cost effective. Proposals from the public and private sector to implement salinity control strategies have far exceeded the available funding and Reclamation has a backlog of proposals. Reclamation continues to select the best and most cost-effective proposals. Funds are available for the Colorado River Basin States' cost sharing for the level of Federal funding requested by the Forum. Water quality improvements accomplished under Title II of the Colorado River Basin Salinity Control Act (Act) also benefit the quality of water delivered to Mexico. Although the United States has always met the commitments of the International Boundary & Water Commission's (Commission) Minute 242 to Mexico with respect to water quality, the United States Section of the Commission is currently addressing Mexico's request for better water quality at the International Boundary.

Some of the most cost effective salinity control opportunities occur when the USBR can improve irrigation delivery systems at the same time that the USDA's program is working with landowners (irrigators) to improve the on-farm irrigation systems. Through the newly authorized USDA EQIP, adequate on-farm funds appear to be available and adequate USBR funds are needed to maximize the effectiveness of the effort.

OVERVIEW

In 2000, Congress reviewed the Program as authorized in 1995. Following hearings, and with administration support, the Congress passed legislation that increased the ceiling authorized by this program by $100 million. Reclamation has received cost-effective proposals to move the Program ahead and the Basin States have funds available to cost-share up-front.

The Program was authorized by Congress in 1974. The Title I portion of the Act responded to commitments that the United States made, through Minute 242, to Mexico concerning the quality of water being delivered to Mexico below Imperial Dam. Title II of the Act established a program to respond to salinity control needs of Colorado River water users in the United States and to comply with the mandates of the then newly legislated Clean Water Act. Initially, the Secretary of the Interior and Reclamation were given the lead Federal role by the Congress. This testimony is in support of adequate funding for the Title II program.

After a decade of investigative and implementation efforts, the Basin States concluded that the Act needed to be amended. Congress revised the Act in 1984. That revision, while leaving implementation of the salinity control policy with the Secretary of the Interior, also gave new salinity control responsibilities to the Department of Agriculture and to the Bureau of Land Management. Congress has charged the administration with implementing the most cost-effective program practicable (measured in dollars per ton of salt removed). The Basin States are strongly supportive of that concept as the Basin States cost share 30 percent of Federal expenditures up-front for the Program, in addition to proceeding to implement their own salinity control efforts in the Colorado River Basin.

The Forum is composed of gubernatorial appointees from Arizona, California, Colorado, Nevada, New Mexico, Utah and Wyoming. The Forum has become the seven-State coordinating body for interfacing with Federal agencies and Congress to support the implementation of the Program necessary to control the salinity of the river system. In close cooperation with the Environmental Protection Agency (EPA) and under requirements of the Clean Water Act, every 3 years the Forum prepares a formal report analyzing the salinity of the Colorado River, anticipated future salinity, and the program necessary to keep the salinities under control.

In setting water quality standards for the Colorado River system, the salinity levels measured at Imperial, and below Parker and Hoover Dams in 1972 have been identified as the numeric criteria. The plan necessary for controlling salinity and to reduce downstream damages has been captioned the "plan of implementation." The 2002 Review of water quality standards includes an updated plan of implementation. The level of appropriation requested in this testimony is in keeping with the agreed upon plan. If adequate funds are not appropriated, State and Federal agen-

cies involved are in agreement that damage from the higher salt levels in the water will be more widespread in the United States, as well as in Mexico, and will be very significant.

Although the Program thus far has been able to implement salinity control measures that comply with the approved plan, recent drought years have caused salinity levels to rise in the river. Predictions are that this will be the trend for the next several years. This places an added urgency for the acceleration of the implementation of the Program.

JUSTIFICATION

The $17,500,000 requested by the Forum on behalf of the seven Colorado River Basin States is the level of funding necessary to proceed with Reclamation's portion of the plan of implementation. In July of 1995, Congress amended the Act. The amended Act gives Reclamation new latitude and flexibility in seeking the most cost-effective salinity control opportunities, and it provides for utilization of proposals from project proponents, as well as more involvement from the private as well as the public sector. The result is that salt loading is being prevented at costs often less than half the cost under the previous Program. Congress recommitted its support to the revised program when it enacted Public Law 106–459. The Basin States' cost sharing up-front adds 43 cents for every Federal dollar appropriated. The federally chartered Colorado River Basin Salinity Control Advisory Council, created by the Congress in the Act, has met and formally supports the requested level of funding. The Basin States urge the subcommittee to support the funding as set forth in this testimony.

ADDITIONAL SUPPORT OF FUNDING

In addition to the funding identified above for the implementation of the most recently authorized program, the Forum urges the Congress to appropriate necessary funds needed to continue to maintain and operate salinity control facilities as they are completed and placed into long-term operation. Reclamation has completed the Paradox Valley unit which involves the collection of brines in the Paradox Valley of Colorado and the injection of those brines into a deep aquifer through an injection well. The continued operation of this project and other completed projects will be funded through Operation and Maintenance funds.

In addition, the Forum supports necessary funding to allow for continued general investigation of the Program. It is important that Reclamation have planning staff in place, properly funded, so that the progress of the Program can be analyzed, coordination between various Federal and State agencies can be accomplished, and future projects and opportunities to control salinity can be properly planned to maintain the water quality standards for salinity so that the Basin States can continue to develop their Compact-apportioned waters of the Colorado River.

PREPARED STATEMENT OF THE MNI WICONI PROJECT

FISCAL YEAR 2005 CONSTRUCTION BUDGET REQUEST

The Mni Wiconi Project beneficiaries (as listed below) respectfully request appropriations and can demonstrate capability for construction in fiscal year 2005 in the amount of $39,317,000 as follows:

	Amount
Oglala Sioux Rural Water Supply System:	
Core Facilities (Pipelines and Pumping Stations)	$8,128,000
Distribution System on Pine Ridge	10,224,000
West River/Lyman-Jones Rural Water System	11,020,000
Rosebud Sioux Rural Water System	7,325,000
Lower Brule Sioux Rural Water System	2,620,000
Total Mni Wiconi Project	39,317,000

The project sponsors were provided by the 107th Congress (Public Law 107–367) with all the authority necessary to finish this project at the level of development originally intended on a schedule through fiscal year 2008. Completion of the project is now clearly achievable as shown in the table below:

Total Federal Required (October 2003 Dollars)	$409,523,000
Estimated Federal Spent Through Fiscal Year 2004	$278,110,000
Percent Spent	67.9
Amount Remaining	$131,413,000
Years to Completion	4
Average Required for Fiscal Year 2008 Finish	$32,853,000

The administration's budget for this project in fiscal year 2005 ($18.2 million for construction) is a disappointment for a second year in a row. The amount requested by the administration falls far short of the average amount needed to complete the project in fiscal year 2008. The needs and merits of this project are considerable as described in section 3.

The project's operation, maintenance and replacement request from the sponsors is in addition to the construction request and is presented in section 8.

OSRWSS CORE PIPELINE TO REACH PINE RIDGE INDIAN RESERVATION IN FISCAL YEAR 2005

OGLALA SIOUX WATER SUPPLY SYSTEM CORE REQUEST

	Amount
South Core:	
Stamford to Kadoka:	
Reservoir to Kadoka Pipeline	$1,036,000
Pump Station, 2 Reservoirs	2,111,000
Kadoka to White River Pipeline	2,587,000
North Core:	
WTP toward Hayes Pipeline	2,394,000
Total	8,128,000

The Pine Ridge Indian Reservation and parts of West River/Lyman-Jones remain without points of interconnection to the OSRWSS core. The requested funding level for the OSRWSS core of $8.128 million will complete the project from Stamford to the northeast corner of the Pine Ridge Indian Reservation where, in combination with the western part of West River/Lyman-Jones, the remaining 50 percent of the design population resides. Funds will also be used by the Oglala Sioux Tribe to build the North Core westerly toward Hayes in the West River Lyman Jones service area with the intent to complete the OSRWSS North Core and all other core facilities in fiscal year 2007. Two additional years of funding will be required to complete the OSRWSS North Core system to serve the Reservation.

The 2000 census confirms that the Oglala Sioux population on Pine Ridge is growing at a rate of 27 percent per decade or 1½ times greater than projected from the 1990 census. Delivery of Missouri River water to this area is urgently needed.

All proposed OSRWSS construction activity will build pipelines that will provide Missouri River water immediately to beneficiaries. In many cases, construction of interconnecting pipelines by other sponsors is ongoing, and fiscal year 2005 funds are required to complete projects that will connect with the OSRWSS core and begin others.

Funding for OSRWSS core and distribution facilities is necessary to bring economic development to the Pine Ridge Indian Reservation, designated as one of five national rural empowerment zones by the previous administration. The designation serves to underscore the level of need. Economic development is largely dependent on the timely completion of a water system, which depends on appropriations for this project.

Finally, the subcommittee is respectfully requested to take notice of the fact that fiscal year 2005 will significantly advance construction of facilities that continues our progress toward the end of the project. The subcommittee's past support has brought the project to the point that the end can be seen. Key to the conclusion of the project in fiscal year 2008 is the completion of the OSRWSS core to the Pine Ridge Indian Reservation. Toward this end, funds are included in the fiscal year 2005 budget to build the connecting pipelines between the northeast corner of the Pine Ridge Indian Reservation and the central portion of the Reservation near Kyle. Rosebud is similarly engaged in the construction of major connecting pipelines that

will deliver water southerly to the central portions of the Rosebud Indian Reservation and to service areas for West River/Lyman-Jones.

UNIQUE NEEDS OF THIS PROJECT

This project covers much of the area of western South Dakota that was formerly the Great Sioux Reservation established by the Treaty of 1868. Since the separation of the Reservation in 1889 into smaller more isolated reservations, including Pine Ridge, Rosebud and Lower Brule, tensions between the Indian population and the non-Indian settlers on former Great Sioux lands have been high with little easing by successive generations. The Mni Wiconi Project is perhaps the most significant opportunity in more than a century to bring the sharply diverse cultures of the two societies together for a common good. Much progress has been made due to the good faith and genuine efforts of both the Indian and non-Indian sponsors. The project is an historic basis for renewed hope and dignity among the Indian people. It is a basis for substantive improvement in relationships.

Each year our testimony addresses the fact that the project beneficiaries, particularly the three Indian Reservations, have the lowest income levels in the Nation. The health risks to our people from drinking unsafe water are compounded by reductions in health programs. We respectfully submit that our project is unique and that no other project in the Nation has greater human needs. Poverty in our service areas is consistently deeper than elsewhere in the Nation. Health effects of water borne diseases are consistently more prevalent than elsewhere in the Nation, due in part to (1) lack of adequate water in the home and (2) poor water quality where water is available. Higher incidences of impetigo, gastroenteritis, shigellosis, scabies and hepatitis-A are well documented on the Indian reservations of the Mni Wiconi Project area. At the beginning of the third millennium one cannot find a region in our Nation in which social and economic conditions are as deplorable. These circumstances are summarized in Table 1. Mni Wiconi builds the dignity of many, not only through improvement of drinking water, but also through direct employment and increased earnings during planning, construction, operation and maintenance and from economic enterprises supplied with project water. We urge the subcommittee to address the need for creating jobs and improving the quality of life on the Pine Ridge and other Indian reservations of the project area.

TABLE 1.—PROFILE OF SELECTED ECONOMIC CHARACTERISTICS: 2000

Indian Reservation/State	2000 Population	Percent Change From 1990	Income		Percent Families Below Poverty	Percent Unemployment
			Per Capita	Median Household		
Pine Ridge Indian Reservation	15,521	27.07	$6,143	$20,569	46.3	16.9
Rosebud Indian Reservation	10,469	7.97	$7,279	$19,046	45.9	20.1
Lower Brule Indian Reservation	1,353	20.48	$7,020	$21,146	45.3	28.1
Star of South Dakota	754,844	8.45	$17,562	$35,282	9.3	3.0
Nation	281,421,906	13.15	$21,587	$41,994	9.2	3.7

Employment and earnings among the Indian people of the project area are expected to positively impact the high costs of health-care borne by the United States and the Tribes. Our data suggest clear relationships between income levels and Federal costs for heart disease, cancer and diabetes. During the life of the Mni Wiconi Project, mortality rates among the Indian people in the project area for the three diseases mentioned will cost the United States and the Tribes more than $1 billion beyond the level incurred for these diseases among comparable populations in the non-Indian community within the project area. While this project alone will not raise income levels to a point where the excessive rates of heart disease, cancer and diabetes are significantly diminished, the employment and earnings stemming from the project will, nevertheless, reduce mortality rates and costs of these diseases. Please note that between 1990 and 2000 per capita income on Pine Ridge increased from $3,591 to $6,143, and median household income increased from $11,260 to $20,569, due in large part to this project, albeit not sufficient to bring a larger percentage of families out of poverty (Table 1).

Financial support for the Indian membership has already been subjected to drastic cuts in funding programs through the Bureau of Indian Affairs. This project is a source of strong hope that helps off-set the loss of employment and income in other programs and provide for an improvement in health and welfare. Tribal leaders have seen that Welfare Reform legislation and other budget cuts Nation-wide

have created a crisis for tribal government because tribal members have moved back to the reservations in order to survive. Economic conditions have resulted in accelerated population growth on the reservations.

The Mni Wiconi Project Act declares that the United States will work with us under the circumstances:

". . . the United States has a trust responsibility to ensure that adequate and safe water supplies are available to meet the economic, environmental, water supply and public health needs of the Pine Ridge, Rosebud and Lower Brule Indian Reservations . . .".

Indian support for this project has not come easily because the historical experience of broken commitments to the Indian people by the Federal Government is difficult to overcome. The argument was that there is no reason to trust and that the Sioux Tribes are being used to build the non-Indian segments of the project and the Indian segments would linger to completion. These arguments have been overcome by better planning, an amended authorization and hard fought agreements among the parties. The subcommittee is respectfully requested to take the steps necessary the complete the critical elements of the project proposed for fiscal year 2004.

The following sections describe the construction activity in each of the rural water systems.

OGLALA SIOUX RURAL WATER SUPPLY SYSTEM—DISTRIBUTION

OGLALA SIOUX WATER SUPPLY SYSTEM DISTRIBUTION REQUEST

	Amount
West Boundary Supply	$506,000
Manderson Loop	1,454,000
Rockyford to Redshirt	179,000
White River to HWY 73/44 Junction:	
Pump Station, Service Lines and Reservoirs	3,127,000
HWY 73/44 Junction to Kyle	4,923,000
Indefinite Quantities	35,000
Total	10,224,000

With the conclusion of projects under construction in fiscal year 2002, the Oglala Sioux Tribe completed all facilities that can be supported from local groundwater. The Tribe, representing more than 40 percent of the project population will rely on the OSRWSS core to convey Missouri River water to and throughout the Reservation. Much pipeline has been constructed, primarily between Kyle, Wounded Knee and Red Shirt and between Pine Ridge Village and the communities of Oglala and Slim Buttes. Additional construction of the Manderson Loop is proposed in fiscal year 2005.

Of particular importance to the Oglala Sioux Tribe is the continuation of the main transmission system from the northeast corner (Highway 73/44 junction) of the Reservation to Kyle in the central part of the Reservation. The transmission line is needed to interconnect the OSRWSS core system with the distribution system within the Reservation in order to deliver Missouri River water to the populous portions of the Reservation. This critical segment of the project can be continued in fiscal year 2005 to coincide with the westward construction of the OSRWSS core to the northeast corner of the Reservation (see section 2). It will require funds in fiscal year 2006 and fiscal year 2007 to complete. This component of the Oglala system has been deferred for several years due to inadequate funding. The component is urgently needed for the OSRWSS core system to be utilized on the Pine Ridge Indian Reservation.

WEST RIVER/LYMAN-JONES RURAL WATER SYSTEM—DISTRIBUTION

WR/LJ RURAL WATER SYSTEM DISTRIBUTION REQUEST

	Amount
Mellette East	$533,000
Moenville	9,566,000
Quinn Town Distribution	176,000
Vivian Town	441,000

WR/LJ RURAL WATER SYSTEM DISTRIBUTION REQUEST—Continued

	Amount
Indefinite Quantities	304,000
Total	11,020,000

Continued drought conditions in the project area have created serious health and economic hardships for WR/LJ members waiting to receive Mni Wiconi water service. A survey of members attending the WR/LJ annual meeting on October 8, 2003 in Midland revealed that, of those members not receiving project water, 67 percent were hauling water for domestic use and 45 percent were hauling water for livestock. Their current source of water, highly mineralized wells and dried up dams, present a serious health hazard and unaffordable increases in production costs due to the time and cost of hauling water.

The requested appropriation is directed to serving members between Ft. Pierre and Philip. The highest priority is completion of the Moenville project. Houston Rose, prior to his death, pioneered initial efforts to bring quality water to this WR/LJ service area closest to the Mni Wiconi water treatment plant. The economy of the area he represented is based on livestock operations that are dependent on quality water supplies.

WR/LJ is now the water service provider in the towns of Quinn and Vivian, however, the existing distribution piping is over 50 years old and is a very high priority for replacement. Funding is also requested for the construction of pumping station and reservoirs required to deliver the full design capability of the pipelines under construction. As a testimony to public recognition of the advantages of quality water and the reliability of the system WR/LJ continues to add users within those areas previously constructed. These additions are being financed by member contributions as part of the statutory non-Federal matching requirement.

The Mni Wiconi project, due to continued Congressional support, has progressed to where the project beneficiaries can look forward to its timely completion and receive the intended project benefits. We sincerely appreciate your support.

ROSEBUD RURAL WATER SYSTEM (SICANGU MNI WICONI)

ROSEBUD SIOUX RURAL WATER SYSTEM REQUEST

	Amount
Hidden Timber	$1,317,000
Rosebud Improvements	737,000
Rural Antelope	866,000
Okreek	2,030,000
Mission Northwest	447,000
Livestock Water	1,271,000
Service Connections	657,000
Total	7,325,000

Fiscal year 2005 efforts build upon the successes of the past 2 years. The Rosebud Core pipeline will begin providing water from the OSRWSS at Murdo to Rosebud and WR/LJ water users in Mellette County. As a result, the limited supply of high quality ground water available from the Rosebud wellfield can be used as a source of supply for northeast Todd County.

The Rosebud Sioux Tribes efforts in fiscal year 2005 focus on connecting additional homes to new and existing pipelines. The Antelope to Okreek Pipeline, completed in late 2003, provides a supply of high quality ground water to the rural Antelope, northwest Mission, Hidden Timber and Okreek project areas. In this portion of northern Todd County, the Oglala Aquifer is not present and ground water is of poor quality and limited quantity where available. Private and community wells have failed in the area and while the Antelope to Okreek Pipeline solved the problem for the community of Okreek, many rural residents are anxiously waiting for water.

The problems are exacerbated in the Hidden Timber area. Where ground water occurs, nitrate concentrations are frequently in excess of the Safe Drinking Water Act primary standard. The high nitrate concentrations pose an acute threat to the unborn and young children.

The major features of the proposed fiscal year 2005 work plan focus on distribution and service lines for this area. Proposed projects for this area include Rural Antelope, Mission Northwest, Okreek and Hidden Timber. It is envisioned that both private contractors and the tribal construction program would be responsible for construction.

The other major project proposed for fiscal year 2005 address improvements needed in the community of Rosebud. In fiscal year 2004, the Tribe will be connecting the lower older part of Rosebud to the rural water system. While this will improve the quality and reliability of supply, improvements are needed to ensure water reaches the users. In several areas, older cast iron pipe has corroded and needs to be replaced. In other areas, older asbestos concrete pipe is still in use and felt to be a health threat. The focus of the work in Rosebud in fiscal year 2005 is to provide a reliable source of high quality water to all service connections.

The Tribe will also expand its service line program. The focus of this effort is new homes and homes that have been constructed since transmission or distribution lines have been installed. It is also proposed to start developing livestock watering facilities. The Tribe has not constructed any of these facilities to date with Mni Wiconi funding and the realty of prolonged drought is having an affect on historic livestock watering sources of supply. A reliable source of water for livestock is necessary to maintain one of the more viable components of the reservation economy.

The total amount requested for the Sicangu Mni Wiconi in fiscal year 2005 is $7,325,000.

LOWER BRULE RURAL WATER SYSTEM—DISTRIBUTION

The Lower Brule Rural Water System (LBRWS) has gained the support of the other sponsors to complete its share of the project with funds appropriated in fiscal year 2005 budget, based on an appropriation of funds for the project in the range generally received. This support is not only a benefit for LBRWS and its users but to the project as a whole. By funding LBRWS in this manner, a savings of approximately $1.5 million will be experienced by the project.

With the funds received in fiscal year 2004, LBRWS will complete the design, cultural resource evaluation and the securing of easements for the remaining service areas and installing mainlines and service lines required to provide water to all of the homes on the Lower Brule Indian Reservation. The fiscal year 2004 funds will also allow LBRWS to begin installing water lines to pasture taps. Since the area has experienced 2 years of drought conditions, many of the dams are dry. The provision of water will allow some pastures to be utilized that would have otherwise been of no benefit to the ranchers.

The fiscal year 2005 funds will allow the completion of the installation of pasture taps and a new 400,000 gallon elevated water tank in Lower Brule. The existing tank is in a location where the slides (soil movement) have occurred. As a result, the stability of the tank's foundation is in question.

OPERATION, MAINTENANCE AND REPLACEMENT BUDGET

The sponsors have and will continue to work with Reclamation to ensure that their budgets are adequate to properly operate, maintain and replace (OMR) their respective portions of the overall system. The sponsors will also continue to manage OMR expenses in a manner ensuring that the limited funds can best be balanced between construction and OMR. In fiscal year 2003, the approved budget for OMR was $8.228 million, which was adequate. Funding was not adequate in fiscal year 2004 at the $6.254 level and will not be adequate at the same leveling the administration's proposed fiscal year 2005 budget of $6.254 million for OMR.

The project has been making significant progress especially over the last 2 years with the initiation of operation of the OSRWSS Water Treatment Plant near Ft. Pierre and the installation of a significant quantity of pipeline. The result is the need for sufficient funds to properly operate and maintain the functioning system throughout the project. As a result, the OMR budget must continue to be adequate to keep pace with the portion of the system that is placed in operation.

In addition to ongoing operation and maintenance activities, water conservation is an integral part of the OMR of the project. Water conservation not only provides immediate savings from reduced water use and production, it also extends the useful life and capacity of the system. Proposed funding is not adequate to perform water conservation functions.

PREPARED STATEMENT OF THE CITY OF WATSONVILLE, CALIFORNIA AND PAJARO VALLEY WATER MANAGEMENT AGENCY

On behalf of the City of Watsonville and the Pajaro Valley Water Management Agency (PVWMA), we are submitting this testimony in support of Federal funding for the Watsonville Area Water Recycling Project. The project has been targeted to receive $2.0 million as part of the fiscal year 2003 and fiscal year 2004 Energy and Water appropriations bills through the Bureau of Reclamation's Title XVI program. This year, we respectfully request your support for the inclusion of $6.3 million in the Bureau of Reclamation's Title XVI program in the fiscal year 2005 Energy and Water Development Appropriations bill.

The City of Watsonville and the PVWMA continue to make great progress on the project. We are working diligently with the Bureau of Reclamation to develop solutions to the seawater intrusion problem affecting the water supply of our agricultural and urban water users. We need not convince you of the vital nature of this project that will protect the Pajaro Valley's fresh water supply from continued degradation.

To address the water resource needs of our area, PVWMA is implementing the Revised Basin Management Plan Project (project). Capital costs of the project are estimated at $165 million, of which $80 million is eligible for Federal cost sharing under the Title XVI program (in 2006 dollars). The Watsonville Water Area Recycling Project components that have qualified for funding through the Title XVI program include:

—Recycled Water Treatment Facility;
—Distribution System; and
—Salinity Control Pipeline.

The next several years will be critical for the project and we anticipate that all construction will be completed by fiscal year 2007. Certification of the Watsonville Water Area Recycling Project Feasibility Study is pending a Record of Decision on the Basin Management Plan Environmental Impact Statement, which is expected by May 2004.

The following table summarizes projected expenditures for design and construction of the Title XVI eligible project components.

[In millions of dollars]

	Projected Expenditures
Fiscal year 2004	9.8
Fiscal year 2005	25.3
Fiscal year 2006	31.3
Fiscal year 2007	13.4

We continue to be concerned by the administration's lack of support for Title XVI projects including the Watsonville Area Water Recycling Project. The Bureau's fiscal year 2005 budget recently submitted to Congress includes no funding for our project. In fact, the Bureau failed to budget for 12 of the 18 eligible projects while requesting over $1.5 million for itself to administer the program. We strongly believe that the Title XVI program in general and the Watsonville Area Water Recycling Project specifically offer effective solutions to the water supply crisis in our State. Indeed, without the Title XVI program, water recycling in our area might not be feasible and would force increased reliance on an already oversubscribed Central Valley Project. We question the wisdom of reducing the Bureau's participation in Title XVI and ask that you work with your colleagues in support of the program as well as funding for the Watsonville Area Water Recycling Project.

We are excited to report that the project is moving ahead on schedule. Approximately $18 million of project components have been constructed through fiscal year 2003. The accelerated construction of these project components allows PVWMA to deliver water early and demonstrate continued progress. In fiscal year 2004, we initiated work on the final design of the distribution system, the recycled water facilities, blending facilities and water wells, and salinity control pipeline. The design for each component will be completed in early fiscal year 2005 and construction of the projects will commence immediately thereafter.

Please feel free to contact PVWMA's Washington Representative or us if you have any questions or require additional information.

PREPARED STATEMENT OF THE LEWIS AND CLARK RURAL WATER SYSTEM

BACKGROUND

The Lewis and Clark Rural Water System is requesting $35 million through the Bureau of Reclamation in Federal funding for continuing construction activities in 2005. These funds will be used for construction, acquisition of easements and property, engineering, and associated legal and professional costs. The project has completed required planning and environmental reviews, and major construction will begin this year. The $17 million secured in fiscal year 2004 will enable Lewis and Clark to install the first segments of the raw water pipeline, provide emergency water connections for communities in Iowa, and various other interconnections throughout the water system. The three member-states and the local project sponsors have also contributed much to this project, with roughly $11 million in local funds to be made available in fiscal year 2005.

The President's budget requests $17.5 million for Lewis and Clark, which reflects a commitment he made to the project last summer. While this request is a welcome starting point, $35 million is necessary to fully-fund the project this year to ensure construction activities will continue in 2005. Even though we are in the early stages of construction, it is important to keep the project on schedule in order to provide this much-needed water source to area communities as soon as possible.

The Lewis and Clark Rural Water System Act became law in July 2000 (Public Law 106–246). When complete, the project will provide safe, reliable drinking water to approximately 200,000 people in South Dakota, Minnesota, and Iowa. Lewis and Clark represents a unique regional approach by three States to address common problems with area water resources in a more effective and cost-efficient way than each State could do alone. Regional water problems include shallow wells and aquifers prone to contamination, compliance with new Federal drinking water standards, and increasing water demand due to population growth and economic expansion.

The Lewis and Clark project will utilize an aquifer adjacent to the Missouri River near Vermillion, South Dakota, and will distribute water to member communities in an area of approximately 5,000 square miles, roughly the size of Connecticut. When complete, the drinking water will pass through a well system, a water treatment plant, and a non-looped distribution system. The system also will include water storage tanks that will provide approximately a 1-day supply. The project will require an estimated 10 to 12 years to complete.

PLANS FOR CONSTRUCTION IN 2004 AND 2005

Lewis and Clark developed a schedule for construction and related services to be performed during the next 2 years. The following work is anticipated in fiscal year 2004 and fiscal year 2005, subject to the availability of funding.

Projects Planned for Fiscal Year 2004

Raw Water Pipeline—Segment 1.—This project has been awarded to Winter Brothers Underground for $1,850,000. Construction will begin in May and will be completed by the end of September.

Raw Water Pipeline—Segments 2 and 3.—This project is currently in the final design phase. Permit applications and easements are currently being processed. It is anticipated this project would be awarded to a contractor in the early summer and construction start in late summer/early fall 2004.

Site J Production Pump Test Well.—Lewis & Clark currently plans to drill another test production well south and west of Vermillion. The well will be a +/−105′ deep vertical well and will be sized to be an actual production well for the project. The construction period will be from August 15 through November 15.

Treated Water Pipeline—SD Segment 1.—The Treated Water Pipeline Segment 1 will involve construction of a pipeline from west of Sioux Falls to Tea, South Dakota. The project will include construction of the main 48″ treated water transmission pipeline for the Lewis & Clark System. Lewis & Clark plans to bid and award this project in September 2004.

Treated Water Pipeline—IA Segment 1 (Iowa Emergency Connection).—The first phase of the Iowa Emergency Connection will involve a pipeline from the Sioux Center water treatment plant to Hull, Iowa. The project will include construction of the main treated water transmission pipeline for the Lewis & Clark System and service connection lines for Sioux Center and Hull. Lewis & Clark plans to bid and award this project in September 2004 or 2005, depending upon funding levels.

Water Treatment Plant Pre-design.—This task includes a preliminary design and evaluation of the treatment plant. The goal is to complete the pre-design and pro-

vide drawings, draft specifications and technical memoranda for a Value Engineering review in early 2005.

Projects Planned for Fiscal Year 2005

Fiscal year 2005 activities will include a continuation of the projects listed above for 2004, plus the following additional system components:

Treated Water Pipeline—SD Segment 2.—The second phase of the treated water pipeline construction in South Dakota would include construction of the main 48″ pipeline from Tea south to Lennox. Part or all of this segment may be included in the 2004 construction if delays are experienced elsewhere in the project. Lewis & Clark would bid and award this project in the summer of 2005.

Treated Water Pipeline—SD Segment 3.—The third phase of the treated water pipeline construction in South Dakota would be a continuation of the main 48″ pipeline south from Lennox to Highway 18. Lewis & Clark would bid and award this project in the summer of 2005.

(Under Consideration) Treated Water Pipeline—SD Segment 4 (portion of Parker service line).—This phase would include a portion of the service line to Parker, South Dakota. Initial construction of this line would be constructed to the turnout for South Lincoln RWS. If pursued, Lewis & Clark would bid and award this project in the summer of 2005.

(Under Consideration) Treated Water Pipeline—SD Segment 5 (South Dakota Emergency Connection).—The South Dakota Emergency Connection may include construction of a pipeline from the east side of Sioux Falls to connect to Lincoln County Rural Water System. The project would include construction of the main treated water transmission pipeline for the Lewis & Clark System. This part of the emergency connection will permit temporary transmission of water from Minnehaha Community Water Corporation (MCWC) to the Lincoln County RWS. Additional water could be provided to Tea, Lincoln County RWS and Harrisburg. If pursued, Lewis & Clark would bid and award this project in the summer of 2005.

(Under Consideration) Treated Water Pipeline—IA Segments 2 (Iowa Emergency Connection).—The next phase of the Iowa Emergency Connection may include building a short section of Lewis & Clark pipeline to connect Sheldon, Iowa to a temporary source of water. If pursued, Lewis & Clark plans to bid and award this project in the summer of 2005.

Treated Water Pipeline—MN Segment 1 (Minnesota Emergency Connection).—The Minnesota Emergency Connection will involve construction of a pipeline from Magnolia to east of Adrian, Minnesota. The project will include construction of the main treated water transmission pipeline for the Lewis & Clark System. The emergency connection will pump water from Rock County RWS to Lincoln-Pipestone RWS and other Minnesota water systems under future contracts. Lewis & Clark plans to bid and award this project in the summer of 2005 or 2006, depending on funding levels.

Water Treatment Plant Design.—The Value Engineering (VE) review will be performed in early 2005. The design team will proceed with design of the water treatment plant incorporating the results and recommendations from the VE review.

PREPARED STATEMENT OF THE MID-DAKOTA RURAL WATER SYSTEM

FISCAL YEAR 2005 FUNDING REQUEST

The Mid-Dakota Project is requesting an appropriations of $17.015 million provided through the Bureau of Reclamation's project construction program for fiscal year 2005. As with our past submissions to this subcommittee, Mid-Dakota's fiscal year 2005 request is based on a detailed analysis of our ability to proceed with construction during the fiscal year. In all previous years, Mid-Dakota has fully obligated its appropriated funds, including Federal, State, and local, and could have obligated significantly more were they available.

An appropriation of $17.015 million for fiscal year 2005 will complete the Federal Government's funding obligation for the initial construction of the authorized Project. It is with pleasure that Mid-Dakota agrees with President Bush's $17.015 million request for Mid-Dakota in fiscal year 2005.

TENTATIVE FISCAL YEAR 2005 CONSTRUCTION SCHEDULE [1]

The proposed construction would provide service to an estimated 1,500 more people than are currently receiving or scheduled to receive Project drinking water.

MID-DAKOTA RURAL WATER SYSTEM STATEMENT OF CAPABILITIES FISCAL YEAR 2005 (OCTOBER 2004 THROUGH SEPTEMBER 2005)

		Construction	Inspection—Percent of Const.	Engin. and Legal	Subtotals
100	Source and Intake (Percent)		12	2	
1	Expansion	$80,000	$57,600	$9,600	$547,200
	Subtotals	$480,000	$7,600	$9,600	$547,200
200	Water Treatment (Percent)		12	2	
1	Expansion	$710,000	$445,200	$74,200	$4,229,400
2	VFD IEEE comp.	$250,000	$30,000	$5,000	$285,000
	Subtotals	$3,960,000	$475,200	$79,200	$4,514,400
300	Main Trans. Pipe (Percent)		8	2	
1	Expansion—BPS	$2,175,000	$174,000	$43,500	$2,392,500
	Subtotals	$2,175,000	$174,000	$43,500	$2,392,500
400	Dist. Pipeline (Percent)		6	6	
1	Wolsey (4–3P (2))	$2,610,000	$156,600	$156,600	$2,923,200
2	Pearl Creek	$1,815,000	$108,900	$108,900	$2,032,800
3	Staum Dam	$1,450,000	$87,000	$87,000	$1,624,000
4	Redfield East	$415,000	$24,900	$24,900	$464,800
5	Vaults and stations	$280,000	$16,800	$16,800	$313,600
	Subtotals	$6,570,000	$394,200	$394,200	$7,358,400
500	Water Storage (Percent)		12	6	
1	Canning Tank	$1,120,000	$134,400	$67,200	$1,321,600
	Subtotals	$1,120,000	$134,400	$67,200	$1,321,600
600	SCADA and Controls (Percent)		8	8	
1	Controls & SCADA	$295,000	$23,600	$23,600	$342,200
	Subtotals	$295,000	$23,600	$23,600	$342,200
	TOTAL	$4,600,000	$1,259,000	$617,300	$16,476,300
	Administration as a Percent of Construction		1.5		$219,000
	Bur. of Rec. as a Percent of Construction		3.0		$438,000
	Contingencies as a percent of Construction		10.0		$1,460,000
	TOTAL CONSTRUCTION CAPABILITIES—FISCAL YEAR 2005				$18,593,300
	WETLAND COMPONENT REQUEST—FISCAL YEAR 2005				$317,000
	TOTAL FISCAL YEAR 2005 CAPABILITIES—FISCAL YEAR 2005				$18,910,300

Total capabilities are greater than the amount remaining in authorized funds. If a funding shortfall is realized, Mid-Dakota will examine its options for funding the shortfall when the amount is known.

[1] Project features listed in table are subject to rescheduling based upon funding provided and readiness to proceed and other factors. Actual construction activities, therefore, may not coincide exactly with schedule presented here.

IMPACTS OF FISCAL YEAR 2005 AWARD

The most obvious impact of any significant reduction from Mid-Dakota's request will be the delay of construction of one or more Project components. The $17.015 million will allow for the completion of the Mid-Dakota Project as it is currently authorized. The requested appropriation will provide the necessary funds to proceed with construction of multiple contracts summarized earlier in this testimony.

HISTORY OF PROJECT FUNDING

The Project was authorized by Congress and signed into law by President George H.W. Bush in October 1992. The Federal authorization for the project totaled $100 million (1989 dollars) in a combination of Federal grant and loan funds (grant funds may not exceed 85 percent of Federal contribution). The State authorization was for $8.4 million (1989 dollars). A breakdown of Project cost ceilings are as follows:

PROJECT COST CEILINGS (FISCAL YEAR 2004)

	Amount
Federal Ceiling	$140,279,000
State Ceiling	9,670,000
Subtotal Rural Water System	149,949,000
Wetland Enhancement Component	2,756,000
Total Project Cost Ceiling	152,705,000

The total authorized indexed cost of the project is approximately $152.705 million (fiscal year 2005 figures were not available at the time of writing this testimony). All Federal funding considered, the Government has provided 89 percent of its commitment ($126.726[2] million of $143.035 million) to provide construction funding for the Project. When considering the Federal and State combined awards, the project is approximately 89 percent complete, in terms of financial commitments.

SUMMARIZATION OF FEDERAL FUNDING

[In millions of dollars]

Fed. Fiscal year	Mid-Dakota Request	Pres. Budg.	House	Senate	Conf. Enacted Levels	Bureau Award Levels	Additional Funds	Total Fed. Funds Provided
1994	7.991	.....	.....	2.000	2.000	1.500	.....	1.500
1995	22.367	.....	.....	8.000	4.000	3.600	.....	3.600
1996	23.394	2.500	12.500	10.500	11.500	10.902	2.323	13.225
1997	29.686	2.500	11.500	12.500	10.000	9.400	1.500	10.900
1998	29.836	10.000	12.000	13.000	13.000	12.221	1.000	13.221
1999	32.150	10.000	10.000	20.000	15.000	14.100	2.000	16.100
2000	28.800	5.000	15.000	7.000	14.000	12.859	1.000	13.859
2001	24.000	6.040	11.040	6.040	10.040	9.398	.....	9.398
2002	30.684	10.040	15.040	15.540	15.040	13.611	0.861	14.472
2003	29.360	10.040	17.040	17.900	17.900	16.129	0.800	16.929
2004	23.869	2.040	12.040	15.040	15.040	13.522	.....	13.522
2005	17.015	17.015	.....	.....	.....	.....	.....	.....
Totals[1]	.....	75.175	116.16	127.52	127.52	117.242	9.484	126.726

[1] Includes Congressional appropriations for the operation and maintenance of the ''Wetland Enhancement'' Component of the Project.

Additionally, the State of South Dakota has contributed $9.67 million in grants to the Mid-Dakota Project, in previous years. The State of South Dakota completed its initial authorized financial obligation to the Mid-Dakota Project in the 1998 Legislative Session.

[2] Includes $15.0 million appropriated in fiscal year 2004, but does not include Agency "underfinancing" or 2005 Indexing.

CONSTRUCTION IN PROGRESS

Mid-Dakota began construction in September of 1994, with the construction of its Water Intake and Pump Station. Since that eventful day of first construction start, we have bid, awarded, and completed 23 project components and are into construction on eight other major Project components. The following table provides a synopsis of each major construction contract:

Contract	Contract Amount with Change Orders	Work Complete to Date	Percent Dollars Comp.	Contract Completion Date
1–1, Intake Station	$3,944,961.74	$3,944,961.74	100	02/28/97
1–1A, Intake Rip-Rap	$87,178.75	$87,178.75	100	05/02/98
1–1B, Intake Road	$26,187.50	$26,187.50	100	10/01/99
2–1, Water Treat. Plant	$10,242,564.00	$10,242,564.00	100	04/28/98
2–1A, WTP Controls	$14,628.98	$14,628.98	100	08/03/00
O&M Center Paving	$58,473.87	$58,473.87	100	06/13/00
3–1A, Raw Water Pipe	$1,719,251.30	$1,719,251.30	100	03/29/96
3–1B, Main Trans. Pipe	$7,022,055.73	$7,022,055.73	100	12/21/97
3–1C, Main Trans. Pipe	$4,793,104.90	$4,793,104.90	100	11/10/97
3–1D, CP System	$214,651.00	$214,651.00	100	11/01/00
3–2A, Main Trans. Pipe	$3,155,454.93	$3,155,454.93	100	12/03/99
3–2B, Main Trans. Pipe	$3,356,564.67	$3,356,564.67	100	12/09/99
3–3A, Main Trans. Pipe	$2,383,513.37	$2,383,513.37	100	11/01/02
3–3B, Main Trans. Pipe	$3,881,892.39	$3,871,671.00	99	11/13/03
3–3C, Main Trans. Pipe	$2,630,672.25	$2,601,234.00	99	11/13/03
4–1A/B (1–5) Dist. Pipe	$10,572,231.62	$10,572,231.62	100	10/20/97 [1] 11/15/97 [1] 11/15/98 05/30/99
4–1A/B (6) Dist. Pipe	$9,027,572.49	$9,027,572.49	100	10/22/99 [1] 12/03/00
4–2 (1) Dist. Pipe	$4,707,394.81	$4,707,394.81	100	11/10/00
4–2 (2) Dist. Pipe	$3,000,176.49	$3,000,176.49	100	11/13/00
4–2 (4–5) Dist. Pipe	$5,134,974.43	$5,134,974.43	100	10/31/01
4–2A (4) Dist. Pipe	$1,191,329.30	$1,191,329.30	100	10/31/01 07/01/02
4–2AP (2–3) Dist. Pipe	$11,435,814.24	$11,114,781.91	97	11/17/02 12/31/03
4–2AV (2–3) Dist. Pipe	$686,749.00	$686,749.00	100	11/01/03
5–1, Highmore Tank	$1,433,000.00	$1,433,000.00	100	10/20/97
5–1A (1) Onida Tank	$397,688.00	$397,688.00	100	06/30/99
5–1A(2—4) Oko. Agar Getty. Tanks	$1,526,453.00	$1,526,453.00	100	09/18/00
5–2 (1) Mac's Corner Tank	$561,100.69	$561,100.69	100	10/16/00
5–2 (2–3) Rezac Lake & Collins Slough Tanks	$911,720.00	$911,720.00	100	09/01/01
5–2A (1–3) Ames & Wess. Springs Tanks	$868,490.00	$868,490.00	100	09/01/02 09/01/03
5–2A (2) Cottonwood Lake Tank	$695,862.98	$695,862.98	100	09/01/02
5–3 Wolsey Tank	$2,021,414.00	$1,281,594.00	63	11/01/04
6–1 SCADA System	$888,260.50	$837,680.72	94	12/01/03
TOTAL	$98,591,386.93	$97,440,295.18		

[1] Intermediate completion date.

CLOSING

Mid-Dakota is very aware of the tough funding decisions that face the Energy and Water Appropriations Subcommittee and we do not envy the difficult job that lies ahead. We strongly urge, the subcommittee to look closely at the Mid-Dakota Project and recognize the dire need that exists. Consider the exceptionally high level of local and State support. And finally consider the fact that fully funding the fiscal year 2005 appropriation request as submitted by the President and by Mid-Dakota will fully fund the initial authorized components of the Mid-Dakota Project.

Again, we thank the subcommittee for its strong support, both past and present.

PREPARED STATEMENT OF THE NEW MEXICO INTERSTATE STREAM COMMISSION

SUMMARY

This statement is submitted in support of appropriations for the Colorado River Basin salinity control program of the Department of the Interior's Bureau of Reclamation. Congress designated the Bureau of Reclamation to be the lead agency for salinity control in the Colorado River Basin by the Colorado River Basin Salinity Control Act of 1974. Public Law 104–20 reconfirmed the Bureau of Reclamation's role. A total of $17.5 million is requested for fiscal year 2005 to implement the authorized salinity control program of the Bureau of Reclamation. The President's appropriation request is inadequate because studies have shown that the implementation of the salinity control program has fallen behind the pace needed to control salinity. An appropriation of $17.5 million for Reclamation's salinity control program is necessary to protect water quality standards for salinity and to prevent unnecessary levels of economic damage from increased salinity levels in water delivered to the Lower Basin States and Mexico.

STATEMENT

The water quality standards for salinity of the Colorado River must be protected while the Basin States continue to develop their compact apportioned waters of the river. Studies have shown that the implementation of the salinity control program has fallen below the threshold necessary to prevent future exceedence of the numeric criteria of the water quality standards for salinity in the Lower Basin of the Colorado River. The salinity standards for the Colorado River have been adopted by the seven Basin States and approved by EPA. While currently the standards have not been exceeded, salinity control projects must be brought on-line in a timely and cost-effective manner to prevent future effects that would cause the numeric criteria to be exceeded.

The Colorado River Basin Salinity Control Act was authorized by Congress and signed into law in 1974. The seven Colorado River Basin States, in response to the Clean Water Act of 1972, had formed the Colorado River Basin Salinity Control Forum, a body comprised of gubernatorial representatives from the seven States. The Forum was created to provide for interstate cooperation in response to the Clean Water Act, and to provide the States with information necessary to comply with Sections 303(a) and (b) of the Act. The Forum has become the primary means for the Basin States to coordinate with Federal agencies and Congress to support the implementation of the salinity control program for the Colorado River Basin.

Bureau of Reclamation studies show that damages from the Colorado River to United States water users are about $300,000,000 per year. Damages are estimated at $75,000,000 per year for every additional increase of 30 milligrams per liter in salinity of the Colorado River. Control of salinity is necessary for the Colorado River Basin States, including New Mexico, to continue to develop their compact-apportioned waters of the Colorado River.

It is essential that appropriations for the funding of the salinity control program be timely in order to comply with the water quality standards for salinity to prevent unnecessary economic damages in the United States, and to protect the quality of the water that the United States is obligated to deliver to Mexico. An appropriation of only the amount specified in the President's budget request is inadequate to protect the quality of water in the Colorado River and prevent unnecessary salinity damages in the States of the Lower Colorado River Basin. Studies have shown that the implementation of the salinity control program has fallen behind the pace needed to control salinity. Although the United States has always met the water quality standard for salinity of water delivered to Mexico under Minute No. 242 of the International Boundary and Water Commission, the United States through the U.S. Section of IBWC is currently addressing a request by Mexico for better quality water.

Congress amended the Colorado River Basin Salinity Control Act in July 1995 (Public Law 104–20). The salinity control program authorized by Congress by the amendment has proven to be very cost-effective, and the Basin States are standing ready with up-front cost sharing. Proposals from public and private sector entities in response to the Bureau of Reclamation's advertisement have far exceeded available funding. Basin States cost sharing funds are available for the $17.5 million appropriation request for fiscal year 2005. The Basin States cost sharing adds 43 cents for each Federal dollar appropriated.

Public Law 106–459 gave the Bureau of Reclamation additional spending authority for the salinity control program. With the additional authority in place and significant cost sharing by the Basin States, it is essential that the salinity control pro-

gram be funded at the level requested by the Forum and Basin States to protect the water quality of the Colorado River.

Maintenance and operation of the Bureau of Reclamation's salinity control projects and investigations to identify new cost-effective salinity control projects are necessary for the success of the salinity control program. Investigation of new opportunities for salinity control are critical as the Basin States continue to develop and use their compact-apportioned waters of the Colorado River. The water quality standards for salinity and the United States water quality requirements pursuant to treaty obligations with Mexico are dependent on timely implementation of salinity control projects, adequate funding to maintain and operate existing projects, and investigations to determine new cost-effective projects.

I urge the Congress to appropriate $17.5 million to the Bureau of Reclamation for the Colorado River Basin salinity control program, adequate funding for operation and maintenance of existing projects and adequate funding for general investigations to identify new salinity control opportunities. Also, I fully support testimony by the Forum's Executive Director, Jack Barnett, in request of this appropriation, and the recommendation of an appropriation of the same amount by the federally chartered Colorado River Basin Salinity Control Advisory Council.

LETTER FROM THE STATE ENGINEER'S OFFICE, WYOMING

Cheyenne, Wyoming, May 18, 2004.

The Honorable PETE V. DOMENICI,
Chairman,

The Honorable HARRY REID,
Ranking Member,
Energy and Water Development Subcommittee, Committee on Appropriations, United States Senate, 127 Dirksen Senate Office Building, Washington, DC 20510.

DEAR CHAIRMAN DOMENICI AND SENATOR REID: This letter is sent in support of fiscal year 2003 funding for the Bureau of Reclamation's Colorado River Basin Salinity Control Project—Title II Program. Thank you in advance for inclusion of this letter in the formal hearing record concerning fiscal year 2005 appropriations.

The Colorado River provides municipal and industrial water for 27 million people and irrigation water to nearly 4 million acres of land in the United States. The River is also the water source for some 2.3 million people and 500,000 acres in Mexico. Limitations on users' abilities to make the greatest use of that water supply due to the River's high concentration of total dissolved solids (hereafter referred to as the salinity of the water) are a major concern in both the United States and Mexico. Salinity in the water source especially affects agricultural, municipal, and industrial water users. While economic detriments and damages in Mexico are unquantified, the Bureau of Reclamation presently estimates salinity-related damages in the United States to amount to $330 million per year. The River's high salt content is in almost equal part due to naturally occurring geologic features that include subsurface salt formations and discharging saline springs; and the resultant concentrating effects of our users man's storage, use and reuse of the waters of the River system. Over-application of irrigation water by agriculture is a large contributor of salt to the Colorado River as irrigation water moves below the crop root zone, seeps through saline soils and then returns to the river system.

The 1944 Mexico Treaty obligates the United States to provide 1.5 million acre-feet of water to Mexico, but does not address quality. Mexico filed a formal protest in the 1960's when the salinity levels of water being delivered pursuant to the Treaty increased sharply. Several minutes, including Minute 242 to the Treaty, were negotiated to address the water quality concerns voiced by Mexico. Minute 242 requires the average annual salinity of the Colorado River water delivered to Mexico upstream of Mexico's principal diversion dam (Morelos Dam) can be no more than 115 parts per million (PPM), plus or minus 30 PPM higher than the average salinity of the water arriving at Imperial Dam, the lowermost point of major water diversion in the United States.

The Environmental Protection Agency's interpretation of the 1972 amendments to the Clean Water Act required the seven Basin States to adopt water quality standards for salinity levels in the Colorado River. In light of the EPA's regulation to require water quality standards for salinity in the Basin, the Governors of Arizona, California, Colorado, Nevada, New Mexico, Utah and Wyoming created the Colorado River Basin Salinity Control Forum as an interstate coordination mechanism in 1973. To address these international and regionally important salinity problems, the Congress enacted the Colorado River Basin Salinity Control Act of 1974. Title I ad-

dressed the United States' obligations to Mexico to control the River's salinity to ensure the United States' water deliveries to Mexico are within the specified salinity concentration range. Title II of the Act authorized control measures upstream of Imperial Dam and directed the Secretary of the Interior to construct several salinity control projects, most of which are located in Colorado, Utah, and Wyoming. Title II of the Act was again amended in 1995 and 2000 to direct the Bureau of Reclamation to conduct a basin-wide salinity control program. This program awards grants to non-Federal entities, on a competitive-bid basis, which initiate and carry out salinity control projects. The basin-wide program has demonstrated significantly improved cost-effectiveness, as computed on $1 per ton of salt basis, as compared to the prior Reclamation-initiated projects. The Forum was heavily involved in the development of the 1974 Act and its subsequent amendments, and continues to actively oversee the Federal agencies' salinity control program efforts.

During the past 31 years, the seven State Colorado River Basin Salinity Control Forum has actively assisted the Federal agencies, including the Bureau of Reclamation, in implementing this unique and important program. At its October 2003 meeting, the Forum recommended that the Bureau of Reclamation seek to have appropriated and should expend for Colorado River Basin salinity control the sum of $17,500,000 in fiscal year 2005. We strongly believe these efforts constitute one of the most successful Federal/State cooperative non-point source pollution control programs in the United States.

The State of Wyoming greatly appreciates the subcommittee's support of the Colorado River Salinity Control Program in past years. We suggest this important basin-wide water quality improvement program merits continued funding and support by your subcommittee.

With best regards,

JOHN W. SHIELDS,
Interstate Streams Engineer, for
PATRICK T. TYRRELL,
Wyoming State Engineer, Wyoming Member, Colorado River Basin Salinity Control Forum.

PREPARED STATEMENT OF THE STATE OF WYOMING

I write to request your support for an appropriation in fiscal year 2005 of $5,234,000 to the Bureau of Reclamation within the budget line item entitled "Endangered Species Recovery Implementation Program" for the Upper Colorado Region. The President's recommended budget for fiscal year 2005 includes this line-item amount. The funding designation we seek is as follows: $4,008,000 for the Upper Colorado River Endangered Fish Recovery Program; $691,000 for the San Juan River Basin Recovery Implementation Program and $535,000 for Fish and Wildlife Management and Development.

These highly successful, cooperative programs are ongoing partnerships among the States of Colorado, New Mexico, Utah and Wyoming, Indian tribes, Federal agencies and water, power and environmental interests. The programs' objectives are to recover endangered fish species while water development proceeds in compliance with the Endangered Species Act. The programs reflect a prudent approach to providing endangered species conservation and recovery within the framework of the Act, while concurrently resolving critical conflicts between endangered species recovery and the development and use of Compact-apportioned water resources in the Upper Colorado River Basin region of the Intermountain West.

The requested fiscal year 2005 appropriation will allow construction of fish passage structures at the Grand Valley Project and Price-Stubb diversion dams on the Colorado River near Grand Junction, Colorado. Fish passage will provide access to an additional 50 miles of historic habitat upstream of these dams. Floodplain restoration activities will continue at high-priority sites and is especially important for the survival of the razorback sucker species. Screening of existing diversion canals, needed to prevent endangered fish from being drawn out of the river and into canal and power plant intake structures, will proceed at the Redlands Water and Power Company and Bureau of Reclamation-constructed Grand Valley Project facilities. The requested funding for the San Juan River Recovery Program will be used for program management, propagation facilities, stocking efforts, non-native management efforts and construction of a fish screen in the Hogback Irrigation Project canal. Additional hatchery facilities, restoring floodplain habitat and fish passage, regulating and supplying instream habitat flows, installing diversion canal screens and controlling non-native fish populations are key components of the capital construction efforts ongoing in both programs.

Substantial non-Federal cost sharing funds are provided by the four States, power users, and water users in support of these recovery programs. Public Law 106–392, as amended by Public Law 107–375, authorizes the Federal Government to provide up to $46 million of cost sharing for these two ongoing recovery programs' remaining capital construction projects. The four participating states are contributing $17 million and $17 million is being contributed from revenues derived from the sale of Colorado River Storage Project (CRSP) hydroelectric power. These facts demonstrate the strong commitment and effective partnerships that are present in both of these successful programs.

The past support and assistance of your subcommittee has greatly facilitated the success of these multi-State, multi-agency programs. On behalf of the citizens of Wyoming, I thank you for that support and request the subcommittee's assistance for fiscal year 2005 funding to ensure the Bureau of Reclamation's continuing financial participation in these vitally important programs.

PREPARED STATEMENT OF THE CENTRAL ARIZONA WATER CONSERVATION DISTRICT (CAWCD)

Mr. Chairman, the Central Arizona Water Conservation District (CAWCD) is pleased to offer the following testimony regarding the fiscal year 2005 Energy and Water Development appropriations request by the U.S. Bureau of Reclamation, Lower Colorado Region.

The Central Arizona Project or "CAP" was authorized by the 90th Congress of the United States under the Colorado River Basin Project Act of 1968. The CAP is a multi-purpose water resource development project designed to deliver the remainder of Arizona's entitlement of Colorado River water into the central and southern portions of the State for municipal and industrial, agricultural, and Indian uses. CAWCD was created in 1971 as the local governmental entity responsible for contracting with the United States to repay the reimbursable construction costs of the CAP and, subsequently to operate and maintain the completed project. Its service area is comprised of Maricopa, Pima, and Pinal counties. CAWCD is a tax-levying public improvement district, a political subdivision, and a municipal corporation, and represents roughly 80 percent of the water users and taxpayers of the State of Arizona. CAWCD is governed by a 15-member Board of Directors elected from the three counties it serves. CAWCD's Board members are public officers who serve without pay.

Project repayment is provided for through a Master Repayment Contract between CAWCD and the United States. Project repayment began in 1994. To date, CAWCD has repaid $740 million of CAP construction costs to the United States.

CENTRAL ARIZONA PROJECT

In its fiscal year 2005 budget request, Reclamation seeks $34,087,000 for the CAP. Of this amount, $21,358,000 is requested for the continuation of construction of water distribution systems for various Indian water users. CAWCD supports full funding for this important program.

Reclamation is also requesting $1,849,000 to continue tendon repairs to the Centennial, Jackrabbit, and Hassayampa siphons. Completing the tendon repairs to these siphons is critical to the long term reliability of the CAP water delivery system; therefore, CAWCD strongly supports this appropriation request.

An amount of $6,692,000 is earmarked to fund activities associated with implementation of a 1994 biological opinion of the U.S. Fish and Wildlife Service (FWS) pertaining to delivery of CAP water to the Gila River Basin and for native fish activities on the Santa Cruz River. $1,951,000 and $28,000, respectively, are requested to complete environmental activities at Modified Roosevelt Dam and to complete a reservoir limnology follow-up study at Lake Pleasant. CAWCD supports these budget requests.

Reclamation is requesting $959,000 to begin land acquisition and right-of-way activities, and to continue coordination and design elements for the water supply reliability features of the Tucson Reliability Division, also known as Tucson Terminal Storage. A stipulation that settles a 1995 lawsuit between CAWCD and Reclamation over CAP costs requires Reclamation to consult with CAWCD before proceeding with the development of these features because of their potential impact on CAWCD's repayment obligation for CAP. Reclamation has not consulted with CAWCD, the city of Tucson, or other Tucson area customers about these activities. Until such consultation occurs, CAWCD opposes any funding for land acquisition and right of way activities for the Tucson Reliability Division.

COLORADO RIVER BASIN SALINITY CONTROL PROJECT—TITLE I

In its fiscal year 2005 budget request, Reclamation is requesting $10,869,000 under the Colorado River Basin Salinity Control Project—Title I. This program supports maintenance of the Yuma Desalting Plant (YDP), maintaining the U.S. Bypass Drain and the Mexico Bypass Drain, and ensuring that Mexican Treaty salinity requirements are met. Currently, the YDP is not operational. Instead, Reclamation is allowing all Wellton-Mohawk drainage water (over 100,000 acre-feet per year) to bypass the YDP and flow to the Santa Clara Slough in Mexico. These flows are not accounted for as deliveries to Mexico under the 1944 Mexican Treaty and represent a significant depletion of the Colorado River water currently in storage. Continuing this practice will eventually reduce the amount of water available to the Central Arizona Project, the lowest priority water user in the Colorado River basin, and increase the risk of future shortages. The Colorado River system is now in its fifth consecutive year of below normal runoff, and water levels in Lake Powell and Lake Mead are at their lowest levels in over 30 years. In fact, water year 2002 was the lowest runoff year in recorded history on the Colorado River. Reclamation's operation of the YDP would conserve an additional 100,000 acre-feet per year of Colorado River water for use by the lower basin States. This amount is roughly equal to the City of Phoenix's annual subcontract entitlement to CAP water.

The House of Representatives Report accompanying the fiscal year 1995 Energy and Water Development Appropriations bill directed Reclamation to maintain the YDP so as to be capable of operating at one-third capacity with a 1-year notice of funding. Conference Report 108–357 that accompanied the fiscal year 2004 Energy and Water Development Appropriations Act directed the Bureau of Reclamation to expedite its modifications to the YDP to enable state of the art operation and to accelerate permitting and environmental compliance activities. A report to the House and Senate Committees on Appropriations was due within 180 days. Reclamation indicates that this report is currently being prepared.

Reclamation's fiscal year 2005 budget justification documents again provide no indication that it has any intention of actually operating the YDP. The budget request for fiscal year 2005 is $381,000 less than Reclamation's fiscal year 2004 budget request. Of this amount, $781,000 is requested for Title I research technology to ". . . promote less expensive operation of the YDP and exploration of new technology to keep the YDP viable as a tool to address future water resource needs." According to Reclamation's budget justification documents, research advancements have already realized a cumulative savings of $10,000,000 in full plant operating expenses. This is an interesting statement in light of the fact that the plant is not being operated. It is also interesting to note that while Reclamation estimates $24 million per year would be needed to operate the plant, it is requesting about $10 million in order not to operate it. The $781,000 should be redirected toward activities necessary to make the YDP operational.

Reclamation is requesting $1,780,000 for continuing data gathering and analysis regarding the salinity of flows arriving at Imperial Dam and flows going into Mexico as well as work associated with minimizing Wellton-Mohawk drainage flows. Work also includes operation of sludge disposal equipment and activities required to purify feed water to the plant. CAWCD understands that most of this work is necessary, but not directly related to YDP operations. However, since the YDP is not operational, it is not clear what is being done for sludge disposal and feed water purification. If this is pretreatment for water treated at the research facility that is already included in the $781,000 previously mentioned, then that portion of the $1,780,000 requested should be redirected to YDP rehabilitation.

Reclamation is requesting $5,771,000 for continuing efforts to ensure the Yuma Desalting Plant can operate to meet Mexican Treaty requirements. This is $147,000 more than Reclamation's fiscal year 2004 budget request for this same line item. Work includes long-term maintenance of Yuma Desalting Plant infrastructure and facilities, maintenance of sections of the Bypass Drain, Protective and Regulatory Pumping Unit and mitigation features. Reclamation's narrative does not provide enough information to determine how much of this total amount is needed for features other than YDP; however, past spending reports, prepared by Reclamation, indicate about 50 percent or $2.9 million might be available for necessary maintenance and rehabilitation to restore operational capability at YDP.

Reclamation is requesting $483,000 to continue a long-term program to bank water and/or pursue short-term agricultural water right leases to offset the need to operate the plant. This is $2,759,000 less than Reclamation's fiscal year 2004 budget request for the same line item. There is no possibility for a program to bank water in 2005. Any plans for water right leases/land fallowing will require several million dollars. Reclamation also notes these funds would complete the permitting and envi-

ronmental compliance process for YDP operations. CAWCD supports this request only to the extent needed to complete the actions, documentation and permits necessary to operate YDP.

Reclamation has included a line item in its appropriations request for $2,054,000 for replacement of high pressure reverse osmosis pumps to correct corrosion problems and to continue to improve plant readiness and correct design deficiencies. CAWCD supports Reclamation's efforts to repair any design deficiencies. We encourage Reclamation to ensure that they have a comprehensive plan in place.

Using the information provided in Reclamation's appropriation request, it appears that of the $10,869,000 requested about $6,735,000 could be used for rehabilitation and modernization of the YDP with a goal of one-third operational capability by the end of 2006. That presumes Reclamation will spend $2 to $3 million of 2004 appropriations on such activities and that the budget will remain relatively level in 2006.

CAWCD requests that language be included in the fiscal year 2005 Energy and Water Appropriations bill directing Reclamation to take the necessary steps to bring the Yuma Desalting Plant into operation at no less than one-third capacity by the end of fiscal year 2006. CAWCD believes Reclamation's budget is sufficient to accomplish this goal.

COLORADO FRONT WORK AND LEVEE SYSTEM

Reclamation is requesting $3,647,000 for the Colorado River Front Work and Levee System. This project regulates, stabilizes, and maintains the river channel and includes the existing offstream storage feature, Senator Wash Dam. This budget request also includes continuing work to plan and design additional offstream storage on the All American Canal. CAWCD supports the budget request for these activities.

ENDANGERED SPECIES CONSERVATION/RECOVERY PROJECT

Reclamation is requesting $1,298,000 for its ongoing Endangered Species Conservation/Recovery Project. This program provides for the development and implementation of projects for the stewardship of endangered, threatened, proposed, and candidate species that are resident or migratory to habitats within the lower Colorado Region. These activities are complementary to the Lower Colorado River Multi-Species Conservation Program (MSCP). CAWCD supports this request.

LOWER COLORADO RIVER OPERATIONS PROGRAM

In its fiscal year 2005 budget request, Reclamation seeks $15,322,000 for its Lower Colorado River Operations Program. This program provides for Reclamation to continue its activities as the "water master" on the lower Colorado River and provides Reclamation's funding for the lower Colorado River Multi-Species Conservation Program (MSCP). $2,018,000 is for administration of the Colorado River and $3,177,000 is for water contract administration and decree accounting. Under Fish and Wildlife Management and Development, $9,027,000 is requested, of which $6,234,000 is earmarked for the MSCP. It is anticipated that a similar amount will be contributed by non-Federal parties. In addition, $1,184,000 is requested for Southwestern Willow Flycatcher and Yuma Clapper Rail Protection, $1,199,000 is for Razorback and Bonytail Chub protection, $410,000 for riparian restoration and research, $150,000 for NEPA compliance activities.

The MSCP is a cost-shared program among Federal and non-Federal interests to develop a long-term plan to conserve endangered species and their habitat along the lower Colorado River from Lake Mead to Mexico. CAWCD is one of the cost-sharing partners. Development of this program will provide habitat for hundreds of threatened and endangered species and, at the same time, allow current water and power operations to continue.

CAWCD supports Reclamation's budget request for the Lower Colorado River Operations Program. The increased funding level is necessary to support the MSCP effort as well as environmental measures necessary to fully implement the interim surplus criteria for the lower Colorado River. These are critical programs upon which lower Colorado River water and power users depend.

CAWCD welcomes this opportunity to share its views with the committee, and would be pleased to respond to any questions or observations occasioned by this written testimony.

PREPARED STATEMENT OF THE COLORADO RIVER WATER CONSERVATION DISTRICT

Chairman Domenici and Senator Reid, I am writing to request your support for an appropriation in fiscal year 2005 of $5,234,000 to the Bureau of Reclamation within the budget line item entitled "Endangered Species Recovery Implementation Program" for the Upper Colorado River Region. The President's recommended budget for fiscal year 2005 includes this line-item amount. Of these funds, I respectfully request the designation of $4,008,000 for the Upper Colorado River Endangered Fish Recovery Program; $691,000 for the San Juan River Basin Recovery Implementation Program and $535,000 for Fish and Wildlife Management and Development, consistent with the President's budget request. The requested fiscal year 2005 appropriation will allow construction of fish passage, floodplain restoration activities, screening of existing diversion canals, propagation facilities, endangered fish stocking, and non-native fish management.

These funds are authorized by Public Law 106–392. Substantial non-Federal cost sharing funds are provided by the States of Colorado, Wyoming, Utah, and New Mexico, power users, and water users in support of these recovery programs. These programs are carried out consistent with State law and interstate water compacts.

The past support and assistance of your subcommittee has greatly facilitated the success of these multi-State, multi-agency programs. I request the subcommittee's assistance relative to fiscal year 2005 funding to ensure the Bureau of Reclamation's continuing financial participation in these vitally important programs.

PREPARED STATEMENT OF THE FORT PECK ASSINIBOINE AND SIOUX TRIBES AND DRY PRAIRIE RURAL WATER

FISCAL YEAR 2005 BUDGET REQUEST

The Fort Peck Assiniboine and Sioux Tribes and Dry Prairie Rural Water respectfully request fiscal year 2005 appropriations for the Bureau of Reclamation from the Subcommittee on Energy and Water Development. Funds will be used to construct critical elements of the Fort Peck Reservation Rural Water System, Montana (Public Law 106–382, October 27, 2000). The amount requested is $25,000,000, based on capability to spend the requested funds as set out below:

FISCAL YEAR 2005 WORK PLAN—FORT PECK RESERVATION RURAL WATER SYSTEM (PUBLIC LAW 106–382)

	Funding	Costs
Appropriations Requested	$25,000,000	
Estimated Rescission and Underfinancing @ 10.18%	(2,545,000)	
Available Federal Funds	22,455,000	
Fort Peck Tribes:		
Federal Funds	15,911,000	
Work Plan:		
Design and Reclamation Oversight		$1,136,000
Missouri River Water Treat Plant		14,775,000
		15,911,000
Dry Prairie:		
Federal Funds	6,544,000	
Non-Federal Funds	2,067,000	
Total	8,611,000	
Work Plan:		
Design and Reclamation Oversight		609,000
Complete Culbertson to Medicine Lake Pipeline		331,000
Dane Valley and E. Med. Lake Pipelines		7,671,000
		8,611,000

The sponsor Tribes and Dry Prairie greatly appreciate the previous appropriations from the subcommittee that have permitted building the Missouri River intake, the critical water source, and the first phase of the Culbertson to Medicine Lake Pipeline Project.

The request is less than the average annual appropriations needed to complete the project in fiscal year 2012, as provided by the authorizing legislation:

Total Federal Funds Authorized (October 2003 Dollars)	$207,333,000
Federal Funds Expended Through Fiscal Year 2004	$1,804,000
Percent Complete	0.87
Amount Remaining	$205,529,000
Average Required for Fiscal Year 2012 Finish (Public Law 106–382)	$25,691,000

PROPOSED ACTIVITIES

This project, which includes all of the Fort Peck Indian Reservation in Montana and the Dry Prairie portion of the project outside the Reservation, was authorized by Public Law 106–382 in October 27, 2000. The request for fiscal year 2005 will continue the construction of the Missouri River water treatment plant, which will require fiscal year 2006 funds in the estimated amount of $5 million for completion. The request will also complete the Culbertson to Medicine Lake Project, which was initiated in fiscal year 2003, and advance the construction of the Dane Valley/Bainville/East Medicine Lake Projects.

The project also has the capability beyond the amount requested, based on current status of design, to build the first portion of the pipeline leaving the water treatment plant at a cost of $10 million. The pipeline section will be east of the water treatment plant and will serve the community of Poplar, headquarters community for the Assiniboine and Sioux Tribes. Construction is scheduled to start in fiscal year 2006. This will also provide a source of water for a section of the Fort Peck Indian Reservation contaminated by oil drilling operations and the subject of EPA orders to the responsible non-Tribal oil company. The oil company will provide the distribution system necessary to mitigate the problems and the Assiniboine and Sioux Rural Water System will provide the interconnecting pipeline without duplicating any facilities identified in the Final Engineering Report. This is an exigent circumstance that will be corrected by the project in fiscal year 2006. No funds are requested for fiscal year 2005 for this project even though design will be complete.

The Dry Prairie rural water system will finish the facilities necessary to bring water supplies from an existing treatment plant on the Missouri River at Culbertson to Medicine Lake where the existing water treatment is inoperable. The system to be completed in fiscal year 2005 will also provide the capability to connect Bainville, Dane Valley and East Medicine Lake residents. The latter project will rely on fiscal year 2005 and fiscal year 2006 funds to mitigate costs of hauling water so prevalent there. The budget request is consistent with the Master Plan as approved by the Bureau of Reclamation.

PROJECT STATUS AND COMPLETION

The Final Engineering Report (FER), water conservation plan and Finding of No Significant Impact were completed in fiscal year 2002. Congressional review of the project ended in August 2003, and construction began immediately. The Missouri River intake and the Culbertson to Medicine Lake pipeline projects are under construction and are scheduled for completion in October 2004.

Design of the water treatment plant is now well advanced. The design of the lagoons at the water treatment plant and the site landscaping will be completed in third-quarter fiscal year 2004, and construction of these preliminary facilities will begin in late fiscal year 2004. The main facility will begin construction in fiscal year 2005 at a cost of $20 million.

Design of the Poplar to Big Muddy pipeline is well advanced and can be completed to utilize first quarter fiscal year 2005 funds, but the appropriation requirements to undertake this pipeline construction in combination with the water treatment plant are considered too great to include in the funding request. Therefore, construction of this pipeline will depend on the availability of funds not currently identified in fiscal year 2006 or fiscal year 2007. The discussion of this pipeline is intended to demonstrate the capability of the project to use funds prior to fiscal year 2007 if funding were available.

Similarly, the design of the branch pipelines that will serve rural residents between Culbertson and Medicine Lake is well ahead of funding. There is more capa-

bility to use funds than will be available in either fiscal year 2004 or fiscal year 2005.

The project master plan is provided for review on the following page.

LOCAL PROJECT SUPPORT

The Fort Peck Tribes have supported the project since 1992 when they conceived it and sought means of improving the quality of life in the region. The planning was a logical step after successful completion of an historic water rights compact with the State of Montana. This compact was the national "ice breaker" that increased the level of confidence by other Tribes in Indian water right settlement initiatives. The Tribes did not seek financial compensation for the settlement of their water rights but expected development of meaningful water projects as now authorized.

The 1999 Montana Legislature approved a funding mechanism from its Treasure State Endowment Program to finance the non-Federal share of project planning and construction. Demonstrating support of Montana for the project, there were only three votes against the statutory funding mechanism in both the full House and Senate. The 2001 and 2003 Montana Legislatures have provided all authorizations and appropriations necessary for the non-Federal cost share.

Dry Prairie support is demonstrated by a financial commitment of all 14 communities within the service area to participate in the project. Rural support is strong, with about 70 percent of area farms and ranches intending to participate as evidenced by their intent fees of $100 per household.

MASTER PLAN

ASSINIBOINE SIOUX AND DRY PRAIRIE RWS

FY 2004 UPDATE

Segment		Total Cost (Oct 1998)	Total Cost (Oct 2003)	October 2003 Fort Peck Contract Cost	October 2003 Dry Prairie Contract Cost	Spent To Date thru 2003	Current Year Carryover 2003	Current Year FY2004 Funds	Balance To Complete	Fort Peck/ Dry Prair	Construction Year 3 2,005	4 2,006	5 2,007	6 2,008	FY 2009 thru FY 2012	Total
Intake		2,880,000	4,223,000	4,223,000		0	1,603,000	2,620,000	0	Fort Peck					0	4,223,000
Treatment Plant		16,734,000	18,618,000	18,618,000		0	0	825,000	17,793,000	Fort Peck	13,033,000	4,760,000			0	18,618,000
Poplar to Big Muddy		22,681,000	27,011,000	27,011,000		0	0		27,011,000	Fort Peck			11,500,000	15,511,000	0	27,011,000
Big Muddy to Plentywood						0	0									
	Culbertson to Medicine Lake	3,734,000	4,447,000		4,447,000	0	1,148,000	2,968,000	331,000	Dry Prair	331,000				0	4,447,000
	Bainville, Dane Valley and East Medicine Lak		8,617,000		8,617,000	0	0	0	8,617,000	Dry Prair	6,595,000	2,022,000			0	8,617,000
	Remaining	15,699,000	5,632,000		5,632,000	0	0	0	5,632,000	Dry Prair		3,632,000	2,000,000		0	5,632,000
Highway 13 to FP Boundary		9,247,000	11,012,000	11,012,000		0	0		11,012,000	Fort Peck				7,000,000	4,012,000	11,012,000
FP Boundary to Scobey		4,025,000	4,793,000		4,793,000	0	0		4,793,000	Dry Prair					4,793,000	4,793,000
Scobey to Plentywood		9,838,000	11,716,000		11,716,000	0	0		11,716,000	Dry Prair					11,716,000	11,716,000
Scobey to Opheim		7,945,000	9,462,000		9,462,000	0	0		9,462,000	Dry Prair					9,462,000	9,462,000
Poplar to Wolf Point		14,889,000	17,731,000	17,731,000		0	0		17,731,000	Fort Peck		10,000,000	7,731,000		0	17,731,000
Wolf Point to Porcupine Ck		25,301,000	30,131,000	30,131,000		0	0		30,131,000	Fort Peck					30,131,000	30,131,000
Porcupine Creek to Glasgow		3,874,000	4,614,000		4,614,000	0	0		4,614,000	Dry Prair					4,614,000	4,614,000
Glasgow to Opheim		3,506,000	4,175,000		4,175,000	0	0		4,175,000	Dry Prair					4,175,000	4,175,000
FP OM Buildings		1,000,000	1,108,000	1,108,000		0	0	542,000	566,000	Fort Peck					566,000	1,108,000
DP OM Buildings		500,000	554,000		554,000	0	0		554,000	Dry Prair					554,000	554,000
FP Electrical, Meters, Easements		4,164,000	4,680,000	4,680,000		0	0		4,680,000	Fort Peck					4,680,000	4,680,000
DP Electrical, Meters, Easements		3,521,000	3,957,000		3,957,000	0	0		3,957,000	Dry Prair					3,957,000	3,957,000
	Subtotal	149,538,000	172,481,000	114,514,000	57,967,000	0	2,751,000	6,955,000	162,775,000		19,959,000	20,414,000	21,231,000	22,511,000	78,660,000	172,481,000
Planning, Design, Admin																
	Reclamation Oversight	6,021,000	7,436,000	4,833,000	2,603,000	474,000		270,000	6,692,000		898,000	817,000	849,000	900,000	3,226,000	7,436,000
	Environmental Mitigation	753,000	930,000	604,000	326,000	14,000	12,000	-2,000	906,000		15,000	102,000	106,000	113,000	570,000	930,000
	Administration	10,691,000	13,204,000	8,329,000	4,875,000	759,000	544,000	664,000	11,237,000		1,208,000	1,208,000	1,208,000	1,208,000	6,405,000	13,204,000
	Easement Acquisition	3,360,000	4,174,000	3,237,000	937,000	23,000	34,000	-12,000	4,129,000		22,000	22,000	22,000	22,000	4,041,000	4,174,000
	Design	11,667,000	14,409,000	9,364,000	5,045,000	998,000	2,377,000	277,000	10,757,000		847,000	1,582,000	1,645,000	1,745,000	4,938,000	14,409,000
	Inspection	10,536,000	13,012,000	8,456,000	4,556,000	10,000	173,000	259,000	12,570,000		1,077,000	1,429,000	1,486,000	1,576,000	7,002,000	13,012,000
		43,048,000	53,165,000	34,823,000	18,342,000	2,278,000	3,140,000	1,456,000	46,291,000		4,067,000	5,160,000	5,316,000	5,564,000	26,184,000	53,165,000
Total		192,586,000	225,646,000	149,337,000	76,309,000	2,278,000	5,891,000	8,411,000	209,066,000		24,026,000	25,574,000	26,547,000	28,075,000	104,844,000	225,646,000
	Tribes (All Federal)	125,092,000	149,337,000	149,337,000		1,177,000	4,549,000	4,582,000	139,029,000		15,911,000	16,936,000	17,581,000	18,592,000	70,009,000	149,337,000
	Dry Prairie	67,494,000	76,310,000		76,309,000	627,000	1,342,000	3,559,000	70,782,000		8,115,000	8,638,000	8,967,000	9,483,000	37,549,000	76,310,000
	Federal	51,295,000	57,996,000		57,996,000			1,963,000			6,544,000	6,966,000	7,231,000	7,647,000	27,645,000	57,996,000
	Non-Federal	16,199,000	18,314,000		18,314,000			1,596,000			1,571,000	1,672,000	1,736,000	1,836,000	9,903,000	18,314,000

NEED FOR WATER QUALITY IMPROVEMENT

The Fort Peck Indian Reservation was previously designated as an "Enterprise Community", underscoring the level of poverty and need for economic development in the region. The success of economic development within the Reservation will be significantly enhanced by the availability of higher quality, safe and more ample municipal, rural and industrial water supplies that this regional project will bring to the Reservation, made more necessary by an extended drought in the region. Outside the Fort Peck Indian Reservation, the Dry Prairie area has income levels that are higher than within the Reservation but lower than the State average.

The feature of this project that makes it more cost effective than similar projects is its proximity to the Missouri River. The southern boundary of the Fort Peck Indian Reservation is formed by the Missouri River for a distance of more than 60 miles. Many of the towns in this regional project are located 2 to 3 miles from the river, including Nashua, Frazer, Oswego, Wolf Point, Poplar, Brockton, Culbertson, and Bainville. As shown on the enclosed project map, a transmission system outside the Fort Peck Indian Reservation will deliver water 30 to 40 miles north of the Missouri River. Therefore, the distances from the Missouri River to all points in the main transmission system are shorter than in other projects of this nature in the Northern Great Plains.

ADMINISTRATION'S BUDGET FOR FISCAL YEAR 2005

The administration's budget for fiscal year 2005 was severe disappointment. It was the only authorized project in the rural water category with construction underway that did not receive funding. Other projects authorized at the same time in both the rural water and water and related resources categories, of similar nature to this project, were generously funded. Of greatest concern now is the need for Reclamation to justify the zero funding amount. In all previous meetings with the Commissioner and his representatives and with OMB, no concerns with the project were raised other than the concerns raised with all projects that the Federal Budget is too constrained, non-Indians should bear a greater cost share and other priorities, such as homeland security, are more demanding of Federal funds. OMB specifically stated in our favor that the project had provided more support and justification of its benefits and costs than most Corps of Engineers and the Bureau of Reclamation projects prior to authorization. Under the circumstances, there is considerable concern on our part that previously undisclosed issues will be generated in support of the absence of a budget request.

The Tribes and Dry Prairie worked extremely well and closely with the Bureau of Reclamation prior to and following the authorization of this project in fiscal year 2000. The Bureau of Reclamation reviewed and commented on the Final Engineering Report, and all comments were either incorporated into the report or agreement was reached on final presentation. The Commissioner, Regional and Area Offices of the Bureau of Reclamation were consistently in full agreement with the need, scope, total costs, and the ability to pay analysis that supported the Federal and non-Federal cost shares. Bureau of Reclamation reviewed in writing all of these items thoroughly and formally and there were no areas of disagreement or controversy in the final formulation of the project. Bureau of Reclamation testimony during the authorization phase fully supported the project within the Fort Peck Indian Reservation and opposed any Federal participation in the costs of the project outside the Fort Peck Indian Reservation, as a matter of policy, but Congress addressed that issue in Public Law 106–382.

The Bureau of Reclamation collaborated with the Tribes and Dry Prairie to conduct and complete value engineering investigations of the Final Engineering Report (planning), the Culbertson to Medicine Lake pipeline (design), the Poplar to Big Muddy River pipeline (design), the Missouri River intake (design) and (during the week of March 31, 2003) on the regional water treatment plant (design). Each of these considerable efforts has been directed at ways to save construction and future operation, maintenance and replacement costs as planning and design proceeded. Agreement with Reclamation has been reached in all value engineering sessions on steps to take to save Federal and non-Federal costs in the project.

Cooperative agreements have been developed and executed from the beginning phases to date between the Bureau of Reclamation and the Tribes and between Bureau of Reclamation and Dry Prairie. Those cooperative agreements carefully set out goals, standards and responsibilities of the parties for planning, design and construction. All plans and specifications are subject to levels of review by the Bureau of Reclamation pursuant to the cooperative agreements. The sponsors do not have the power to undertake activities that are not subject to oversight and approval by the Bureau of Reclamation. Each year the Tribes and Dry Prairie are required by

the cooperative agreements to develop a work plan setting out the planning, design and construction activities and the allocation of finding to be utilized on each project feature.

Clearly, the Fort Peck Reservation Rural Water System is well supported by the Bureau of Reclamation planners. Congress authorized the project with a plan formulated in full cooperation and collaboration with the Bureau of Reclamation, and major project features are under construction.

PREPARED STATEMENT OF THE COLORADO RIVER ENERGY DISTRIBUTORS ASSOCIATION

The Colorado River Energy Distributors Association (CREDA) appreciates the opportunity to submit its views on funding for specific programs of the Bureau of Reclamation and the Western Area Power Administration in the fiscal year 2005 Energy and Water Development appropriations bill. We look forward to working with you and the subcommittee on these issues of importance to electric consumers in the Colorado River Basin States. The first issue is a request for Federal funds to pay for costs of increased security at Federal multi-purpose dams. The Bureau of Reclamation has requested $43 million for dams under its jurisdiction for fiscal year 2005. CREDA is attempting to determine whether this represents the total amount that will be spent by the Bureau for increased security in fiscal year 2005 or not. The second issue is a request for $10,000,000 of additional funds for the Western Area Power Administration of the Department of Energy relating to the Animas-La Plata project.

CREDA is a non-profit, regional organization representing consumer-owned municipal and rural electric cooperatives, political subdivisions, irrigation and electrical districts and tribal utility authorities that purchase hydropower resources from the Colorado River Storage Project (CRSP). CRSP is a multi-purpose Federal project that provides flood control; water storage for irrigation, municipal and industrial purposes; recreation and environmental mitigation, in addition to the generation of electricity. CREDA was established in 1978, and serves as the "voice" of CRSP contractor members in dealing with resource availability and affordability issues. CREDA represents its members in dealing with the Bureau—as the owner and operator of the CRSP—and the Western Area Power Administration—as the marketing agency of the CRSP.

CREDA members serve nearly 3 million electric consumers in the six western States of Arizona, Colorado, Nevada, New Mexico, Utah and Wyoming. CREDA's member utilities purchase more than 85 percent of the power produced by the CRSP. In addition, several Indian tribes have joined CREDA as affiliate members prior to receiving allocations of CRSP power on October 1, 2004.

With regard to the President's proposed fiscal year 2005 budget request, CREDA has two primary concerns:

NON-REIMBURSABILITY OF POST-9/11 SECURITY COST INCREASES

Federal multipurpose projects across the country provide millions of citizens with a multitude of benefits, including flood control, municipal, rural, and industrial water supply, navigation, recreation, and, of course, hydropower. Providing adequate security for these multi-purpose, federally owned facilities is important to all U.S. citizens. In the aftermath of the attacks on September 11, 2001, Federal agencies involved in the Federal power program (the U.S. Bureau of Reclamation, the U.S. Army Corps of Engineers, and the Federal Power Marketing Administrations) have determined that significant increases in security are needed, and will continue for years to come.

Adequately protecting and securing national assets, such as the Federal multipurpose dams, comes with a price tag. In 1941 and 1942, Congress treated increased security costs before and after Pearl Harbor as non-reimbursable (e.g., as costs to be borne by the Federal Government and financed through appropriations, rather than reimbursed by hydropower customers) because of the obvious national security interest at stake and the benefits these projects offer to all Americans. Thus far, Congress has agreed with this historical precedent, as evidenced by Senate Appropriations report language for fiscal year 2003 and fiscal year 2004, which stated that funds made available to respond to the September 11, 2001, terrorist attacks shall be non-reimbursable and indicates these costs "are recurring" (S. Rept. 107–220 and S. Rept. 108–105). House report language for fiscal year 2003 also supported this view (H. Rept. 107–681).

The Bureau of Reclamation received $28.4 million in the fiscal year 2003 Energy and Water Appropriations bill and an additional $25 million in the 2003 Supplemental Appropriations bill to cover increased costs to protect Reclamation dams and

other facilities post September 11. The Bureau also received $28.5 million for increased security costs in the fiscal year 2004 Energy and Water bill that was signed into law in December 2003. The Bureau of Reclamation recognized the above historical precedent and the sound policy behind it and, in fiscal year 2003 and 2004, administratively determined that additional security costs should be non-reimbursable (Bureau of Reclamation Commissioner Keys, April 2002). The Corps of Engineers did not, treating additional security investments at Corps facilities as reimbursable.

Due to budget constraints and pressures to control costs from the Office of Management and Budget (OMB), the President's fiscal year 2005 budget directs the Bureau and the Corps to recover some of the costs of increased security measures from entities that benefit from the multi-purpose projects. Given our past experience with the Bureau and the Corps, we believe that power customers will be unfairly singled out to pay the reimbursable costs.

The reasons that security costs at Federal dams should continue to be non-reimbursable are: (1) these facilities are Federal and multi-purpose in nature, and the benefits accrue to a vast number of citizens in many States; (2) protection of these Federal facilities is clearly in the national interest and should remain a Federal responsibility; and (3) by taking this funding stream out of the appropriations process, congressional oversight of Reclamation's use of the funds would be greatly diminished, thereby reducing accountability for the type and expense of the security measures imposed.

CREDA urges the committee to include the following statutory language in the fiscal year 2005 Water and Energy Development Appropriations bill, to clarify that the additional costs of securing facilities of the Bureau of Reclamation, the Corps of Engineers and the Federal power marketing administrations are a Federal responsibility and should be non-reimbursable:

"For fiscal year 2005 and each fiscal year thereafter, the increased costs of ensuring security of Bureau of Reclamation dams, federal power marketing administration facilities and Corps of Engineers multipurpose facilities in the aftermath of the events of September 11, 2001, shall be non-reimbursable and non-returnable."

ANIMAS-LA PLATA PROJECT

The Colorado Ute Settlement Act Amendments of 2000 (Title III, Section 301(b)(10), Public Law 106–554, December 21, 2000) authorized development of the Animas-La Plata Project to satisfy water right claims of the Southern Ute and Ute Mountain Ute Tribes in southwest Colorado (known collectively as the "Colorado Ute Indian Tribes"). The project requires construction of a reservoir, pumping plant and appurtenant facilities to provide water supply and delivery of municipal and industrial water and other benefits to the Tribes.

In order to provide power from the CRSP to the Durango Pumping Plant, transmission facilities will need to be constructed, operated and maintained by the Western Area Power Administration. These transmission facilities do not provide any benefit to CRSP power customers; they are required solely to deliver water to project beneficiaries.

The Western Area Power Administration will be responsible for construction, operation and maintenance of these transmission facilities, and requires additional appropriations in the amount of $10,000,000 in fiscal year 2005 to meet the construction timetable established by the U.S. Bureau of Reclamation, the project manager. Since the transmission lines will power the pumping plant required for delivery of water to Native American and non-Native American municipal and industrial users, the costs related to the transmission facilities and services should not be borne by the CRSP power customers and should be considered non-reimbursable and non-returnable. To do otherwise could turn 102 years of Reclamation law on its head. Failure to address this issue in the fiscal year 2005 appropriations cycle could jeopardize the current construction schedule for the Animas-La Plata project and subject CRSP power customers and the consumers they serve to an unfair financial burden.

The Western Area Power Administration, the Bureau of Reclamation, the Colorado River Energy Distributors Association, the water users and the Colorado Ute Indian Tribes all support the inclusion of the following language in the fiscal year 2005 Energy and Water Development Appropriations bill:

"For carrying out the functions authorized by title III, section 302(a)(1)(E) of the Act of August 4, 1977 (42 U.S.C. 7152), and other related activities including conservation and renewable resources programs as authorized, including official reception and representation expenses in an amount not to exceed $1,500, $183,100,000 to remain available until expended, of which $170,756,000 shall be derived from the Department of the Interior Reclamation Fund: Provided, That all authorities and fu-

ture contributions described in Section 402, subparagraph (b)(3)(B) of the Reclamation Projects Authorization and Adjustment Act of 1992 previously assigned to the Secretary of Energy, Western Area Power Administration, shall be transferred to the Secretary of the Interior, Bureau of Reclamation: Provided further, That of the amount herein appropriated, $10,000,000 shall be available until expended on a nonreimbursable basis to the Western Area Power Administration to design, construct, operate and maintain transmission facilities and services for the Animas-La Plata Project as authorized by sections 301(b)(10) of Public Law 106–554."

PREPARED STATEMENT OF THE MNI WICONI PROJECT

FISCAL YEAR 2005 CONSTRUCTION BUDGET REQUEST

The Mni Wiconi Project beneficiaries (as listed below) respectfully request appropriations and can demonstrate capability for construction in fiscal year 2005 in the amount of $39,317,000 as follows:

	Amount
Oglala Sioux Rural Water Supply System:	
Core Facilities (Pipelines and Pumping Stations)	$8,128,000
Distribution System on Pine Ridge	10,224,000
West River/Lyman-Jones Rural Water System	11,020,000
Rosebud Sioux Rural Water System	7,325,000
Lower Brule Sioux Rural Water System	2,620,000
Total Mni Wiconi Project	39,317,000

The project sponsors were provided by the 107th Congress (Public Law 107–367) with all the authority necessary to finish this project at the level of development originally intended on a schedule through fiscal year 2008. Completion of the project is now clearly achievable as shown in the table below:

Total Federal Required (October 2003 Dollars)	$409,523,000
Estimated Federal Spent Through Fiscal Year 2004	$278,110,000
Percent Spent	67.9
Amount Remaining	$131,413,000
Years to Completion	4
Average Required for Fiscal Year 2008 Finish	$32,853,000

The administration's budget for this project in fiscal year 2005 ($18.2 million for construction) is a disappointment for a second year in a row. The amount requested by the administration falls far short of the average amount needed to complete the project in fiscal year 2008. The needs and merits of this project are considerable as described in section 3.

The project's operation, maintenance and replacement request from the sponsors is in addition to the construction request and is presented in section 8.

OSRWSS CORE PIPELINE TO REACH PINE RIDGE INDIAN RESERVATION IN FISCAL YEAR 2005

OGLALA SIOUX WATER SUPPLY SYSTEM CORE REQUEST

	Amount
South Core:	
Stamford to Kadoka:	
Reservoir to Kadoka Pipeline	$1,036,000
Pump Station, 2 Reservoirs	2,111,000
Kadoka to White River Pipeline	2,587,000
North Core:	
WTP toward Hayes Pipeline	2,394,000
Total	8,128,000

The Pine Ridge Indian Reservation and parts of West River/Lyman-Jones remain without points of interconnection to the OSRWSS core. The requested funding level

for the OSRWSS core of $8.128 million will complete the project from Stamford to the northeast corner of the Pine Ridge Indian Reservation where, in combination with the western part of West River/Lyman-Jones, the remaining 50 percent of the design population resides. Funds will also be used by the Oglala Sioux Tribe to build the North Core westerly toward Hayes in the West River Lyman Jones service area with the intent to complete the OSRWSS North Core and all other core facilities in fiscal year 2007. Two additional years of funding will be required to complete the OSRWSS North Core system to serve the Reservation.

The 2000 census confirms that the Oglala Sioux population on Pine Ridge is growing at a rate of 27 percent per decade or 1½ times greater than projected from the 1990 census. Delivery of Missouri River water to this area is urgently needed.

All proposed OSRWSS construction activity will build pipelines that will provide Missouri River water immediately to beneficiaries. In many cases, construction of interconnecting pipelines by other sponsors is ongoing, and fiscal year 2005 funds are required to complete projects that will connect with the OSRWSS core and begin others.

Funding for OSRWSS core and distribution facilities is necessary to bring economic development to the Pine Ridge Indian Reservation, designated as one of five national rural empowerment zones by the previous administration. The designation serves to underscore the level of need. Economic development is largely dependent on the timely completion of a water system, which depends on appropriations for this project.

Finally, the subcommittee is respectfully requested to take notice of the fact that fiscal year 2005 will significantly advance construction of facilities that continues our progress toward the end of the project. The subcommittee's past support has brought the project to the point that the end can be seen. Key to the conclusion of the project in fiscal year 2008 is the completion of the OSRWSS core to the Pine Ridge Indian Reservation. Toward this end, funds are included in the fiscal year 2005 budget to build the connecting pipelines between the northeast corner of the Pine Ridge Indian Reservation and the central portion of the Reservation near Kyle. Rosebud is similarly engaged in the construction of major connecting pipelines that will deliver water southerly to the central portions of the Rosebud Indian Reservation and to service areas for West River/Lyman-Jones.

UNIQUE NEEDS OF THIS PROJECT

This project covers much of the area of western South Dakota that was formerly the Great Sioux Reservation established by the Treaty of 1868. Since the separation of the Reservation in 1889 into smaller more isolated reservations, including Pine Ridge, Rosebud and Lower Brule, tensions between the Indian population and the non-Indian settlers on former Great Sioux lands have been high with little easing by successive generations. The Mni Wiconi Project is perhaps the most significant opportunity in more than a century to bring the sharply diverse cultures of the two societies together for a common good. Much progress has been made due to the good faith and genuine efforts of both the Indian and non-Indian sponsors. The project is an historic basis for renewed hope and dignity among the Indian people. It is a basis for substantive improvement in relationships.

Each year our testimony addresses the fact that the project beneficiaries, particularly the three Indian Reservations, have the lowest income levels in the Nation. The health risks to our people from drinking unsafe water are compounded by reductions in health programs. We respectfully submit that our project is unique and that no other project in the Nation has greater human needs. Poverty in our service areas is consistently deeper than elsewhere in the Nation. Health effects of waterborne diseases are consistently more prevalent than elsewhere in the Nation, due in part to (1) lack of adequate water in the home and (2) poor water quality where water is available. Higher incidences of impetigo, gastroenteritis, shigellosis, scabies and hepatitis-A are well documented on the Indian reservations of the Mni Wiconi Project area. At the beginning of the third millennium one cannot find a region in our Nation in which social and economic conditions are as deplorable. These circumstances are summarized in Table 1. Mni Wiconi builds the dignity of many, not only through improvement of drinking water, but also through direct employment and increased earnings during planning, construction, operation and maintenance and from economic enterprises supplied with project water. We urge the subcommittee to address the need for creating jobs and improving the quality of life on the Pine Ridge and other Indian reservations of the project area.

Employment and earnings among the Indian people of the project area are expected to positively impact the high costs of health care borne by the United States and the Tribes. Our data suggest clear relationships between income levels and Fed-

eral costs for heart disease, cancer and diabetes. During the life of the Mni Wiconi Project, mortality rates among the Indian people in the project area for the three diseases mentioned will cost the United States and the Tribes more than $1 billion beyond the level incurred for these diseases among comparable populations in the non-Indian community within the project area. While this project alone will not raise income levels to a point where the excessive rates of heart disease, cancer and diabetes are significantly diminished, the employment and earnings stemming from the project will, nevertheless, reduce mortality rates and costs of these diseases. Please note that between 1990 and 2000 per capita income on Pine Ridge increased from $3,591 to $6,143, and median household income increased from $11,260 to $20,569, due in large part to this project, albeit not sufficient to bring a larger percentage of families out of poverty (Table 1).

TABLE 1.—PROFILE OF SELECTED ECONOMIC CHARACTERISTICS: 2000

Indian Reservation/State	2000 Population	Change from 1990 (Percent)	Income		Families Below Poverty (Percent)	Unemployment (Percent)
			Per Capita (Dollars)	Median Household (Dollars)		
Pine Ridge Indian Reservation	15,521	27.07	6,143	20,569	46.3	16.9
Rosebud Indian Reservation	10,469	7.97	7,279	19,046	45.9	20.1
Lower Brule Indian Reservation	1,353	20.48	7,020	21,146	45.3	28.1
State of South Dakota	754,844	8.45	17,562	35,282	9.3	3.0
Nation	281,421,906	13.15	21,587	41,994	9.2	3.7

Financial support for the Indian membership has already been subjected to drastic cuts in funding programs through the Bureau of Indian Affairs. This project is a source of strong hope that helps off-set the loss of employment and income in other programs and provide for an improvement in health and welfare. Tribal leaders have seen that Welfare Reform legislation and other budget cuts Nation-wide have created a crisis for tribal government because tribal members have moved back to the reservations in order to survive. Economic conditions have resulted in accelerated population growth on the reservations.

The Mni Wiconi Project Act declares that the United States will work with us under the circumstances:

". . . the United States has a trust responsibility to ensure that adequate and safe water supplies are available to meet the economic, environmental, water supply and public health needs of the Pine Ridge, Rosebud and Lower Brule Indian Reservations . . .".

Indian support for this project has not come easily because the historical experience of broken commitments to the Indian people by the Federal Government is difficult to overcome. The argument was that there is no reason to trust and that the Sioux Tribes are being used to build the non-Indian segments of the project and the Indian segments would linger to completion. These arguments have been overcome by better planning, an amended authorization and hard fought agreements among the parties. The subcommittee is respectfully requested to take the steps necessary the complete the critical elements of the project proposed for fiscal year 2004.

The following sections describe the construction activity in each of the rural water systems.

OGLALA SIOUX RURAL WATER SUPPLY SYSTEM—DISTRIBUTION

OGLALA SIOUX WATER SUPPLY SYSTEM DISTRIBUTION REQUEST

	Amount
West Boundary Supply	$506,000
Manderson Loop	1,454,000
Rockyford to Redshirt	179,000
White River to HWY 73/44 Junction:	
Pump Station, Service Lines and Reservoirs	3,127,000
HWY 73/44 Junction to Kyle	4,923,000
Indefinite quantities	35,000
TOTAL	10,224,000

With the conclusion of projects under construction in fiscal year 2002, the Oglala Sioux Tribe completed all facilities that can be supported from local groundwater. The Tribe, representing more than 40 percent of the project population will rely on the OSRWSS core to convey Missouri River water to and throughout the Reservation. Much pipeline has been constructed, primarily between Kyle, Wounded Knee and Red Shirt and between Pine Ridge Village and the communities of Oglala and Slim Buttes. Additional construction of the Manderson Loop is proposed in fiscal year 2005.

Of particular importance to the Oglala Sioux Tribe is the continuation of the main transmission system from the northeast corner (Highway 73/44 junction) of the Reservation to Kyle in the central part of the Reservation. The transmission line is needed to interconnect the OSRWSS core system with the distribution system within the Reservation in order to deliver Missouri River water to the populous portions of the Reservation. This critical segment of the project can be continued in fiscal year 2005 to coincide with the westward construction of the OSRWSS core to the northeast corner of the Reservation (see section 2). It will require funds in fiscal year 2006 and fiscal year 2007 to complete. This component of the Oglala system has been deferred for several years due to inadequate funding. The component is urgently needed for the OSRWSS core system to be utilized on the Pine Ridge Indian Reservation.

WEST RIVER/LYMAN-JONES RURAL WATER SYSTEM—DISTRIBUTION

WR/LJ RURAL WATER SYSTEM DISTRIBUTION REQUEST

	Amount
Mellette East	$533,000
Moenville	9,566,000
Quinn Town Distribution	176,000
Vivian Town	441,000
Indefinite Quantities	304,000
Total	11,020,000

Continued drought conditions in the project area have created serious health and economic hardships for WR/LJ members waiting to receive Mni Wiconi water service. A survey of members attending the WR/LJ annual meeting on October 8, 2003 in Midland revealed that, of those members not receiving project water, 67 percent were hauling water for domestic use and 45 percent were hauling water for livestock. Their current source of water, highly mineralized wells and dried up dams, present a serious health hazard and unaffordable increases in production costs due to the time and cost of hauling water.

The requested appropriation is directed to serving members between Ft. Pierre and Philip. The highest priority is completion of the Moenville project. Houston Rose, prior to his death, pioneered initial efforts to bring quality water to this WR/LJ service area closest to the Mni Wiconi water treatment plant. The economy of the area he represented is based on livestock operations that are dependent on quality water supplies.

WR/LJ is now the water service provider in the towns of Quinn and Vivian, however, the existing distribution piping is over 50 years old and is a very high priority for replacement. Funding is also requested for the construction of pumping station and reservoirs required to deliver the full design capability of the pipelines under construction. As a testimony to public recognition of the advantages of quality water and the reliability of the system WR/LJ continues to add users within those areas previously constructed. These additions are being financed by member contributions as part of the statutory non-Federal matching requirement.

The Mni Wiconi project, due to continued congressional support, has progressed to where the project beneficiaries can look forward to its timely completion and receive the intended project benefits. We sincerely appreciate your support.

ROSEBUD RURAL WATER SYSTEM (SICANGU MNI WICONI)

ROSEBUD SIOUX RURAL WATER SYSTEM REQUEST

	Amount
Hidden Timber	$1,317,000

ROSEBUD SIOUX RURAL WATER SYSTEM REQUEST—Continued

	Amount
Rosebud Improvements	737,000
Rural Antelope	866,000
Okreek	2,030,000
Mission Northwest	447,000
Livestock Water	1,271,000
Service Connections	657,000
Total	7,325,000

Fiscal year 2005 efforts build upon the successes of the past 2 years. The Rosebud Core pipeline will begin providing water from the OSRWSS at Murdo to Rosebud and WR/LJ water users in Mellette County. As a result, the limited supply of high quality ground water available from the Rosebud wellfield can be used as a source of supply for northeast Todd County.

The Rosebud Sioux Tribes efforts in fiscal year 2005 focus on connecting additional homes to new and existing pipelines. The Antelope to Okreek Pipeline, completed in late 2003, provides a supply of high quality ground water to the rural Antelope, northwest Mission, Hidden Timber and Okreek project areas. In this portion of northern Todd County, the Ogallala Aquifer is not present and ground water is of poor quality and limited quantity where available. Private and community wells have failed in the area and while the Antelope to Okreek Pipeline solved the problem for the community of Okreek, many rural residents are anxiously waiting for water.

The problems are exacerbated in the Hidden Timber area. Where ground water occurs, nitrate concentrations are frequently in excess of the Safe Drinking Water Act primary standard. The high nitrate concentrations pose an acute threat to the unborn and young children.

The major features of the proposed fiscal year 2005 work plan focus on distribution and service lines for this area. Proposed projects for this area include Rural Antelope, Mission Northwest, Okreek and Hidden Timber. It is envisioned that both private contractors and the tribal construction program would be responsible for construction.

The other major project proposed for fiscal year 2005 address improvements needed in the community of Rosebud. In fiscal year 2004, the Tribe will be connecting the lower older part of Rosebud to the rural water system. While this will improve the quality and reliability of supply, improvements are needed to ensure water reaches the users. In several areas, older cast iron pipe has corroded and needs to be replaced. In other areas, older asbestos concrete pipe is still in use and felt to be a health threat. The focus of the work in Rosebud in fiscal year 2005 is to provide a reliable source of high quality water to all service connections.

The Tribe will also expand its service line program. The focus of this effort is new homes and homes that have been constructed since transmission or distribution lines have been installed. It is also proposed to start developing livestock watering facilities. The Tribe has not constructed any of these facilities to date with Mni Wiconi funding and the realty of prolonged drought is having an affect on historic livestock watering sources of supply. A reliable source of water for livestock is necessary to maintain one of the more viable components of the reservation economy.

The total amount requested for the Sicangu Mni Wiconi in fiscal year 2005 is $7,325,000.

LOWER BRULE RURAL WATER SYSTEM—DISTRIBUTION

The Lower Brule Rural Water System (LBRWS) has gained the support of the other sponsors to complete its share of the project with funds appropriated in fiscal year 2005 budget, based on an appropriation of funds for the project in the range generally received. This support is not only a benefit for LBRWS and its users but to the project as a whole. By funding LBRWS in this manner, a savings of approximately $1.5 million will be experienced by the project.

With the funds received in fiscal year 2004, LBRWS will complete the design, cultural resource evaluation and the securing of easements for the remaining service areas and installing mainlines and service lines required to provide water to all of the homes on the Lower Brule Indian Reservation. The fiscal year 2004 funds will also allow LBRWS to begin installing water lines to pasture taps. Since the area has experienced 2 years of drought conditions, many of the dams are dry. The provi-

sion of water will allow some pastures to be utilized that would have otherwise been of no benefit to the ranchers.

The fiscal year 2005 funds will allow the completion of the installation of pasture taps and a new 400,000 gallon elevated water tank in Lower Brule. The existing tank is in a location where the slides (soil movement) have occurred. As a result, the stability of the tank's foundation is in question.

OPERATION, MAINTENANCE AND REPLACEMENT BUDGET

The sponsors have and will continue to work with Reclamation to ensure that their budgets are adequate to properly operate, maintain and replace (OMR) their respective portions of the overall system. The sponsors will also continue to manage OMR expenses in a manner ensuring that the limited funds can best be balanced between construction and OMR. In fiscal year 2003, the approved budget for OMR was $8.228 million, which was adequate. Funding was not adequate in fiscal year 2004 at the $6.254 level and will not be adequate at the same leveling the administration's proposed fiscal year 2005 budget of $6.254 million for OMR.

The project has been making significant progress especially over the last 2 years with the initiation of operation of the OSRWSS Water Treatment Plant near Ft. Pierre and the installation of a significant quantity of pipeline. The result is the need for sufficient funds to properly operate and maintain the functioning system throughout the project. As a result, the OMR budget must continue to be adequate to keep pace with the portion of the system that is placed in operation.

In addition to ongoing operation and maintenance activities, water conservation is an integral part of the OMR of the project. Water conservation not only provides immediate savings from reduced water use and production, it also extends the useful life and capacity of the system. Proposed funding is not adequate to perform water conservation functions.

PREPARED STATEMENT OF THE REDLANDS WATER & POWER COMPANY

Chairman Domenici and Senator Reid, I am writing to request your support for an appropriation in fiscal year 2005 of $5,234,000 to the Bureau of Reclamation within the budget line item entitled "Endangered Species Recovery Implementation Program" for the Upper Colorado River Region. The President's recommended budget for fiscal year 2005 includes this line-item amount. Of these funds, I respectfully request the designation of $4,008,000 for the Upper Colorado River Endangered Fish Recovery Program; $691,000 for the San Juan River Basin Recovery Implementation Program and $535,000 for Fish and Wildlife Management and Development, consistent with the President's budget request. The requested fiscal year 2005 appropriation will allow construction of fish passage, floodplain restoration activities, screening of existing diversion canals, propagation facilities, endangered fish stocking, and non-native fish management.

These funds are authorized by Public Law 106–392. Substantial non-Federal cost sharing funds are provided by the States of Colorado, Wyoming, Utah, and New Mexico, power users, and water users in support of these recovery programs. These programs are carried out consistent with State law and interstate water compacts.

The past support and assistance of your subcommittee has greatly facilitated the success of these multi-State, multi-agency programs. I request the subcommittee's assistance relative to fiscal year 2005 funding to ensure the Bureau of Reclamation's continuing financial participation in these vitally important programs.

PREPARED STATEMENT OF THE RED RIVER VALLEY ASSOCIATION

Mr. Chairman and members of the committee, I am Wayne Dowd, and pleased to represent the Red River Valley Association, as its President. Our organization was founded in 1925 with the express purpose of uniting the citizens of Arkansas, Louisiana, Oklahoma and Texas to develop the land and water resources of the Red River Basin.

The Resolutions contained herein were adopted by the Association during its 79th Annual Meeting in Bossier City, Louisiana on February 19, 2004, and represent the combined concerns of the citizens of the Red River Basin Area as they pertain to the goals of the Association.

Our western rivers played a very important part in the development and economic success of the States west of the Mississippi River. An agency responsible for the development of those water resources has been the Bureau of Reclamation. In our four State region they have been most active in Oklahoma.

I would like to comment on two specific requests for the future economic well being of the citizens residing in the Red River Valley region in Oklahoma. We support the following two studies and request that the Bureau of Reclamation be funded at their full fiscal year 2005 capability.

North Fork of the Red River, OK, Investigation Study.—The W.C. Austin (Altus Lake and Dam) Project in southwestern Oklahoma, is authorized to provide water for irrigation to approximately 48,000 acres of privately owned land in southwestern Oklahoma; control flooding on the North Fork of the Red River and augment municipal water supply for the City of Altus. Secondary benefits include fish and wildlife conservation and recreation opportunities. Project features include Altus Dam, four canals, a 221-mile lateral distribution system and 26 miles of drains. The Lugert-Altus Irrigation District (LAID) is responsible for operation and maintenance of the project.

Water demand in the District and region is growing which, in turn, is reducing future water availability and economic development opportunities. This proposed investigation would: (1) develop a hydrologic model of the NFRR watershed; and (2) evaluate opportunities for augmenting water availability in the project region.

We support a 3-year comprehensive evaluation of water resources in the North Fork of the Red River in Oklahoma for a total study cost of $670,000. We sincerely appreciate your support in allocating $150,000 in the fiscal year 2004 appropriations.

An allocation of $150,000 is requested for the fiscal year 2005 appropriations.

Arbucle-Simpson Aquifer Study.—The Arbuckle-Simpson Aquifer has been designated a sole source aquifer by EPA and a large number of Oklahomans depend on its protection for their health and economic future. This is an important source of water supply for: the citizens of Ada, Sulphur, Mill Creek and Roff; the Chickasaw National Recreational Area; Chickasaw and Choctaw Tribal members; and many farmers and ranchers owning land overlying the basin. Contributions from the aquifer also provide the perennial flow for many streams and natural springs in the area. The Arbuckle-Simpson Aquifer underlines approximately 500 square miles of south-central Oklahoma.

During recent years, a number of issues have emerged which have caused concerns about the utilization and continued health of the aquifer. These concerns include issues over water use, exportation of water out of the area, impacts of groundwater development on the flows in the significant springs and rivers, and competition for water and water quality.

In order to assure the future well-being of the aquifer we support a 5-year study to include detailed assessments of; the formation's hydrogeology, water quality and vulnerability; groundwater-surface water interactions; land use changes and related impacts; Tribal-State water rights; and overall management of the resources. The initial estimates put the total study cost at $2.7 million; however, due to its complexity and new issues concerning Chickasaw and Choctaw Tribal interest, a better cost estimate will be known after the second year of the study. We appreciate your support of this study by funding the first year of the study in the fiscal year 2004 appropriations for $700,000.

We request $1,000,000 be appropriated for fiscal year 2005 and support that the study be cost shared, 90 percent Federal and 10 percent State/Local funds.

The Red River Valley Association understands these are difficult times with our Nation's budget, so we appreciate your support for these studies in fiscal year 2004. We feel they are extremely important to the welfare of the citizens in Oklahoma and request that you again support these studies in fiscal year 2005.

We are always available to provide additional information and answer whatever questions you may have.

PREPARED STATEMENT OF THE SANTA CLARA VALLEY WATER DISTRICT

CALFED BAY-DELTA PROGRAM, SANTA CLARA COUNTY, CALIFORNIA

Background.—In an average year, half of Santa Clara County's water supply is imported from the San Francisco Bay/Sacramento-San Joaquin Delta estuary (Bay-Delta) watersheds through three water projects: The State Water Project, the Federal Central Valley Project, and San Francisco's Hetch Hetchy Project. In conjunction with locally-developed water, this water supply supports more than 1.7 million residents in Santa Clara County and the most important high-tech center in the world. In average to wet years, there is enough water to meet the county's long-term needs. In dry years, however, the county could face a water supply shortage of as much as 100,000 acre-feet per year, or roughly 20 percent of the expected de-

mand. In addition to shortages due to hydrologic variations, the county's imported supplies have been reduced due to regulatory restrictions placed on the operation of the State and Federal water projects.

There are also water quality problems associated with using Bay-Delta water as a drinking water supply. Organic materials and pollutants discharged into the Delta, together with salt water mixing in from San Francisco Bay, have the potential to create disinfection by-products that are carcinogenic and pose reproductive health concerns.

Santa Clara County's imported supplies are also vulnerable to extended outages due to catastrophic failures such as major earthquakes and flooding. As demonstrated by the 1997 flooding in Central Valley, the levee systems can fail and the water quality at the water project intakes in the Delta can be degraded to such an extent that the projects cannot pump from the Delta.

Project Synopsis.—The CALFED Bay-Delta Program is an unprecedented, cooperative effort among Federal, State, and local agencies to restore the Bay-Delta. With input from urban, agricultural, environmental, fishing, and business interests, and the general public, CALFED has developed a comprehensive, long-term plan to address ecosystem and water management issues in the Bay-Delta.

Restoring the Bay-Delta ecosystem is important not only because of its significance as an environmental resource, but also because failing to do so will stall efforts to improve water supply reliability and water quality for millions of Californians and the State's trillion dollar economy and job base.

The June 2000 Framework for Action and the August 2000 Record of Decision/Certification contain a balanced package of actions to restore ecosystem health, improve water supply reliability and water quality. It is critical that Federal funding be provided to implement these actions in the coming years.

Fiscal Year 2004 Funding.—An amount of $9 million was appropriated for CALFED activities under the various units of the Central Valley Project in fiscal year 2004.

Fiscal Year 2005 Funding Recommendation.—It is requested that the committee support an appropriation add-on of $15 million, in addition to the $15 million in the administration's fiscal year 2005 budget, for a total of $30 million for California Bay-Delta Restoration.

SAN LUIS RESERVOIR LOW POINT IMPROVEMENT PROJECT

Background.—San Luis Reservoir is one of the largest reservoirs in California, and is the largest "off-stream" water storage facility in the world. The Reservoir has a water storage capacity of more than 2 million acre-feet and is a key component of the water supply system serving the Federal Central Valley Project (CVP) and California's State Water Project. San Luis is used for seasonal storage of Sacramento-San Joaquin delta water that is delivered to the reservoir via the California Aqueduct and Delta-Mendota Canal. The San Luis Reservoir is jointly owned and operated by the U.S. Bureau of Reclamation and the California Department of Water Resources.

The San Luis Reservoir provides the sole source of CVP water supply for the San Felipe Division contractors—Santa Clara Valley Water District (District), San Benito County Water District and, in the future, Pajaro Valley Water Management Agency. When water levels in San Luis Reservoir are drawn down in the spring and summer, high water temperatures result in algae blooms at the reservoir's water surface. This condition degrades water quality, making the water difficult or impractical to treat and can preclude deliveries of water from San Luis Reservoir to San Felipe Division contractors. In order to avoid the low point problem, the reservoir has been operated to maintain water levels above the critical low elevation—the "low point"—resulting in approximately 200,000 acre-feet of undelivered water to south of the Delta State and Federal water users. The frequency of the low point problem will increase in the future as delta pumping becomes more restricted and demands grow for full allocation and use of all of the water in San Luis Reservoir.

Project Goals and Status.—The goal of the project is to increase the operational flexibility of storage in San Luis Reservoir and ensure a high quality, reliable water supply for San Felipe Division contractors. The specific project objectives are to:

—Increase the operational flexibility of San Luis Reservoir by increasing the effective storage.

—Ensure that San Felipe Division contractors are able to manage their annual Central Valley Project contract allocation to meet their water supply and water quality commitments.

—Provide opportunities for project-related environmental improvements.

—Provide opportunities for other project-related improvements.

From the Public Scoping meetings held in August 2002 and working with a Stakeholder Committee and Regulatory Agencies, the District identified approximately 75 conceptual solutions to the low point problem. From these, the District has narrowed down the list of conceptual solutions to seven feasible alternatives to be studied in the environmental review process.

Fiscal Year 2004 Funding.—No appropriation was requested in fiscal year 2004.

Fiscal Year 2005 Funding Recommendation.—It is requested that the committee support authority for the U.S. Bureau of Reclamation to conduct feasibility studies of the San Luis Reservoir low point problem and an appropriation add-on of $5.5 million.

SAN JOSE AREA WATER RECLAMATION AND REUSE PROGRAM (SOUTH BAY WATER RECYCLING PROGRAM)

Background.—The San Jose Area Water Reclamation and Reuse Program, also known as the South Bay Water Recycling Program, will allow the City of San Jose and its tributary agencies of the San Jose/Santa Clara Water Pollution Control Plant to protect endangered species habitat, meet receiving water quality standards, supplement Santa Clara County water supplies, and comply with a mandate from the U.S. Environmental Protection Agency and the California Water Resources Control Board to reduce wastewater discharges into San Francisco Bay.

The Santa Clara Valley Water District (District) collaborated with the City of San Jose to build the first phase of the recycled water system by providing financial support and technical assistance, as well as coordination with local water retailers. The design, construction, construction administration, and inspection of the program's transmission pipeline and Milpitas 1A Pipeline was performed by the District under contract to the City of San Jose.

Status.—The City of San Jose is the program sponsor for Phase 1, consisting of almost 60 miles of transmission and distribution pipelines, pump stations, and reservoirs. Completed at a cost of $140 million, Phase 1 began partial operation in October 1997. Summertime 2003 deliveries averaged 10 million gallons per day of recycled water. The system now serves over 450 customers and delivers over 7,000 acre-feet of recycled water per year.

Phase 2 is now underway. In June 2001, San Jose approved an $82.5 million expansion of the program. The expansion includes additional pipeline extensions into the cities of Santa Clara and Milpitas, a major pipeline extension into Coyote Valley in south San Jose, and reliability improvements of added reservoirs and pump stations. The District and the City of San Jose executed an agreement in February 2002 to cost share on the pipeline into Coyote Valley and discuss a long-term partnership agreement on the entire system. Phase 2's near-term objective is to increase deliveries by the year 2010 to 15,000 acre-feet per year.

Funding.—In 1992, Public Law 102–575 authorized the Bureau of Reclamation to work with the City of San Jose and the District to plan, design, and build demonstration and permanent facilities for reclaiming and reusing water in the San Jose metropolitan service area. The City of San Jose reached an agreement with the Bureau of Reclamation to cover 25 percent of Phase 1's costs, or approximately $35 million; however, Federal appropriations have not reached the authorized amount. To date, the program has received $26.5 million of the $35 million authorization.

Fiscal Year 2004 Funding.—An amount of $3 million was appropriated in fiscal year 2004 for project construction.

Fiscal Year 2005 Funding Recommendation.—It is requested that the congressional committee support an appropriation add-on of $3 million in fiscal year 2005 budget to fund the work.

PREPARED STATEMENT OF THE SOUTHWESTERN WATER CONSERVATION DISTRICT

Chairman Domenici and Senator Reid, the Southwestern Water Conservation District (the "District") is a political subdivision of the State of Colorado formed by the Colorado legislature in 1937 under C.R.S. 37–47–101, et seq. The District is charged with conserving and developing the waters of the San Juan and Dolores Rivers, tributaries to the Colorado River.

On behalf of the District, we are writing to request your support for an appropriation in fiscal year 2005 of $5,234,000 included as an item in the administration's proposed budget for the Bureau of Reclamation ("Reclamation") labeled "Endangered Species Recovery Programs and Activities for the Upper Colorado River Region". Of that amount, $691,000 is designated for construction activities under the San Juan River Basin Recovery Implementation Program ("San Juan Program") and $4,008,000, is designated for similar construction activities under the Recovery Im-

plementation Program for Endangered Fish Species in the Upper Colorado River Basin ("Upper Basin Program"). In addition, $535,000 is designated for Fish and Wildlife Management and Development, consistent with the President's budget request. The requested fiscal year 2005 appropriation will allow construction of endangered fish passages, floodplain restoration activities, screening of existing diversion canals, endangered fish propagation facilities, endangered fish stocking, and non-native fish management.

These cooperative programs involving the States of Colorado, New Mexico, Utah and Wyoming, four Indian tribes, Federal agencies and water, power and environmental interests are ongoing in the Upper Colorado River and San Juan River Basins and have as their objective recovering endangered fish species while water development proceeds in compliance with the Endangered Species Act, State water law, and inter-State water compacts.

The San Juan Program is supported by the States of Colorado and New Mexico, the Southern Ute Indian, Jicarrilla Apache and Ute Mountain Ute Tribes and the Navajo Nation, water development interests, Reclamation, the Bureau of Indian Affairs, the Bureau of Land Management, and the U.S. Fish and Wildlife Service ("FWS"). The Program provides Endangered Species Act compliance for new depletions and for 600,000 acre-feet of existing depletions in Colorado and New Mexico, including the Animas-La Plata and the San Juan-Chama Projects, which are to provide water as part of tribal reserved water rights settlements. In addition, the Program provided the ESA compliance for a 121,000 acre-foot/year depletion to complete the Navajo Indian Irrigation Project.

In fiscal year 2005, the San Juan Program will continue substantial recovery activities that include habitat restoration, endangered fish propagation, and the development of fish passage structures in the San Juan River to expand the available habitat for the endangered fish.

The Upper Basin Program is supported by the States of Colorado, Utah and Wyoming, environmental organizations, power users, water development interests, Reclamation, the FWS, and the Western Area Power Administration. This Recovery Program, now in its fifteenth year of operation, has the objective of cooperatively recovering four endangered fish in compliance with the Endangered Species Act while water development moves forward. Beginning in fiscal year 1994, the Upper Basin Program initiated specific studies and actions in preparation for the construction activities necessary to recover the endangered fish.

The fiscal year 2005 funds for both Programs will enable their vital activities to continue and to be successfully completed in subsequent fiscal years. The past support and assistance of your subcommittee has greatly facilitated the success of these multi-State, multi-agency programs. We request the subcommittee's assistance relative to fiscal year 2005 funding to ensure the Bureau of Reclamation's continuing financial participation in these vitally important programs.

PREPARED STATEMENT OF THE SOUTHEASTERN COLORADO WATER CONSERVANCY DISTRICT

Chairman Domenici and Senator Reid, I am writing to request your support for an appropriation in fiscal year 2005 of $5,234,000 to the Bureau of Reclamation within the budget line item entitled "Endangered Species Recovery Implementation Program" for the Upper Colorado River Region. The President's recommended budget for fiscal year 2005 includes this line-item amount. Of these funds, I respectfully request the designation of $4,008,000 for the Upper Colorado River Endangered Fish Recovery Program; $691,000 for the San Juan River Basin Recovery Implementation Program and $535,000 for Fish and Wildlife Management and Development, consistent with the President's budget request. The requested fiscal year 2005 appropriation will allow construction of fish passage, floodplain restoration activities, screening of existing diversion canals, propagation facilities, endangered fish stocking, and non-native fish management.

These funds are authorized by Public Law 106–392. Substantial non-Federal cost sharing funds are provided by the States of Colorado, Wyoming, Utah, and New Mexico, power users, and water users in support of these recovery programs. These programs are carried out consistent with State law and inter-State water compacts.

The past support and assistance of your subcommittee has greatly facilitated the success of these multi-State, multi-agency programs. I request the subcommittee's assistance relative to fiscal year 2005 funding to ensure the Bureau of Reclamation's continuing financial participation in these vitally important programs.

PREPARED STATEMENT OF THE UPPER GUNNISON RIVER WATER CONSERVANCY DISTRICT

Chairman Domenici and Senator Reid, I am writing to request your support for an appropriation in fiscal year 2005 of $5,234,000 to the Bureau of Reclamation within the budget line item entitled "Endangered Species Recovery Implementation Program" for the Upper Colorado River Region. The President's recommended budget for fiscal year 2005 includes this line-item amount. Of these funds, I respectfully request the designation of $4,008,000 for the Upper Colorado River Endangered Fish Recovery Program; $691,000 for the San Juan River Basin Recovery Implementation Program and $535,000 for Fish and Wildlife Management and Development, consistent with the President's budget request. The requested fiscal year 2005 appropriation will allow construction of fish passage, floodplain restoration activities, screening of existing diversion canals, propagation facilities, endangered fish stocking, and non-native fish management.

These funds are authorized by Public Law 106–392. Substantial non-Federal cost sharing funds are provided by the States of Colorado, Wyoming, Utah, and New Mexico, power users, and water users in support of these recovery programs. These programs are carried out consistent with State law and interstate water compacts.

The past support and assistance of your subcommittee has greatly facilitated the success of these multi-State, multi-agency programs. I request the subcommittee's assistance relative to fiscal year 2005 funding to ensure the Bureau of Reclamation's continuing financial participation in these vitally important programs.

PREPARED STATEMENT OF THE COLORADO RIVER CONGRESS

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PREPARED STATEMENT OF DENVER WATER

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DEPARTMENT OF ENERGY

PREPARED STATEMENT OF THE HEALTH PHYSICS SOCIETY (HPS) AND HEALTH PHYSICS PROGRAM DIRECTORS ORGANIZATION (HPPDO)

This written testimony for the record for fiscal year 2005 requests $500,000 for the Health Physics Graduate Fellowship program through the Department of Energy's Office of Nuclear Energy, Science and Technology (DOE–NE) to help address the shortage of Health Physicists, which is an issue of extreme importance to the safety of our Nation's workers, members of the public, and our environment.

The Department of Energy has recognized that the safety of our Nation's workers, members of the public, and our environment is in jeopardy because of the projected near-term and long-term shortage of sufficient educated radiation safety professionals to protect them. The organizations responsible for the performance and education of radiation safety professionals, i.e., the Health Physics Society (HPS) and the Health Physics Program Directors Organization (HPPDO), are very pleased that DOE–NE brought this crisis to the attention of the committee and has committed to take action to address it. In his testimony to the committee on March 3, 2004, William D. Magwood, IV, Director of the Office of Nuclear Energy, Science and Technology, stated, "The Department is concerned that the Nation may soon not have the trained health physicists who are needed to assure the safety of all nuclear and radiological activities. With this budget, we begin building a program to reverse the negative trends in this field as we have already done in nuclear engineering."

The committee has expressed strong support for the University Reactor Fuel Assistance and Support program's efforts to provide fellowships, scholarships, and grants to students enrolled in science and engineering programs at U.S. universities, and has expressed concern about the ability of the Nation to respond to the growing demand for trained experts in nuclear science and technology. In Senate Report 108–105, the committee also recognized the need to support health physics academic programs as part of this effort when it wrote, "The Committee recommendation strongly encourages the Department to request sufficient funding in future years to fund all meritorious proposals, including appropriate proposals to support health physics university programs."

We applaud DOE's response to the committee's encouragement by including, in the words of Director Magwood, ". . . a small but important element to provide scholarships and graduate fellowships to students studying the vital and too-often overlooked discipline of health physics" and we are appreciative of having the $200,000 in the President's proposed budget applied to health physics programs.

However, the HPS and HPPDO believe that in order to meet the supply needs of health physicists funding for the health physics programs should be at least $500,000 in order to build a program to reverse the negative trend.

Health Physics is the profession that specializes in radiation safety, an integral and necessary distinct discipline within the nuclear sciences. A recent workforce study by the Nuclear Energy Institute (NEI) has shown that the projected demand for health physicists for both the Government and Industry far surpasses the current ability of the academic programs to meet these employment demands, projecting a shortage of over 100 health physicists by 2011. The number of health physics program graduates in 2001 was one-half the number in 1996. A matter of great concern is that the NEI study does not address the impact that the lack of sufficient qualified radiation safety professionals will have on our Nation's health and homeland security programs. For example, the homeland security effort to provide training and radiation detection instruments to first responders, to establish guidelines for responding to a radiological terrorist event, to develop and deploy measures for the interdiction of radioactive materials beyond our borders, and to employ nuclear and radiation technology in screening for contraband materials requires health physics professionals. A recent survey conducted by the Health Physics Society indicates that present demand for radiation safety professionals is approximately 130 percent of supply. The NEI study projects a growth in that number to 400 percent by 2011 in the nuclear industry alone.

We submitted testimony to the committee last year that requested approximately $2 million in fiscal year 2005 and included a plan we felt would stem the decline of health physics university academic programs, and would assist in the public's understanding of radiation safety as it is applied to the Nation's energy, health, and security policies. That plan included academic program support for HP Graduate

Fellowship Programs, HP Undergraduate Scholarship Programs, Health Physics Education & Research (HPER) Grants, and HP Minority-Majority Partnerships. It also included Health Physics Society program support for academic program ABET–ASAC Accreditation and HPS Science Teacher Workshops. We are realistic about the pressures of this year's budget and realize all six of these of these programs cannot be supported this fiscal year.

We consider it important program to address immediately the HP Graduate Fellowship program. We need between 15 and 20 fellows in a 2-year Masters Degree program to start meeting our Nation's manpower needs for radiation safety personnel. A single fellowship would be about $30,000 annually, considering stipend, tuition and fees. Funding of $500,000 would allow for approximately 15 fellows and allowance for overhead administration costs. Funding at the administration's budget request of $200,000 would support approximately 6 fellows, less than half of the minimum need.

The committee's favorable consideration of this request will help meet our Nation's radiation safety needs of the future.

PREPARED STATEMENT OF THE AMERICAN NUCLEAR SOCIETY

Mr. Chairman and members of the subcommittee, on behalf of the American Nuclear Society, I would like to express our concern regarding recent changes in the direction of U.S. fusion research. In a letter exchange with Dr. John Lindl of the Lawrence Livermore National Laboratory, Dr. Raymond Orbach, the Director of the DOE Office of Science stated the current administration position: "now is not the right time for us to invest in energy related R&D for fusion, for either MFE (magnetic fusion energy) or for IFE (inertial fusion energy)". This position has been reflected in the Office of Fusion Energy Science fiscal year 2005 budget request in which the so-called "long-range" fusion technology research activities have been terminated. DOE has also been reducing its efforts on the advanced design of fusion energy systems. The total funding cut in these areas is about $9 million from the fiscal year 2003 level.

With these changes, U.S. magnetic fusion energy research will become effectively a plasma physics research program while inertial fusion energy research will become a high-energy-density physics program. As the eliminated programs represent less than 5 percent of fusion research expenditures, their elimination is based mainly on policy grounds (as opposed to cost saving reasons).

It is difficult to understand this decision to terminate the fusion technology program given the support for fusion energy research at the highest administration levels,[1] the plan for the United States to join construction of the ITER device which is the highest priority facility listed in DOE Office of Science's Strategic Plan,[2] and the continuing construction of the National Ignition Facility (NIF).

It would seem prudent to maintain some balance in the program between science and technology and between MFE and IFE. This is reflected in several statements from the Fusion Energy Science Advisory Committee (FESAC, which provides ad-

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[1] See for example President Bush's February 2003 statement at http://www.whitehouse.gov/news/releases/2003/02/20030206-12.html:

"We're also going to work to produce electricity and hydrogen through a process called fusion. Fusion is the same kind of nuclear reaction that produces—that powers the sun. The energy produced will be safe and clean and abundant. We've spent quite a bit of money, as the senators here will tell you, on whether or not fusion works. And we're not sure if it will be able to produce affordable energy for everyday use. But it's worth a try. It's worth a look. Because the promise is so great.

"So the United States will work with Great Britain and several European nations, as well as Canada, Japan, Russia and China, to build a fusion test facility and create the largest and most advanced fusion experiment in the world. I look forward to working with Congress to get it funded. I know you all have considered this in the past. It's an incredibly important project to be a part of.

"Imagine a world in which our cars are driven by hydrogen and our homes are heated by electricity from a fusion power plant. It'll be a totally different world than what we're used to . . .".

See also Secretary Abraham's January 2003 statement (at http://fire.pppl.gov/) specifically stating that: "It is imperative that we maintain and enhance our strong domestic research program . . . Critical science needs to be done in the U.S., in parallel with ITER, to strengthen our competitive position in fusion technology."

Also, the U.S. Department of Energy (DOE) Office of Science 2004 Strategic Plan states: "The President has made achieving commercial fusion power the highest long-term priority for our Nation. Our challenge is to develop a science-based solution that harnesses fusion energy to power our industry and homes. We will do this by joining an international burning plasma experiment, ITER, and exploring other promising technologies."

[2] See http://wwwofe.er.doe.gov/Sub/Mission/Mission_Strategic.htm.

vice and recommendations to the DOE Office of Science Director) in regard then to the fiscal year 2004 budget. At that time, DOE had proposed to terminate the fusion technology effort in fiscal year 2004 but a Congressional add-on and a strongly-worded letter from FESAC[3] helped to provide a reprieve. The fiscal year 2005 budget request includes the same fusion technology funding cuts which, as part of the fiscal year 2004 budget, were criticized by FESAC in 2003.

Fusion technology research addresses the fundamental scientific issues that will be encountered in fusion systems with substantial amount of fusion energy (including such fusion facilities as ITER and NIF). It provides solutions to near term technology issues that will certainly arise in building and operating facilities like the NIF and ITER. The advanced design and analysis of fusion energy systems provide a vision of the ultimate fusion energy goal and a tool that is useful for guiding the highest leverage near term scientific research.

Other participants in ITER, in particular the E.U. and Japan, have strong programs in fusion technology R&D in preparation for testing in ITER and leading to a power reactor in the future. It would be regretful at this stage for the United States to pull out of this R&D area and to be left in the precarious position of having to catch-up with our international partners in the future once we decide to seriously develop the advanced technology required for attractive fusion power plants (of either MFE or IFE types).

I hope that this subcommittee will share our concern about this apparent disconnect between the administration fusion energy goals and this recent fusion energy funding policy change as well as about the increasing gap in fusion technology expenditure and expertise between the United States and its international partners. We strongly recommend additional funding to the Department of Energy, Office of Science, Fusion Energy Sciences fiscal year 2005 budget, with at least $5 million specifically allocated to restoring the funding in the Fusion Technologies and Advanced Design categories. We also recommend a strong accompanying statement of support from the subcommittee on these activities.

PREPARED STATEMENT OF THE COALITION OF NORTHEASTERN GOVERNORS

Dear Mr. Chairman, the Coalition of Northeastern Governors (CONEG) is pleased to provide this testimony for the record to the Senate Appropriations Subcommittee on Energy and Water Development as it considers fiscal year 2005 funding for the Office of Energy Efficiency and Renewable Energy (EERE) of the U.S. Department of Energy (DOE). While we recognize the many demands being placed upon Federal resources in the coming year, we urge the subcommittee to provide the increased Federal funding support for renewable energy programs, particularly the national and regional partnerships that advance research, development, demonstration and deployment of renewable energy technologies. The Governors appreciate the subcommittee's previous support for one of these partnerships, the Regional Biomass Energy Program (RBEP), and the decision of the EERE to continue this valuable Federal-State-private partnership for bioenergy. We request the subcommittee to fund the EERE's renewable programs at a level that will enable DOE to continue its support of the RBEP program at $5 million in fiscal year 2005.

Renewable energy plays an increasingly vital role in a strategy to meet the country's near and longer-term energy needs. It is an important component of the diverse mix of fuels essential for a reliable energy supply. Today, biomass provides a larger percentage of the Nation's total energy mix than do hydroelectric sources; and it is responsible for more energy output than all other renewable technologies combined. Ethanol and electricity generation from biomass feedstocks contribute over 3 percent of the Nation's energy consumption. In the Northeast, bioenergy pro-

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[3] In a March 5, 2003 letter to Dr. Orbach, the FESAC said, ". . . devastating cuts to certain program elements are alarming; this note expresses our most serious concerns," and commented, "Thus, FESAC is puzzled by the elimination in the fiscal year 2004 budget of funding for fusion technology." The FESAC said, "Similarly, inertial fusion energy (IFE) is an important element of a balanced U.S. fusion program: it provides the principal alternative to magnetic fusion and takes advantage of NNSA investments in the National Ignition Facility. The fiscal year 2004 budget, however, eliminates (fusion) chamber technology for both MFE (magnetic fusion energy) and IFE." With respect to the Advanced Design and Analysis program, the FESAC said, "The study of future energy systems is a central component of fusion research. Its evolving conceptualization of an eventual fusion power plant has helped us visualize our target, while allowing us to identify key scientific challenges." "In summary," the 2003 FESAC letter said, "FESAC finds the Presidential request for fusion research funding in fiscal year 2004 to be not only meager but also harmfully distorted. It terminates components of the program that are truly essential." (see http://www.ofes.fusion.doe.gov/More_HTML/FESAC_Charges_Reports-.html).

duced from the region's forest and agricultural resources contributes to approximately 5 percent of the region's energy consumption. Some of the most promising technologies which can meet renewable energy needs in the near-term and lessen the Nation's dependence on fossil fuels use biomass.

While the CONEG Governors recognize Federal support for bioenergy can take many forms, we specifically support a level of funding for the EERE's renewable energy programs that will enable the DOE to continue its support of the Regional Biomass Energy Program and its effective network of regional host organizations at a level of $5 million in fiscal year 2005. This RBEP network is an important partner in the Federal Government's multi-faceted initiatives to encourage a diverse energy resource mix and energy efficiency across the country. Funding for the RBEP program will allow this valuable Federal-State-private sector initiative to continue—without interruption—the pioneering regional projects and technical assistance networks which help bring bioenergy into regional energy markets across the Nation.

The revitalized RBEP encompasses all 50 States in five regional programs. It is an important tool in the Nation's effort to realize the opportunities which bioenergy offers for energy production, economic development and sound environmental management. The regional program is uniquely situated to target program resources to the specific biomass opportunities of each part of the country. Through a blend of projects and technical assistance networks, the RBEP identifies opportunities for and helps reduce barriers to the commercialization of biomass technologies; promotes coordinated State and Federal public policies in support of bioenergy; and educates consumers on the opportunities and benefits of biomass energy.

The RBEP's success is closely tied to its use of State-based regional organizations to administer and coordinate program resources and activities. These organizations, with their direct ties to elected and appointed State decision-makers and agencies, are uniquely able to leverage Federal, State and private sector resources and cooperation across State and Federal agencies, among various States, and between the public and private sector. These organizations have:

—the ability to gain governors' and State legislators' attention and commitment to bioenergy;

—the capacity to leverage resources and cooperation for collaborative policy and technical projects from private companies and multiple State and Federal agencies—transportation, environmental protection, public utility commission, and agriculture;

—the capability to move quickly to address emerging issues; and

—the ability to offer staff with extensive biomass program management experience.

The CONEG Policy Research Center is pleased to be part of the Northeast Regional Biomass Program (NRBP) and its work to advance renewable biomass energy, the region's most abundant resource. From Maine to Maryland, the NRBP encompasses a wide range of activities that cover all biomass resources and technologies. The NRBP makes possible State-level working groups that promote public-private partnerships for biomass development, and it helps promote policies that support renewable biomass. It encourages demonstrations of leading edge technologies, and conducts public education and outreach that helps condition the marketplace for new bioenergy technologies and biobased products. A major strength of the NRBP is its ability to link biomass development to other public policy goals, such as creating new economic opportunities, preserving agricultural or forest lands for current use, and reducing air and water pollution. As Renewable Portfolio Standard programs have and continue to be promulgated in the Northeast States, biomass power has recently begun to be a focus of new and significant project development. The contributions of the NRBP program over the years has played, and will continue to play, an essential role in stimulating and facilitating this market development through its working groups, extensive networking, and leadership of its regional coordinator.

Congressional funding for EERE's renewable energy programs at a level in fiscal year 2005 that will permit $5 million for the RBEP will allow these partnerships, with their administration by proven host agency organizations, to strengthen the established bioenergy networks that transfer experience and coordinate activities within a State, throughout a region and across the Nation.

We thank the subcommittee for this opportunity to share the views of the Coalition of Northeastern Governors, and we stand ready to provide you with any additional information on the importance of the Regional Biomass Energy Program and the Northeast Regional Biomass Program to the Northeast and the rest of the Nation, as well as the vital role biomass can play in meeting the Nation's energy needs.

PREPARED STATEMENT OF BOB LAWRENCE & ASSOCIATES, INC.

COST/BENEFITS OF GEOTHERMAL ENERGY R&D

Mr. Chairman and members of the subcommittee, my name is Dr. L.R. (Bob) Lawrence, Jr., and I am President of Bob Lawrence & Associates, Inc., a consulting firm in Alexandria, Virginia. I, and my firm, have been working with the Department of Energy's Geothermal program since 1990, and during the past 14 years, we have seen many positive changes in the program which are helpful to the industry and to our country as a whole. I come before you, today, to request $30 million for the program for fiscal year 2005, the same level that was appropriated for fiscal year 2003, of which, $6 million would be applied to the GeoPowering the West portion of the Program.

Geothermal electric generation, at 16 billion Kw-hrs per year, is the largest contributor to delivered electricity from Renewables except for Hydro generation. For the past several years, the Geothermal Technology program has been held back at budget levels below $30 million. This has been harmful to the industry which is dependent upon the technology evolving from the DOE programs to develop new and ever more difficult resources. During the fiscal year 2003 appropriations process, the Senate funded the Geothermal program at $37 million. Although the Conference only funded the program at $30 million, it was certainly a step in the right direction. It is consummately in the national interest to increase the funding level of this program to $30 million annually to accelerate increased geothermal use for energy purposes. The fiscal year 2004 appropriation of $25.5 million was, unfortunately, a step backward, causing cuts in numerous, high quality, ongoing programs.

At $30 million, it gives the Geothermal program the chance to move forward with industry on several fronts. At the $30 million level, strong programs, heavily cost shared with industry, can move ahead addressing Enhanced Geothermal Systems, where tertiary treated waste water is injected deep into the earth to provide additional needed water to under-saturated geothermal resources. The GeoPowering the West program, addressing 19 Western States, can be strengthened. And most importantly, Cost-Shared Exploratory Drilling, Reservoir Definition, and New Resource Exploration can move forward in areas where it has slowed to nearly a stop. Even at $30 million, the Geothermal program will be the lowest funded of all Renewables, even though the program returns the most revenue to the government and has been the most successful based on present generation annual levels.

OVERVIEW

Cost-shared Department of Energy investments in geothermal energy R&D, starting in the 1970's, have made possible the establishment of the geothermal industry in the United States. Today that industry generates over 16 billion kilowatt-hours per year in the United States, alone. The total, retail value of this electricity exceeds $1 billion per year. The Industry:

—returns over $41 million annually to the Treasury in royalty and production payments for geothermal development on Federal lands;
—supplies the total electric-power needs of about 4 million people in the United States, including over 7 percent of the electricity in California, about 10 percent of the power in Northern Nevada, and about 25 percent of the electricity for the Island of Hawaii (the Big Island);
—employs some 30,000 U.S. workers;
—uses over $500 million worth of steel structures;
—displaces emissions of at least 16 million tons of carbon dioxide, 20,000 tons of sulfur dioxide, 41,000 tons of nitrogen oxides, and 1,300 tons of particulate matter every year, compared with production of the same amount of electricity from a state-of-the-art coal-fired plant;
—has installed geothermal projects worth $3.0 billion overseas, mostly in the Philippines and Indonesia.

NEAR TERM POTENTIAL

The geothermal industry, with appropriate government R&D support, can provide an additional 600 Megawatts of power in about 18 months. This power will come from:

—Use of tertiary treated wastewater injection (Enhanced Geothermal Systems): 200 MW.
—Implementation of new technologies into old plants, well field upgrades, and turbine replacements: 400 MW.

In addition, direct use increases, through the GeoPowering the West initiative, will provide an additional, near term, 100MW of use for heating, cooling, industrial drying, agricultural applications, and recreational purposes.

This is an additional 700MW of clean, renewable, geothermal energy available within 2 years with appropriate government funding and support, right in the heart of the western States that presently have the most critical power problems.

LONGER TERM POTENTIAL

The long term potential of Geothermal energy in the United States is estimated to be 25,000 MW of electrical generation and an additional 25,000 MW of direct use. To date, the geothermal industry has made use of only the highest grade geothermal resources in the United States. The keys to realizing the enormous potential of geothermal energy are improved technology to tap resources that can not, at present, be economically developed, and cost shared programs with industry for accelerated implementation of the technology. Substantial investments in R&D by the geothermal industry, acting alone, have not happened and are unlikely, because the developers are uniformly financial entities, with small engineering components, which rely on the technology centered at national laboratories and university institutes for project development and engineering.

TECHNOLOGY NEEDS

Applied R&D is essential to reduce the technical and financial risks of new technology to a level that is acceptable to the private sector and its financial backers. The U.S. geothermal industry has conducted a series of workshops to determine the industry's needs for new technology and has recommended cost-shared R&D programs to DOE based on the highest-priority needs.

The Geothermal Industry supports the Strategic Plan of the DOE Office of Geothermal Technology. The plan calls for increased spending, quickly reaching $50 to $60 million per year, a geothermal budget level consistent with that recommended by the President's Committee of Advisors on Science and Technology (PCAST) in their 1997 report. Technical needs include:

Drilling.—Geothermal drilling differs dramatically from oil and gas drilling since the necessary production holes are three times as wide as oil and gas production holes, and they must be drilled through hard, volcanic rock rather than sedimentary soils. Also, because of the high temperatures and corrosive nature of geothermal fluids, geothermal drilling is much more difficult and expensive than conventional oil and gas drilling. Each well costs $1 million to $3 million, and an average geothermal field consists of 10 to 100 or more wells. The drilling technology program continues to show cost-saving advancements.

Exploration and Reservoir Technology.—The major challenge facing the industry in exploration and development of geothermal resources is how to remotely detect producing zones deep in the subsurface so that drill holes can be sited and steered to intersect them. No two geothermal reservoirs are alike. Present exploration techniques are not specific enough, and result in too many dry wells, driving up development costs. The industry needs better geological, geochemical, and geophysical techniques, as well as improved computer methods for modeling heat-extraction strategies from geothermal reservoirs.

Energy Conversion.—The efficiency in converting geothermal steam into electricity in the power plant directly affects the cost of power generation. During the past decade, the efficiency of dry- and flash-steam geothermal power plants was improved by 25 percent. It is believed that geothermal power-plant efficiency can be improved by an additional 10 to 20 percent over the next decade with a modest investment in R&D.

Reclaimed Water Use for Geothermal Enhancement.—Many potential geothermal resources are not utilized due to insufficient water in the hot zones. Reclaimed water, the disposal of which is an expensive problem for many communities, could be used productively, in many cases, to enhance the geothermal resources, making them more economically viable for local use. In the United States, over 300 western communities each have a potentially useable geothermal resource co-located within 5 miles. The technology which will evolve from this effort could be broadly applicable to these communities and their combined energy and wastewater problems.

GeoPowering the West.—This initiative, now in its fourth year, seeks to develop, as well as provide information and implement, those technologies needed to utilize geothermal resources in the over 300 presently identified "co-located" communities in 19 Western States. Studies now underway may increase the number of communities to over 350. The program is creating partnerships with the subject communities to utilize hot geothermal waters for direct use applications such as space con-

ditioning, industrial drying, agricultural applications, and recreational purposes. Additionally, the program will provide technology needed to explore these resources for generation potential. In the short time that this program has been ongoing, it has played a major role in expanding the number of States with geothermal electric generation potential from four to eight, or a doubling of candidate States. This program is singularly important to the expanded geothermal future of our country and should be expanded to $6 million for fiscal year 2005.

GeoSciences.—Basic research in the GeoSciences needs to continue at national laboratories, universities, and research institutes to expand and advance the knowledge base in this technology area. Funding the GeoSciences ensures a flow of new, capable, engineers and scientists into this important field as well as expanding the basic knowledge base surrounding geothermal resources and geothermal energy. It is important for this program to continue.

CONCLUSION

The cost shared, cooperative, research, development, and implementation projects of the Department of Energy's Geothermal program should serve as a model for programs whose purpose is to provide and enhance national benefits, while reaping a return on investment for the taxpayer. The $41 million that the industry returns to various governmental entities in royalties and leases exceeds, annually, the amount that the government invests in the future of the technology. Yet, the future of the technology and the expanded industry is closely tied to these programs. Clearly, the Geothermal research and technology development is an outstanding example of a proper, taxpayer investment. $30 million is required for fiscal year 2004.

PREPARED STATEMENT OF BOB LAWRENCE & ASSOCIATES, INC.

REQUIRED REPLACEMENT OF THE TOPOCK-DAVIS-MEAD TRANSMISSION LINE

Mr. Chairman and members of the subcommittee, my name is Bob Lawrence, and I am President of Bob Lawrence & Associates, Inc., a consulting firm in Alexandria, VA. Our company is involved in a variety of high technology subjects largely related to the Energy sector.

I am here, today, to request an appropriation of $20 million for fiscal year 2005 for replacement of the Topock-Davis-Mead transmission line with Aluminum Matrix Composite Conductor (AMC). The Topock-Davis-Mead line runs along the Colorado River on the Western boundary of Arizona and serves the electricity needs of the communities there including Havasu City (pop. 50,000), Bullhead City (33,769), Mohave Valley (13,694), Needles, CA (5193) and the Mohave Indian Tribe. It is the primary load server for this region. The line also provides needed service to Kingman, AZ (22,092) and Blythe, CA (21,376). The line is operating with all of its capacity allocated. The $20 million requested would be the first of two increments for a total of $35 million to replace this line with AMC conductor. Studies accomplished by WAPA and others show that to double the capacity of this transmission corridor would cost $10 million to $17 million more with conventional technologies than it would using the AMC conductor option. A simple line for line replacement, using the AMC option, will increase the capacity by well over a factor of 3, and some studies indicate a factor of 8.

WAPA ratepayers presently pay about $80 million more to the government than WAPA receives in appropriations on an annual basis. If WAPA were a private utility, these funds would be available to upgrade their system. In the WAPA case, the "surplus" goes back to the Federal treasury. Yet, the WAPA budget request to Congress contains only $12 million for "construction" which is woefully inadequate to maintain their system with needed upgrades. Therefore, it is requested that the funding to pay for the upgrading of this line come from the annual "surplus," and be designated "non-reimbursable."

The service area for this line is one of the hottest regions of the United States. Without air conditioning, individuals of fragile health in the region could be at considerable risk. The region served by Topock-Davis-Mead is populated largely by retirees, causing a greater than normal percentage of elderly in the population. These are the people that could be particularly, negatively affected by a transmission shutdown, causing a loss of electrical service, and air conditioning, during peak summer temperatures. The situation is now approaching critical.

The region is experiencing load growth, as much as 10 percent per year in some areas. The Parker-Davis dam system is operating at full capacity, and all of the generated power is being delivered through the transmission system. There is no capa-

bility for additional transmitted power in the immediate region above what is presently demanded.

WAPA is legislatively responsible for "system reliability," but is not required to provide for load growth beyond the generation of the Parker-Davis dam system.

The Topock-Davis-Mead line, when running at peak capacity, is thermally limited and limited by the sag. If additional power is transmitted, the line would sag beyond the safe limits established by national electrical safety code standards. It was excessive sag in a transmission line that triggered the blackout event of August 14, 2003, in the Northeast and Midwest. It is essential that this be avoided in this WAPA DSR transmission trunk.

The conventional solution to this problem would be to construct a new transmission line in the area, requiring new right-of-way, new towers, and new lines. The transmission path is in an archeologically significant and environmentally sensitive area, which makes new right-of-way an unattractive option.

The Department of Energy has been evolving this potential solution at the request of Congress. Since 1998, DOE has been developing and testing the Aluminum Matrix Composite Conductor (AMC), also called Aluminum Conductor Composite Reinforced (ACCR). This is a high capacity transmission line conductor that could provide very substantial capacity increases by simply replacing the old technology lines with the new, AMC/ACCR option. Field testing of this option, now underway, has met all needed utility specifications. AMC/ACCR is in operational service in Hawaii, North Dakota, Minnesota and Arizona. AMC/ACCR is now available for commercial sale and application.

The use of this new technology on the Topock-Davis-Mead line would offer key benefits including:

—Ensure delivery of power to the citizens of the surrounding communities.
—Improve the reliability of the region by addressing a known problem.
—Elimination of a bottleneck resulting in an 8-fold increase in power transfer capability (in this case the flow would be north to Mead, the most critical 500kV feed into Southern California)
—Preserve the visual landscape since no visual change to the existing line would occur and no additional land is required.
—Avoid the environmental impact associated with building a new line and time delays that can occur during the permitting process.
—Provide additional revenue to the Federal Government in the form of increased power sales or additional wheeling charges for carrying power from other producers.

Finally, this project would provide a "showcase installation" for a new, well tested, technology and would spur further adoption. The experiences of the past 2 years have clearly shown that our Nation needs an affordable option that will improve, upgrade, and increase the capacity of our national grid without adding to the environmental insult of overhead, electric transmission lines. The Aluminum Matrix Composite Conductor appears to be the most near term option available.

The program to develop this option was begun in fiscal year 2002 with $4 million, and was continued through fiscal year 2003 and fiscal year 2004 at $4 million per year. Substantial cost sharing from both industry and utilities occurred. The need for the Congressionally mandated $4 million per year has now ended. Accessories tailored for each conductor installation were also developed and tested. The testing included a low-voltage outdoor test span operated by ORNL that can continuously cycle a 1,200-foot multispan line to high-temperature operation.

Multi-year field trials are now demonstrating medium and large size conductor performance under different conditions, such as various voltages, mechanical loading conditions, and operating conditions. The testing is proceeding flawlessly. WAPA is hosting two of the ongoing field trials which began in fiscal year 2002 under this program.

In conclusion, I would like to thank the chairman and his staff for having the foresight to provide the needed funding to bring the development program and the status of the technology to this point. Clearly, it is the best option to replace outdated, conventional technology lines in critical locations such as the Topock-Davis-Mead corridor.

PREPARED STATEMENT OF BOB LAWRENCE & ASSOCIATES, INC.

HIGH TEMPERATURE SUPERCONDUCTIVITY R&D

Mr. Chairman and members of the subcommittee, my name is Bob Lawrence, I am President of Bob Lawrence and Associates, Inc., of Alexandria, Virginia. I appre-

ciate the opportunity to present this testimony, today, on the important subject of Superconductivity. I am here to request an appropriation of $49 million for the Department of Energy program for fiscal year 2005.

BACKGROUND

Of all the technologies which are emerging today, Superconductivity is arguably one of the most promising in terms of dramatic, potential enhancements to American infrastructure and national benefits. Laboratory results have moved into government-industry partnerships aimed at accelerating superconducting products into the electrical marketplace with concurrent, dramatic, energy efficiency and environmental improvements. Energy Committee Chairman Pete Domenici summed up the promise and accomplishments of this program, earlier this year, when he noted that, 20 years ago, superconducting material only came in 1 centimeter lengths, whereas today, they are making cables out of it. This is exceptional progress in research.

Superconductivity is the property of a material to conduct unusually large quantities of electrical current with virtually no resistance. Since the middle of the century, researchers have known that certain ceramic materials show superconducting properties when they approach a temperature near absolute zero, or the temperature of liquid hydrogen and liquid helium. Practical applications of these materials are difficult, however, since they are characteristically very costly to make, very brittle in nature, and prohibitively expensive to cool to the required, very low temperature.

In 1986, a new class of ceramic materials was discovered which showed superconducting properties at temperatures up to 34K. Since that time, improvements have produced superconducting materials at the temperature of liquid nitrogen, or 72K. These "high temperature" superconducting (HTS) materials have generated great excitement since the projected costs of applications have dropped by orders of magnitude, and first viable products appear to be within reach.

THE PROGRAM

Today, a number of HTS-based pieces of electrical equipment are at the prototype stage with capable manufacturing entities intimately involved. Early candidates for commercial products include Transformers, Electric Motors, Generators, Fault Current Limiters, and underground Power Cables. Later in the commercialization process, replacements for overhead transmission lines are also foreseen; however, this will not be an early application. To enhance and accelerate the prospects for early commercialization of HTS products, the Department of Energy has developed a vertically integrated program in which product oriented teams are focused on the development and implementation of HTS equipment. Under the title of the Superconductivity Partnership Initiative (SPI), these vertically integrated teams typically each consist of an electric utility, a system manufacturer, an HTS wire supplier, and one or more national laboratories. Supporting these vertical teams is a Second Generation Wire Initiative, in which development teams are exploiting research breakthroughs at Los Alamos, Argonne, and Oak Ridge National labs that promise unprecedented current-carrying capabilities in high-temperature superconducting wires. Since superconducting wire is the main component of all superconducting cables, products and systems, the price drop projected by the Second Generation technology is highly significant and important to successful commercialization.

Transformer development is being carried out by the team of Waukesha Electric Systems, Intermagnetics General Corporation, Rochester Gas and Electric, Rensselaer Polytechnic Institute, and the Oak Ridge National Laboratory. This team has conducted a series of reference designs concentrating mostly on a 30-MVA, 138-kV/13.8kV transformer which is representative of a class expected to capture about half of all U.S. power transformer sales in the next two decades. According to industry experts, Japan and Europe are somewhat ahead of the United States in transformer development.

The United States HTS electric motor team is headed by Reliance Electric with American Superconductor Corp as the HTS coil supplier and manufacturer. Also on this team are Centerior Energy (a utility company) and Sandia National Laboratory. "In February 1996, Reliance Electric successfully tested a four-pole, 1800 rpm synchronous motor using HTS windings operating at 27°K at a continuous 150kW output. The coils . . . achieved currents of 100A . . . , 25 percent over the initial goal of 80 A." This program has now been extended to "develop a pre-commercial prototype of a 3.7MW HTS motor". The demonstration of this motor will be an important milestone in the commercialization process, since it will provide a measure of efficiency, reliability, and projected costs and benefits.

Generator efforts in the United States have recently begun with a team headed by General Electric. The efforts here, again, appear to be behind those in Japan. In Japan, funds expended on HTS design, development, and demonstration exceed those in the United States. This Japanese, heavily funded effort involves 16 member organizations with representation from the electric utilities, manufacturers of electric power equipment, research organizations, manufacturers of HTS wire and tape, refrigeration and cryogenic suppliers, and independent research institutes.

Fault Current Limiters represent a new class of electric utility equipment with many attractive properties. This type of equipment may, in fact, be a market leader, since its properties appear to provide substantial potential cost savings to electric utilities as well as containing power outages. This type of equipment is only possible using superconducting technology.

Exciting developments have taken place in the field of underground HTS cables for transmission and distribution. In the United States, two teams are pursuing two different technical concepts, but each team is led by a powerhouse electrical cable manufacturer; Pirelli North America, and Southwire Co. First design cables are now under test in practical applications. Worldwide, about 10 superconducting electric power cable demonstrations are now underway, in various stages of completion.

THE BENEFITS

Dramatic cost and energy savings are projected when the candidate systems and products from superconducting technology are fully implemented, with incremental benefits accruing from the time of technology readiness and commercial introduction to the time of full market penetration. When fully implemented into the electric generation and utilization sectors of our economy, superconducting technology is expected to save $8 billion per year in retail value of presently lost electricity, lost due to transmission and distribution. An additional $8 billion per year can be saved with the installation of superconductive transformers and electric motors. Yet another $1 billion or so can be saved by full implementation of HTS generators. This totals fully implemented benefits of $17 billion per year from full implementation of HTS technology in presently envisioned equipment. Oak Ridge National Laboratory (ORNL) experts and studies carried out by Energetics, Inc. indicate that HTS underground cable savings would be in the range of 125,000 kWhr per mile, per year. At the present average rate of 6.89 cents per kWhr, this corresponds to retail level monetary savings of $8,612.50 per mile per year. These savings will flow directly into reductions in taxpayer electric bills, under a competitive electricity delivery environment.

EFFECTS OF FISCAL YEAR 2004 CUTS

As is well known, the Department of Energy, for fiscal year 2004, elected to fund the Superconductivity program at $32 million, even though the final, Conference version of the fiscal year 2004 appropriations bill "urged" a funding level of $48 million. This decision has been devastating to the program and the industry, and if it isn't corrected, the damage to the program will be such that it will take many years to recover. This type of action must absolutely be avoided in the future.

NATIONAL SECURITY

Above ground transmission lines are vulnerable to terrorist attack, as well as severe weather. High Temperature Superconductivity would allow transmission lines to be placed underground with very large capacity increases per cross section. This also allows for a more environmentally effective use of the surface land. Higher national security and better environmental posture: a good combination.

There are Defense applications of this technology, enabling in nature, applying to directed energy weapons. Exact applications are sensitive in nature, but it is important to note that the benefits from success in this technology will apply to many cross sections of the American economy and infrastructure.

In conclusion, Mr. Chairman, I thank you for the opportunity to present this testimony. Major efforts in this technology are now underway in China, South Korea, Japan, and a number of European countries, as well as the United States. It is very important that we make every effort to be ahead of the rest of the world in this technology, and for that reason, I ask that the committee provide an appropriation of $49 million for the Superconductivity R&D program for fiscal year 2005.

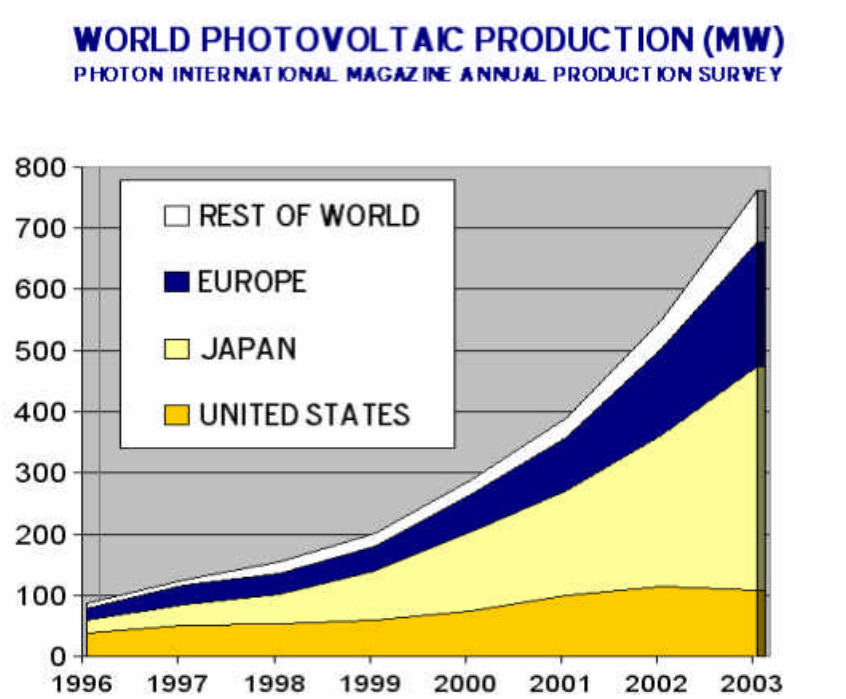
PREPARED STATEMENT OF THE SOLAR ENERGY INDUSTRIES ASSOCIATION

The Solar Energy Industries Association represents photovoltaic, concentrating solar power, and solar thermal manufacturers, distributors, contractors, and installers nationwide. I am writing to request research funding of $100 million for photovoltaics, $20 million for Concentrating Solar Power, and $5 million for Solar Heating and Lighting, as well as potential future Federal procurement programs. This is a substantial increase over current funding levels, but in line with funding proposed in the conference Energy Bill, as supported by SEIA.

PHOTOVOLTAICS

Our industry is at a critical decision point. While clean energy industries soar worldwide, the United States is increasingly left behind. Worldwide solar production in 2003 was more than 760 million watts, up from just over 550 million in 2002. However, the United States produced just 109 megawatts—the first U.S. production decline in recent memory. We must stop this trend, before we become dependent on importing yet another source of energy.

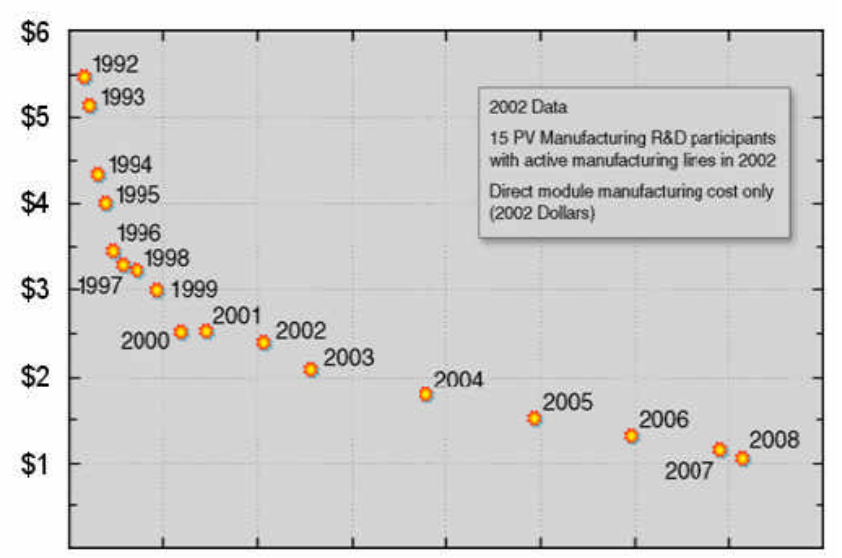
The overall industry is supercharged; world PV production is now doubling almost every 2 years. Bell Labs produced the first watt of commercial PV in 1954, and we expect to produce more than one billion watts in 2004. However, increasingly, that production occurs in Japan and Germany.



Leaving aside environmental and energy security concerns, this is a major issue. The Renewable Energy Policy Project estimates that each megawatt of solar produced supports 35.5 jobs over 10 years—more than any other energy source. At that rate, a solar industry which continues to grow at current rates would support more than 100,000 jobs by 2020; an industry half the size of General Motors. Many of these are very high value-added manufacturing jobs, with major manufacturing in TN, NJ, MI, IL, MA, OH, MD, WA, DE, CA, and elsewhere. Federal R&D has a real impact on where these plants develop. My members tell me that the opportunity to participate in DOE's world-class research is one of their primary considerations when deciding where to locate manufacturing.

Other nations have noted this industry's potential, and are coupling incentive programs with increasingly aggressive research funding. However, while the photovoltaics industry has more than doubled in size since 2000, U.S. research fund-

ing for photovoltaics has remained essentially flat; this makes even less sense when you consider the program's impressive results. The DOE PV research program has been a major reason why solar manufacturing prices have dropped by more than half in the last 10 years alone. (Below—DOE's PV Roadmap is now predicting that solar electricity will be available for less than $.08/kWh within the next 10 years.) These innovations occur in a competitive cost-sharing environment that ensures rapid development of technologies that would not likely emerge otherwise. As a result of this excellent work, PV electricity is now cost-competitive in a growing number of markets for homes, businesses, and remote applications alike—the number and size of these markets will only increase as costs continue to fall.



Continuing advances in crystalline silicon technologies could bring prices down by half again, while DOE's Systems-Driven Approach squeezes optimum efficiency and reliability out of every part of the solar system, from panels to connectors to inverters. Meanwhile, the Thin Film Partnership is beginning large-scale commercialization of their products, which use much less raw material and more rapid continuous-line production processes. Equally exciting are the "generation beyond next" nanostructured and organic solar cells being developed by many domestic companies and labs—these flexible cells offer the possibility of manufacturing millions of watts of solar on machines similar to today's printing presses, out of chemicals we currently use to make paint and toothpaste.

The 2003 Peer Review of DOE's Photovoltaics subprogram, assembled by a team of eminent scientists and researchers including a retired Scientific Advisor for Exxon Corporate Research, heaped praise upon the program's achievements, noting "The role of the laboratories in the projects reviewed has been outstanding in terms of quality of science, technology and engineering; relevance to national needs and DOE mission; and programmatic performance, management and planning." However, they felt the need to note that DOE is now in the position of having to choose between research and basic equipment needs:

"Equipment and facilities are aging and failing at the laboratories . . . Funds for personnel and current research are being cannibalized to sustain equipment that should have been replaced long ago . . . An exceptional research capability at both Sandia and NREL is at risk in the immediate future unless DOE develops a strategy for dealing with these ongoing strains . . . the panel heard frequent references to specific equipment and facilities that were:

"—Aging and less capable than new equipment.

"—Failing from lack of maintainability.

"—Being kept in operation at the expense of funds to support staff patent applications, conferences and publications.

"It appears that the operating budgets at NREL and Sandia are being partly cannibalized to keep basic equipment operating." (Emphasis added.)

The current fiscal year 2005 administration request for the photovoltaics program—ca. $75 million—is insufficient to support the research needs of the evolving technology and growing industry behind these programs. If we are to meet DOE's goal of PV-generated electricity for $.06/kWh by 2020, funding needs to be increased substantially. SEIA requests $100 million for the photovoltaics program in total.

CONCENTRATING SOLAR POWER

CSP systems currently produce 354 MW of clean, reliable, and relatively inexpensive power in the California desert—enough for ca. 120,000 homes. New companies are now entering this market with newer, more refined, and more sophisticated technologies. Early construction has begun for another 50 MW plant in Nevada, and a 1 MW plant in Arizona. Other project sites are in early negotiations now, and the Western Governor's Association has stated that they support further developing this resource. Recently, New Mexico Governor Bill Richardson announced he plans to use $3 million in capital outlay funds to attract concentrating solar power plants to his State.

A recent "due diligence" review of the CSP program, conducted by third party consultants Sargent and Lundy under the auspices of the National Research Council, found that "CSP technology is a proven technology for energy production, there is a potential market for CSP technology and that significant cost reductions are achievable assuming reasonable deployment of CSP technologies occurs." The administration's own budget document for 2003 states:

"Large-scale CSP technologies have been operating successfully in the California desert for 15 years. Over this time the cost of these systems has decreased by a factor of 3 . . . they are currently the least expensive source of solar electricity. Recent technology advancements . . . (have) revitalized the CSP industry and placed them in a position to play a major role in near-term green power opportunities, both domestically and overseas, as costs are projected to drop into the 6 to 8 cents/kWh range."

Given this degree of support and promise, a closeout budget request (ca. $2 million) is unjustifiable. The funding rollercoaster for the CSP program has damaged its ability to make long-term investments and retain high quality staff. Laboratory staff has been reduced by 70 percent, a staggering loss of knowledge and expertise. Priceless equipment goes unused or will be soon dismantled.

Funding of $20 million would allow the Department of Energy to revitalize this program, maintaining an ability to validate technology and components as well as lowering operations and maintenance costs in a stable environment. We expect that CSP plants could generate massive amounts of electricity for prices in the neighborhood of $.07 to $.09/kWh by the end of the decade. (For instance, using CSP on less than one-quarter of 1 percent of Arizona's land area could meet the State's entire electrical needs.) Given the growth potential of this industry and the very strong international interest in these technologies, it seems a small price to pay.

We also note with interest the provision of the recent conference Energy Bill that provides substantial research support for using Concentrating Solar Power as a source of new hydrogen fuel. Solar will undoubtedly be one of the critical cornerstone technologies of the hydrogen economy, giving us the ability to produce zero-emissions motor fuels when and where we want them. Concentrating Solar Power offers two unique opportunities in this regard; conventional electrolysis of water to generate hydrogen, and, unique to solar, inexpensive thermochemical processes that use a direct catalytic conversion.

SOLAR HEATING AND LIGHTING/ZERO ENERGY BUILDINGS

SEIA also strongly supports the Solar Buildings projects, including the visionary Zero Energy Buildings Program. The multi-year goal of ZEB is to allow widespread adoption of zero energy residences by 2010 and commercial buildings by 2015. This would slow and eventually eliminate new buildings' consumption of our finite energy sources. Builders around the country are increasingly developing new construction techniques and materials, and including solar technologies which will achieve zero finite fuel source energy consumption. For these programs we request $8 million in funding, and we support the administration's attempts to move this program into its logical niche in the Interior appropriations budget, where partnerships with DOE's Buildings program could make the most of relevant equipment and expertise. A different program, formerly filed under the "solar buildings" heading, is Solar Heating and Lighting. Solar water heating technologies are utilized around the world in quantities far exceeding those in the United States. Such systems can significantly reduce electricity and natural gas consumption. Solar water heating tech-

nologies are already ubiquitous in many other countries, thereby saving other energy sources for higher value purposes.

Within this program, emphasis is placed on reducing the cost of solar water heating by using lightweight polymer materials to replace the heavy copper and glass materials in today's collectors. The goal is to complete R&D on new polymers and manufacturing processes to reduce the cost of solar water heating to 4¢/kWh by the end of 2004. We recommend that this program be funded explicitly at the $5 million level.

FUTURE APPROPRIATIONS

While they are not yet law, we would like to draw the subcommittee's attention to two areas of the proposed energy bill as supported by SEIA (both H.R. 6 and the new S. 2095). Sec. 205 would authorize substantial purchases of photovoltaics on the part of the Federal Government, driving down costs nationwide and giving the government a good long-term energy investment. Sec. 902 would cost-share the installation of renewable energy systems in State or local buildings, improving the energy independence and financial situation of State and local governments with new clean energy devices.

CONCLUSION

Solar energy's benefits to the Nation are far too numerous to list here comprehensively. However, we cannot mention enough that as a long-lived source of renewable energy, solar enables us to make more of our energy at home, rather than being forced to acquire it overseas or from volatile fuel markets. Modular and simple to install, it can provide quick answers to grid congestion or supply inadequacy, while sidestepping environmental and NIMBY issues. The high coincidence of solar panels' peak output with daily peak demand makes them an attractive solution for load pockets or seasonal demand spikes, avoiding the dirtiest and least efficient conventional generators.

Increased investment in solar also ties us more closely to a source of energy that can be used anywhere in the Nation, and which becomes less expensive, not more, every single year. These are nontrivial considerations when the Chairman of DuPont recently declared that high natural gas costs will prompt the company to shift its "center of gravity" overseas, and when the Conference Board, the Chicago Fed, and Federal Reserve Chairman Greenspan all publicly cite volatility and escalation in energy costs as a major uncertainty as well as a drag on economic growth.

Expanded use of renewable energy is also a key recommendation of the report on mitigating the natural gas market crisis, as issued in September 2003 by the Secretary of Energy's National Petroleum Council (NPC). The NPC report set as its number one recommendation to "Improve Demand Flexibility and Efficiency" with an emphasis on the use of renewable fuels and technologies for power generation.

Clean energy is the most likely next tech boom, and other nations' research and incentive spending shows that they are very much aware of this fact. As Business Week correctly observed in their March 22 issue, economically viable solar power could drive a transformative "job boom" in the coming century, maintaining American leadership in the world economy as did the automobile and the commercial aircraft earlier this century. I urge the subcommittee to make the most of this historic opportunity.

PREPARED STATEMENT OF THE AMERICAN SOCIETY OF PLANT BIOLOGISTS

The American Society of Plant Biologists (ASPB) is a non-profit society of nearly 6,000 scientists. My name is Mary Lou Guerinot, President of ASPB and Professor at Dartmouth College. ASPB urges the subcommittee to support the fiscal year 2005 budget request of the Department of Energy of $228,422,000 for the Chemical Sciences, Geosciences and Biosciences Division of the Office of Basic Energy Sciences. This represents an increase of $8.8 million or 4 percent.

The Biosciences program within the Chemical Sciences, Geosciences and Biosciences Division supports fundamental research needed to develop future biotechnologies related to energy. The supported research focuses on the biological mechanisms occurring in plants and microorganisms.

Plants and microbes fit readily into the energy context by virtue of serving as renewable resources for fuel and other fossil resource substitutes, as vehicles to restore previously disrupted environmental sites, and as potential components of industrial processes to produce new products and chemicals in an environmentally benign manner.

The Biosciences program is devoted to the fundamental science underlying the use of biological systems to produce and conserve energy.

Biosciences research on plants and microbes opens the opportunity to synthesize an almost limitless variety of energy-rich organic compounds and polymers. DOE's biosciences fundamental research could lead to higher quality plant products, more environmentally benign products and a reduction in the increasing demand for imported petroleum.

The DOE Office of Science, Office of Basic Energy Sciences' Division of Chemical Sciences, Geosciences and Biosciences is a competitive grants program in which awards are made based on merit. The Division and its Biosciences program select the best research proposals as determined in a process of peer review. Leading researchers at universities throughout the Nation are funded by the Biosciences program.

The Biosciences program currently supports research in the following areas:

Plant Science

—Structure and function of the plant cell wall (cellulose, lignin, hemicellulose, and protein)
—Biophysical and biochemical mechanisms of photosynthesis
—Plant primary and secondary metabolism
—Genetic and biochemical mechanisms of plant growth and development
—Bioenergetics, ion uptake, and other membrane-related phenomena
—Arabidopsis genome sequencing
—Functional plant genomics

Fermentation Microbiology

—Bioenergetics and metabolic properties of anaerobic microbes
—Degradation of lignin, cellulose, and hemicellulose
—Biochemistry, genetics, and physiology of microbes that metabolize one and two carbon compounds
—Mechanisms of plant symbiotic and pathogenic interactions
—Functional microbial genomics

Extremophilic Organisms

—Biochemistry, genetics and physiology of hyperthermophilic microbes
—Mechanisms of life under extreme conditions, temperature, salt, pH, etc.
—Metabolism of inorganic compounds

Biomaterials and Biocatalysis

—Biosynthesis of novel materials
—Catalytic antibodies
—Structural and kinetic characterization of energy-related enzymes
—Bioadhesion

The Biosciences program has sponsored many leading research efforts. For example, Biosciences program grant support led to a breakthrough in cellulose biosynthesis research. Plant cell walls are the major energy component of renewable biological resources. Cellulose is the major constituent of the plant cell wall and represents the most abundant biopolymer on earth.

Dr. R. Malcolm Brown, Jr. and colleagues at the University of Texas at Austin gave the first experimental confirmation of an important structure involved in cellulose biosynthesis. This work featured a combination of molecular biology and immunocytochemistry techniques. This research provides an exciting springboard for future applications in the efficient design of specific complex carbohydrates and other renewable carbon resources.

As another example, research sponsored earlier by the Biosciences program led to new findings on the capture of energy from photosynthesis. This research led to the presentation to Biosciences-program-grantee Dr. Paul Boyer of the shared award of the 1997 Nobel Prize in Chemistry (biochemistry). Photosynthesis is nature's way of utilizing sunlight to produce chemical energy and to bring carbon dioxide into biological organisms. Increased knowledge in this area could lead to a better understanding of how to manage carbon dioxide in the atmosphere. Further research in this area could also contribute to development of alternative energy sources.

At the latter part of the 19th Century, people throughout the world were dependent upon plants and other contemporaneous biological sources for the production of organic materials. Plants and animals provided the only sources of fibers, coatings, lubricants, solvents, dyes, waxes, fillers, insulation, fragrances, detergents, sizing, wood, paper, rubber and many other types of materials. In 1930, fully 30 percent of industrial organic chemicals were still derived from plants.

The discovery of extensive petroleum reserves and advances in chemistry and petroleum engineering resulted in a major shift to reliance on fossil sources of organic feedstocks such as petroleum. These developments also led to the development of petroleum-based materials, such as inexpensive plastics, with properties that could not be duplicated at the time by abundantly available natural materials.

Advances in modern plant research made possible by support from the Biosciences program can result in a shift toward use of feedstocks from domestically grown plants for chemical products. Plant-produced products can provide the chemical industry with much greater diversity than is available from the comparatively limited structures found in crude oil.

Knowledge gained from Biosciences-supported research is leading to enhanced plants that will provide the feedstocks for new types of polyurethane, new biodegradable lubricants and superior quality nylon having stronger and more flexible fibers. The United States produces nylon, polyurethane and other plastics to supply multi-billion dollar markets. Genetically modified crop production of nylon alone could create over $2 billion in new income for America's growers.

Plants are a major source of renewable and alternative fuels in the United States. Greater knowledge of the basic biology of plants will lead to further economies in domestic production of renewable fuels.

The science community deeply appreciates the continued strong support of the subcommittee for innovative research on plants and microbes sponsored by the Chemical Sciences, Geosciences and Biosciences Division.

PREPARED STATEMENT OF SOUTHEASTERN FEDERAL POWER CUSTOMERS, INC.

Mr. Chairman and members of the subcommittee, on behalf of the Southeastern Federal Power Customers ("SeFPC" or "Customers"), I am pleased to provide testimony in reference to the administration's fiscal year 2005 budget request for the Department of Energy and related Federal Power Marketing Administrations ("PMAs"). My testimony will focus primarily on the budget request for the Southeastern Power Administration ("SEPA"). Among other issues, we wish to emphasize that the proposed changes in SEPA's Puchased Power and Wheeling ("PP&W") budget would have a negative impact on Federal preference power customers throughout the Southeast.

SEPA purchases, transmits, and markets the power generated at Federal reservoirs to municipal systems, rural electric cooperatives, and other wholesale customers throughout the Southeast. The SeFPC has enjoyed a long and successful relationship with SEPA that has greatly benefited the approximately 5.8 million customers that are SeFPC members. As the subcommittee is aware SEPA markets the energy and capacity that is generated from the Federal reservoir projects in the Southeast. The SeFPC represents some 238 rural cooperatives and municipally owned electric systems in the States of Alabama, Georgia, Mississippi, Kentucky, North Carolina, South Carolina, Florida, Virginia, and Illinois, which purchase power from SEPA. In some cases, SEPA supplies as much as 25 percent of the power and 10 percent of the energy needs of SeFPC customers.

ADMINISTRATION'S PROPOSAL TO ZERO OUT PURCHASED POWER AND WHEELING

The administration has proposed the elimination of all Federal funding for PP&W by the end of 2004. The President's proposal would reduce PP&W funding for SEPA by 100 percent in the upcoming fiscal year, from the current level of $34.5 million to the proposed level of $0. This proposal is very troubling to the SeFPC. The failure to fund these important programs under SEPA's jurisdiction could have dire consequences for the Federal power program in the Southeast and Federal preference power generally.

If the President's proposal becomes law, the power supply for the not-for-profit distributors and their customers throughout the Southeast will be severely disrupted. SEPA's customers also will likely lose the benefits of long-term contractual arrangements for transmission and purchased power. Because SEPA does not own its own transmission lines, the loss of PP&W appropriations will force us to arrange our own transmission services, including delivery services from SEPA projects. Also, elimination of SEPA's purchased power funds will force us to buy our power from sources other than SEPA at higher prices, which will be passed directly to our customers.

PROPOSAL WOULD YIELD NO COST SAVINGS FOR FEDERAL GOVERNMENT

It is important to note that the President's proposal would yield no cost savings for the Federal Government. The use of PP&W revenues is a discretionary function with no budgetary impact. PP&W funds are repaid annually by preference customers. Moreover, if PP&W funds are eliminated, SEPA's annual return to the U.S. Treasury of roughly $155 million would likely be reduced significantly.

Thank you in advance for considering our comments on the President's proposed fiscal year 2005 budget for SEPA.

PREPARED STATEMENT OF THE AMERICAN PUBLIC POWER ASSOCIATION

The American Public Power Association (APPA) is the national service organization representing the interests of over 2,000 municipal and other State and locally owned utilities throughout the United States (all but Hawaii). Collectively, public power utilities deliver electricity to one of every seven electric consumers (about 40 million people), serving some of the Nation's largest cities. However, the vast majority of APPA's members serve communities with populations of 10,000 people or less.

We appreciate the opportunity to submit this statement outlining our fiscal year 2005 funding priorities within the Energy and Water Development Subcommittee's jurisdiction.

RENEWABLE ENERGY PRODUCTION INCENTIVE PROGRAM (REPI)

The Department of Energy's REPI program was created in 1992's Energy Policy Act (EPAct) as a counterpart to the renewable energy production tax credits made available to for-profit utilities. EPAct authorizes the Department of Energy (DOE) to make direct payments to not-for-profit public power systems and rural electric cooperatives at the rate of 1.5 cents per kWh (now closer to 1.8 cents when adjusted for inflation) from electricity generated from solar, wind, geothermal and biomass projects. According to DOE sources, in order to fully fund all past and current REPI applicants, $60 million would be needed for fiscal year 2005. Despite the demonstrated need, however, DOE has again asked for only $4 million for fiscal year 2005, citing budgetary constraints.

Approximately 25 percent of electric utility customers are served by not-for-profit public power systems and rural electric cooperatives. Fully funding REPI is an issue of comparability for the communities served by these systems. For example, in 2000, for-profit utilities and private developers received about $58 million in renewable energy tax credits for wind power alone. The same year, REPI subscribers received only $3.99 million for renewable energy projects of all types. While APPA supports increasing renewable energy use throughout the utility sector, our member utilities simply must receive comparable federally sanctioned incentives to help in that effort.

We believe Congress was committed over a decade ago to removing economic barriers to enable all communities to benefit from the production of more renewable and clean energy. We also believe that Congress is equally committed today—not only to producing more renewable energy, but also to diversifying America's portfolio of fuels, decreasing our reliance on foreign sources of energy, and reducing greenhouse gas emissions. In fact, under a fully funded REPI program, close to 60 million metric tons of carbon equivalent could be reduced through the development of existing landfills into landfill-gas-to-energy projects. In order to ensure that these efforts and other renewable energy goals are achieved throughout the electric utility industry, Congress must provide an increase for REPI.

RENEWABLE ENERGY PROGRAMS

As is demonstrated by our strong support for REPI, APPA believes that investing in energy efficiency and renewable energy programs is critical. We urge the subcommittee to support adequate funding to ensure that renewable energy usage continues to increase as part of the portfolio of fuel options available to our Nation's electric utilities.

FEDERAL POWER MARKETING ADMINISTRATIONS (PMA'S)

Purchase Power and Wheeling

We urge the subcommittee to authorize appropriate levels for use of receipts so that the Western Area Power Administration (WAPA), the Southeastern Power Administration (SEPA) and the Southwestern Power Administration (SWPA) can con-

tinue to purchase and wheel electric power to their municipal and rural electric cooperative customers.

The fiscal year 2005 DOE budget proposes to eliminate the ability of WAPA, SEPA, and SWPA to use receipts—which do not score in the Federal budget process—to provide these services to their customers. Although appropriations are no longer needed to initiate the purchase power and wheeling (PP&W) process, the subcommittee continues to establish ceilings on the use of receipts for this important function.

The PP&W program is important because hydroelectric generation and customer use are rarely in exact balance—both vary from hour-to-hour and day-to-day. The PMA's often make purchases in the spot market to "firm" the resource when generation is less than the amount contracted for delivery. Additionally, in low-water years, the PMA's often purchase additional power to fulfill their contracts with customers. The PMA's then must negotiate to transmit this power to their customer—often over non-Federal transmission lines (wheeling is the charge that the PMA's pay to move electricity over a non-Federal transmission line). For individual PMA customers—many of whom are the distribution utility of very small towns—to be forced to perform these purchase power and wheeling functions would be extremely inefficient, and would almost certainly result in rate increases for the retail customers of these small utilities.

The PP&W arrangement is effective, has no impact on the Federal budget, and is supported by the PMA customers who pay the costs. Therefore, we request that the subcommittee authorize the use of receipts in fiscal year 2005 as follows:

—*Western Area Power Administration (WAPA)*.—$227.6 million authorization needed in the fiscal year 2005 bill.

—*Southeastern Power Administration (SEPA)*.—$32.7 million authorization needed in the fiscal year 2005 bill.

—*Southwestern Power Administration (SWPA)*.—$2.9 million authorization needed in the fiscal year 2005 bill.

Security Costs

We urge the subcommittee to reaffirm the Federal Government's responsibility to pay the costs of increased security measures at Federal, multi-purpose facilities and delivery systems and include language to ensure that such costs are non-reimbursable.

Following the September 11, 2001 attacks, the U.S. Bureau of Reclamation moved aggressively to strengthen security measures at Federal dams throughout the West, including such facilities as Hoover, Grand Coulee and Glen Canyon dams. These multipurpose facilities provide important flood control, water storage for irrigation, municipal and industrial uses, power generation, recreation and environmental mitigation benefits, and are a linchpin of the regional economy.

To date, funds appropriated in fiscal year 2003 and fiscal year 2004 for anti-terrorism/site security measures at Bureau of Reclamation facilities have been treated as non-reimbursable pursuant to an administrative determination. This decision found that counter-terrorism protections are not considered normal operation and maintenance activities and that the national security interests justifies making the expenditures a Federal responsibility.

This determination is also consistent with how similar costs were treated in the aftermath of the attacks on Pearl Harbor in World War II. To ensure that the costs of increased security at Federal facilities continue to be treated as a non-reimbursable Federal expenditure, we request that you include the following language in the fiscal year 2005 Energy and Water Appropriations bill:

"For fiscal year 2005 and each fiscal year thereafter, the increased costs of ensuring security of Bureau of Reclamation and Corps of Engineers dams and the Federal power marketing administrations in the aftermath of the events of September 11, 2001, shall be non-reimbursable and provided through appropriated funds."

Animas-La Plata

The Colorado Ute Settlement Act Amendments of 2000 (Title III, Section 301(b)(10), Public Law 106–554, December 21, 2000) authorized development of the Animas-La Plata Project to satisfy water right claims of the Southern Ute and Ute Mountain Tribes in southwest Colorado (known collectively as the "Colorado Ute Indian Tribes.") The project requires construction of a reservoir, pumping plant and appurtenant facilities to provide water supply and delivery of municipal and industrial water and other benefits to the Tribes.

In order to provide power from the Colorado River Storage Project (CRSP) to the Durango Pumping Plant, transmission facilities will need to be constructed, oper-

ated and maintained by the Western Area Power Administration. Because these transmission facilities are associated with the satisfaction of the Tribes' water rights claims, all amounts expended for their construction, operation and maintenance should be considered non-reimbursable and non-returnable. If Congress does not clarify that these costs are non-reimbursable and non-returnable, CRSP power customers run the risk that the costs of the transmission facilities and services will be shifted to them, despite the fact that they receive no benefit from them.

WAPA will be responsible for the construction, operation and maintenance of these transmission facilities, and requires additional appropriations in the amount of $10,000,000 in fiscal year 2005 to meet the construction timetable established by the Bureau of Reclamation, the project manager. WAPA, the Bureau of Reclamation, the Colorado River Energy Distributors Association, the water users, the Colorado Ute Indian Tribes and APPA all support the inclusion of the following language in the fiscal year 2005 Energy and Water Development Appropriations bill:

"For carrying out the functions authorized by title III, section 302(a)(1)(E) of the Act of August 4, 1977 (42 U.S.C. 7152), and other related activities including conservation and renewable resources programs as authorized, including official reception and representation expenses in an amount not to exceed $1,500, $183,100,000 to remain available until expended, of which $170,756,000 shall be derived from the Department of the Interior Reclamation Fund: Provided, That all authorities and future contributions described in Section 402, subparagraph (b)(3)(B) of the Reclamation Projects Authorization and Adjustment Act of 1992 previously assigned to the Secretary of Energy, Western Area Power Administration, shall be transferred to the Secretary of the Interior, Bureau of Reclamation: Provided further, That of the amount herein appropriated, $10,000,000 shall be available until expended on a nonreimbursable basis to the Western Area Power Administration to design, construct, operate and maintain transmission facilities and services for the Animas-La Plata Project as authorized by sections 301(b)(10) of Public Law 106–554."

STORAGE FOR HIGH-LEVEL NUCLEAR WASTE

Since 1982, the Nation's electricity customers have contributed $22 billion to the Nuclear Waste Fund to finance centralized Federal management of spent nuclear fuel used for commercial purposes. We therefore support the administration's efforts to finalize the location of a permanent storage site at Yucca Mountain, Nevada.

The President requested $880 million for fiscal year 2005 for the nuclear waste repository at Yucca Mountain. While we support the President's budget request of $880 million, if legislation is not enacted to take $749 million of the requested funds "off-budget" as the administration assumes, we hope that resources are available to the subcommittee to adequately fund Yucca, but not at the expense of other valuable programs, such as the Renewable Energy Production Incentive and other programs mentioned in this statement.

ADVANCED HYDROPOWER TURBINE PROGRAM

APPA supports the administration's budget request of $6 million for the Advanced Hydropower Turbine Program for fiscal year 2005. This program is a joint industry-government cost-share effort to develop a hydroelectric turbine that will protect fish and other aquatic habitats while continuing to allow for the production of emission-free hydroelectric power.

During the next 15 years, 220 hydroelectric projects will seek new licenses from the Federal Energy Regulatory Commission (FERC). Publicly owned projects constitute 50 percent of the total capacity that will be up for renewal. Many of these projects were originally licensed over 50 years ago. Newly imposed licensing conditions can cost hydro project owners 10 to 15 percent of power generation. A new, improved turbine could help assure that any environmental conditions imposed at relicensing in the form of new conditioning, fish passages or reduced flows are not accomplished at the expense of emission-free, renewable energy production. This is particularly important given the increasingly competitive market in which electric utilities operate today. Flow levels will affect the economics of each of these projects and many will be unable to compete if the current trend toward flow reduction continues.

FEDERAL ENERGY REGULATORY COMMISSION (FERC)

The Federal Energy Regulatory Commission (FERC) has requested $210 million for fiscal year 2005 for its overall operations. APPA supports this request. The FERC is charged with regulating certain interstate aspects of the natural gas, oil pipeline, hydropower, and electric utility industries. Such regulation includes

issuing licenses and certificates for construction of facilities, approving rates, inspecting dams, implementing compliance and enforcement activities, and providing other services to regulated businesses. These businesses pay fees and charges that cover most of the cost of the government's operations.

NAVAJO ELECTRIFICATION DEMONSTRATION PROGRAM

APPA supports full funding for the Navajo Electrification Demonstration Program at its $15 million authorized funding level for fiscal year 2005 and for each succeeding year of its authorization (through 2006). The purpose of the program is to provide electric power to the estimated 18,000 occupied structures in the Navajo Nation that lack electric power.

The Navajo Nation is served by the Navajo Tribal Utility Authority (NTUA), an APPA member. NTUA provides electric, natural gas, water, wastewater treatment, and photovoltaic services throughout the Navajo Indian Reservations in the States of Arizona, New Mexico and Utah. Fully funding the Navajo Electrification Demonstration Program will significantly improve the quality of life for the people of the Navajo Nation.

NATIONAL CLIMATE CHANGE TECHNOLOGY INITIATIVE

APPA supports the administration's efforts to promote greenhouse gas reductions through voluntary programs and investments in new technologies. We therefore support DOE's request of $3 million for fiscal year 2005 to spur innovation of technologies that will reduce, avoid, or capture greenhouse gas emissions.

PREPARED STATEMENT OF THE BIOMASS ENERGY RESEARCH ASSOCIATION

This testimony pertains to the fiscal year 2005 appropriation for biomass research, development, and deployment (RD&D) conducted by the Department of Energy's (DOE) Office of Energy Efficiency and Renewable Energy (EERE). Separate statements will be submitted in support of biomass RD&D performed under the Interior and Related Agencies Bill by EERE, and on forest biomass production research performed by the U.S. Department of Agriculture Forest Service (USDAFS).

BERA recommends appropriations of $92,500,000 for biomass RD&D in fiscal year 2005 under EERE's Biomass and Biorefinery Systems program and Hydrogen Technology program as follows:

—$2,000,000 for Feedstock Infrastructure R&D.
—$26,000,000 for Platforms R&D: Thermochemical Conversion ($13,000,000) and Bioconversion ($13,000,000).
—$19,000,000 for Utilization of Platform Outputs, Integration of Biorefinery Technologies at PDU and pilot scales: Thermochemical Conversion ($9,000,000) and Bioconversion ($10,000,000).
—$39,000,000 for State-Industry Partnerships: Biorefinery Systems Development ($34,000,000 demonstration facilities) and State & Regional Partnerships (SRP, formerly the Regional Biomass Energy Program, RBEP) ($5,000,000).
—$6,500,000 for biomass-related projects under Hydrogen Technology.

On behalf of BERA's members, I would like to thank you, Mr. Chairman, for the opportunity to present the recommendations of BERA's Board of Directors for the high-priority projects and programs that we strongly urge be continued or started. BERA is a non-profit association based in Washington, DC. It was founded in 1982 by researchers and private organizations that are conducting biomass research. Our objectives are to promote education and research on the production of energy and fuels from virgin and waste biomass that can be economically utilized by the public, and to serve as a source of information on biomass RD&D policies and programs. BERA does not solicit or accept Federal funding for its efforts.

The level of earmarks in the last few years has resulted in premature reductions of scheduled programs by EERE. BERA respectfully asks the subcommittee to carefully consider the impacts of all earmarks on EERE's RD&D. If they are for projects that are not included in DOE's formal funding request, BERA urges that they be add-ons to the baseline funds rather than deductions. In fiscal year 2004, about 35 percent of the appropriation for EERE's RD&D is provided as earmarked funds. EERE's planned objectives are therefore extremely difficult or impossible to achieve because the appropriation provided for fiscal year 2004 is only about 7.5 percent more than the baseline funding requested.

The original goal of the Biomass and Bioproducts Initiative (BBI) created as a result of "The Biomass Research and Development Act of 2000" and Title IX of the Farm Bill was to triple the usage of bioenergy and biobased products. Congress has

provided annual funding for the BBI since fiscal year 2000. A strategic plan was developed by the multi-agency Biomass Research and Development Board (BRDB), co-chaired by the Secretaries of Energy and Agriculture, to achieve this goal. Its achievement is necessary because of environmental and energy security and supply issues, and our increasing dependence on imported oil. We must determine whether practical biomass systems capable of displacing much larger amounts of fossil fuels can be developed. For example, biomass energy consumption in 2002 was about 1.66 million barrels of oil equivalent (BOE) per day. BERA strongly urges that the BBI be continued in fiscal year 2005 at the funding level recommended by BERA for the cost-shared demonstration projects shown in the table on page 3. The highest priority should be given to this program component.

PROGRAM INTEGRATION, COORDINATION, AND MANAGEMENT

For several years, BERA has urged that all biomass-related research funded by DOE should be coordinated and managed at DOE Headquarters so that the program managers are heavily involved in this activity. We are pleased to note that this process, which began in fiscal year 2002, has continued in fiscal year 2004. BERA congratulates DOE on the progress made in restructuring the program and its management. BERA also congratulates DOE and USDA for the cooperation and joint coordination of the programs of each department to increase the usage of agricultural and forestry biomass for the production of much larger amounts of affordable fuels, electricity, and biomass-derived products than have been realized in the past. These efforts are expected to help facilitate the transition of waste and virgin biomass in the United States into major sources of renewable energy, fuels, and chemicals.

However, without full incorporation of the BBI into DOE's and USDA's biomass research programs, the time table for this transition will be stretched out for several decades and possibly never happen except to a very limited extent for niche markets. Large, strategically located, energy plantations are ultimately envisaged in which waste biomass acquisition and virgin biomass production systems are integrated with conversion systems and operated as analogs of petroleum refineries to afford flexible slates of multiple products from multiple feedstocks. Unfortunately, relatively large amounts of capital and inducements are required to convince the private sector to get involved in developing even modest size projects in the field. So to help implement this essential program, BERA includes the BBI as a line-item in its annual testimony.

BERA also continues to recommend that implementation of the BBI should include identification of each Federal agency that provides funding related to biomass energy development and each agency's programs and expenditures, as is done by the DOE and USDA today. This is an on-going activity that should be expanded to include other agencies and departments to help fine-tune the critical pathways to program goals. Continuous analysis of the information compiled should enable the coordination of all federally funded biomass energy programs through the BRDB to facilitate new starts focused on high priority targets, and help to avoid duplication of efforts, unnecessary expenditures, and continuation of projects that have been completed or that do not target program goals. Full implementation of the BBI will enhance the value of the Federal expenditures on biomass research to the country in many different ways.

BERA RECOMMENDATIONS

BERA's recommendations consist of a balanced program of mission-oriented RD&D on conversion research and technology transfer to the private sector. Advanced conversion processes and power generation technologies, alternative liquid transportation fuels, and hydrogen-from-biomass processes are emphasized. Biomass production RD&D for energy uses is expected to be done by the USDA.

BERA continues to recommend that at least 50 percent of the Federal funds appropriated for biomass research, excluding the funds for scale-up projects, are used to sustain a national biomass science and technology base via sub-contracts for industry and universities. While it is desirable for the national laboratories to coordinate this research, increased support for U.S. scientists and engineers in industry, academe, and research institutes that are unable to fund biomass research will encourage commercialization of emerging technologies and serious consideration of new ideas. It will also help to expand the professional development and expertise of researchers committed to the advancement of biomass technologies.

Although progress has been made, EERE has terminated research in several critical thermochemical and microbial conversion areas. BERA believes that a balanced program of high-priority research should be sustained and protected, so we continue to recommend both a diversified portfolio of research and an appropriate amount of

funding for scale-up without diminishing either EERE's R&D or scale-up programs. BERA's specific dollar allocations are listed in the table on page 3. Additional commentary on each program area is presented on pages 3, 4 and 5. Other mission-oriented biomass RD&D programs are funded through EERE's Industrial Technologies Program by the Interior and Related Agencies Bill. DOE's basic research on biomass energy outside of EERE by the Office of Science, which supports academic research, should be designed to complement EERE's mission-oriented biomass RD&D and the BBI.

ALLOCATION OF APPROPRIATIONS RECOMMENDED BY BERA FOR FISCAL YEAR 2005

BERA recommends that the appropriations for biomass RD&D in fiscal year 2005 be allocated as shown in the accompanying table. For fiscal year 2005, EERE has again incorporated revisions in nomenclature and has zeroed-out, consolidated, or moved some programs within EERE. So our recommendations are generally listed in the same order as the funding requests under EERE's headings and program area titles except several program areas are included that are either new or that BERA recommends be restored to maintain a balanced program. Note that the recommended budgets for the demonstration projects do not include industry cost-sharing, which is required to be a minimum of 50 percent of each project cost. BERA recommends that funds for the BBI be used for these scale-up projects after evaluating the projected contribution of each project to the BBI's goals. New projects should not be started until this is done.

Office of Energy Efficiency and Renewable Energy	Program Area	Recommended Budget for	
		Research	Scale-Up
Biomass/Biorefinery Systems:			
Feedstock Infrastructure	Harvesting Equipment/Storage/Logistics	$2,000,000	
Platforms R&D	Thermochemical Conversion:		
	Advanced Combustion & Controls	2,000,000	
	Oxygenates from Syngas	4,000,000	
	Liquid Fuels from Pyrolysis	4,000,000	
	Chemicals from Syngas & Pyrolysis	3,000,000	
	Bioconversion:		
	Pretreatment and Hydrolysis	4,000,000	
	Organisms and Enzymes	4,000,000	
	Fermentation (Ethanol)	4,000,000	
	Fermentation (Methane)	1,000,000	
Utilization of Platform Outputs	Integration of Biorefinery Technologies:		
	Thermochemical Conversion:		
	Small Modular Power Generation [2]		$2,000,000
	Biomass Cofiring Power Generation [2]		2,000,000
	Oxygenates and Mixed Alcohols [2]		5,000,000
	Bioconversion:		
	Ethanol from Cellulosics [2]		5,000,000
	Value-Added Products [2]		5,000,000
State-Industry Partnerships	Biorefinery Systems Development: [3]		
	Design Optimization, Efficiencies	[3] 1,000,000	
	Product Slates, Economics, Markets	[3] 1,000,000	
	Siting, Acquisition, Construction	[3] 2,000,000	[3] 20,000,000
	Operations		[3] 10,000,000
	State & Regional Partnerships	0	5,000,000
Subtotal		32,000,000	54,000,000
Hydrogen Technology [1]	Thermal Processes (Reforming)	500,000	1,000,000
	Photolytic Processes (Algae)	1,000,000	
	Innovative Conversion Processes	4,000,000	0
Subtotal		5,500,000	1,000,000
Totals		37,500,000	55,000,000
Grand Total			92,500,000

[1] BERA's recommendations pertain only to the biomass-based portion of Hydrogen Technology.
[2] BERA's recommendations should be used for scale-up at the PDU and pilot-plant scales, preferably with industry cost-sharing.
[3] All demonstration projects should be cost-shared with industry and state participation.

Feedstock Infrastructure, Harvesting Equipment, Storage, and Logistics.—DOE terminated biomass production research a few years ago and is concentrating on infrastructure development, including novel systems for collecting agricultural residues, the analysis of sustainable feedstock systems, and regional and national cost-supply relationships. In fiscal year 2005, EERE plans to continue work on the harvesting and logistics roadmap, the sustainability roadmap, and policy considerations, and is expected to include work on one-pass harvesting systems for wheat straw and corn stover, innovative densification and storage systems, and regional modeling that integrates economic and environmental considerations. BERA recommends that EERE continues to develop the feedstock infrastructure, while the USDA Forest Service initiates and continues RD&D on woody biomass for energy.

Platforms R&D, Thermochemical Conversion.—Continuation of thermochemical conversion R&D to develop advanced biomass combustion and gasification methods could have environmental and economic benefits that can lead to significant growth in power generation from waste biomass and combined energy recovery-disposal methods for certain kinds of high-moisture waste biomass such as biosolids (municipal sewage), and for MSW, agricultural residues, and wood wastes. Most of this research has been phased out by EERE. Completion of the development of medium-Btu biomass gasification technologies is also an essential component for the production of fuel gases including synthesis gas (syngas) and hydrogen, power, and chemicals. BERA recommends restoration of this R&D with the goal of developing the next generation of advanced combustion and gasification processes for power generation.

Several thermochemical conversion methods are available for liquefaction of waste and virgin biomass feedstocks to afford storable liquid fuels and chemicals. Included among them are the catalytic conversion of syngas from biomass to liquid products such as ethanol, mixed alcohols, and other oxygenates; the catalytic hydrogenation of biomass and biomass derivatives such as natural oils and waste triglycerides for the direct production high-cetane diesel fuels; and biomass liquefaction under supercritical conditions of pressure and/or temperature in aqueous media. These technologies offer a wide range of options for liquefaction of all categories of waste and virgin biomass. Note also that syngas production from biomass is established technology, and that several processes are commercially available. For several years, BERA has recommended that EERE support thermochemical liquefaction processes. This should have been a key component of EERE's research, but has been a minimally funded R&D effort, particularly when compared with the effort expended on other conversion technologies. It is noteworthy that EERE has significantly increased this activity for fiscal year 2005.

The pyrolysis of biomass, or its thermal decomposition in the absence of oxygen, yields a large number of gaseous, liquid, and solid products. Hardwood feedstocks were used commercially until the 1930's to manufacture fuel gases, solvents, chemicals, fuel oils, and charcoal. Because of the continuously increasing prices of natural gas and crude oils, a few small-scale commercial biomass pyrolysis systems have recently been installed and operated under innovative conditions that increase product flexibility to yield cost-competitive products. BERA recommends that R&D on both waste and virgin biomass pyrolysis be added to EERE's program to help perfect advanced processes. It is encouraging to note that pyrolytic oils have been added to EERE's project roster for fiscal year 2005. All of the basic data compiled at DOE on biomass pyrolysis in the 1970's and 1980's should be reexamined in this work.

BERA urges that thermochemical conversion R&D for both biomass liquefaction and gasification processes be restored, expanded, and continued and be given a higher priority by EERE.

Platforms R&D, Bioconversion.—The goal of achieving efficient hydrolysis of low-cost cellulosic feedstocks to obtain the sugars and of simultaneous conversion of the resulting pentoses and hexoses to fermentation ethanol requires the use of special processes for producing genetically engineered organisms and cellulase systems at acceptable costs and performance on a commercial scale. Research by industry and academe should continue to perfect these technologies for incorporation into the overall conversion systems used for these processes. This will ensure that the best possible skills and technologies are brought to bear.

Methane fermentation (anaerobic digestion) is unique in that it produces methane, the major component in natural gas, at high concentrations in the medium-Btu product gas from a full range of virgin and waste biomass. DOE has terminated most of this research, which can lead to advanced waste disposal-energy recovery processes as well as the alleviation of numerous environmental problems encountered during waste treatment in urban communities and agricultural facilities. This research should be restored.

Bioconversion is useful for converting a variety of biomass and derivatives to a wide range of commodity or high-value organic chemicals and polymers. The use of selected microbial populations is in fact the only practical route to certain types of chemicals and polymers. An exploratory program to advance this technology is a natural adjunct to DOE's on-going Bioconversion R&D. BERA recommends that part of this research effort should focus on this field.

Utilization of Platform Outputs, Integration of Biorefinery Technologies, Thermochemical Conversion and Bioconversion.—BERA recommends that this effort utilize the best available information produced by the Platforms R&D programs for testing, confirming, and perfecting the conversion technologies at the PDU and pilot-plant scales shown in the table on page 3. This will generate the information needed to support the design, construction, and operation of demonstration facilities under State-Industry Partnerships, Biorefinery Systems Development (see following section).

Commentary on the value of intermediate scale process R&D is in order. For example, several projects performed at semi-commercial plant scales or that involved modules of commercial plants have been funded to develop processes for converting low-cost cellulosic feedstocks to fermentation ethanol. Unfortunately, the results of this effort have not led to operating systems despite the excessive time and relatively large budgets that have been provided to conduct the work. It is apparent that although the science is feasible, the scale-up projects have not yet been successful. But it is still important to commercialize this technology to help reduce the cost of fermentation ethanol. Intermediate-scale projects such as those conducted at the PDU and pilot-plant scales can more readily focus on efficient development of the critical information and operating data needed to overcome or eliminate existing scale-up barriers. It is also essential that integrated feedstock acquisition-biorefinery systems be designed and built using this information for demonstration in the field on a sustainable basis. The pathways to successful development of these systems are in hand now. They should be implemented.

State-Industry Partnerships, Biorefinery Systems Development.—Overall, this program component should focus on the ultimate objective of sustainable operation of biorefineries integrated with biomass acquisition systems in relatively large field demonstration facilities (energy plantations). This effort should address siting, plant design, financing, permitting, construction, environmental controls, waste processing and disposal, and sustained operations; feedstock selection, transport, storage, and delivery; all waste disposal and emissions issues; and storage and delivery of the salable products to market. BERA recommends that industrial partners and States be carefully selected for participation in this cost-shared program. This work should be given the highest priority. BERA recommends that the funds for the BBI provided by Congress should be used for this effort. Long-range planning is essential to ensure that each project has a high probability of success and lays the groundwork for continued installation of similar systems by the private sector. Since only a minimal effort has been conducted to date in the United States on this type of program, BERA recommends that the first demonstration facility target the acquisition of waste and/or virgin biomass feedstocks for conversion into electricity, liquid and gaseous fuels, and chemicals. Existing moderate- and large-scale facilities from terminated and continuing EERE projects, such as biomass cofiring, gasification, liquefaction, and fermentation, should be carefully examined to determine whether one or more are suitable for these projects. The partnerships should be in place at the start of each demonstration project.

State and Regional Partnerships (Formerly Regional Biomass Energy Program).—The Regional Biomass Energy Program (RBEP) was a model outreach program for more than 20 years. No other DOE program had the information transfer role, capabilities, level of experience, or widespread networks of the RBEP, nor has there been a partnership program so closely affiliated with the highest levels of State and regional government energy organizations. DOE has replaced the RBEP with a new program, State and Regional Partnerships (SRP), that will involve collaboration with States on technology transfer, research, development, field testing, and other needed efforts to overcome market barriers. BERA feels that RBEP can provide a strong foundation for the SRP, and that adequate funding should be provided to sustain the new SRP because of the history and successful track record of the RBEP.

Hydrogen Technology.—Research on the thermal reforming of biomass and on splitting water with algae, should be continued. In addition, innovative conversion methods such as the use of anaerobic digestion under ambient conditions and catalytic and non-catalytic thermochemical gasification under certain operating conditions that minimize methane formation while maximizing hydrogen formation should be studied. These technologies may lead to low-cost hydrogen production methods.

PREPARED STATEMENT OF THE AMERICAN MUSEUM OF NATURAL HISTORY

ABOUT THE AMERICAN MUSEUM OF NATURAL HISTORY

The American Museum of Natural History (AMNH) is one of the Nation's preeminent institutions for scientific research and public education. Since its founding in 1869, the Museum has pursued its mission to "discover, interpret, and disseminate—through scientific research and education—knowledge about human cultures, the natural world, and the universe." It is renowned for its exhibitions and collections of more than 32 million specimens and cultural artifacts. With nearly 4 million annual visitors—approximately half of them children—its audience is one of the largest and most diverse of any museum in the country. Museum scientists conduct groundbreaking research in fields ranging from all branches of zoology, comparative genomics, and bioinformatics to earth, space, and environmental sciences and biodiversity conservation. Their work forms the basis for all the Museum's activities that seek to explain complex issues and help people to understand the events and processes that created and continue to shape the Earth, life and civilization on this planet, and the universe beyond.

More than 200 Museum scientists, led by 46 curators, conduct laboratory and collections-based research programs as well as fieldwork and training. Scientists in five divisions (Anthropology; Earth, Planetary, and Space Sciences; Invertebrate Zoology; Paleontology; and Vertebrate Zoology) are sequencing DNA and creating new computational tools to retrace the evolutionary tree, documenting changes in the environment, making new discoveries in the fossil record, and describing human culture in all its variety. The Museum also conducts undergraduate, graduate, and postdoctoral training programs in conjunction with a host of distinguished universities.

The AMNH collections are a major resource for Museum scientists as well as for more than 250 national and international visiting scientists each year. They often include endangered and extinct species as well as many of the only known "type specimens," or examples of species by which all other finds are compared. Collections such as these are historical libraries of expertly identified and documented examples of species and artifacts, providing an irreplaceable record of life on earth.

The Museum interprets the work of its scientists, highlights its collections, addresses current scientific and cultural issues, and promotes public understanding of science through its renowned permanent and temporary exhibits as well as its comprehensive education programs. These programs attract more than 400,000 students and teachers and more than 5,000 teachers for professional development opportunities. The Museum also takes its resources beyond its walls through the National Center for Science Literacy, Education, and Technology, launched in 1997 in partnership with NASA.

SUPPORT FOR DEPARTMENT OF ENERGY SCIENCE MISSION AND GOALS

As one of the world's leading science organizations, DOE's primary strategic goals include maintaining a world class scientific research capability and protecting the Nation's security. Its science program supports fundamental research in energy, matter, and the basic forces of nature and the advanced computational tools critical to research. The American Museum shares DOE's fundamental commitments to cutting-edge research and technology in support of science and education.

Genomic Science

DOE's scientific leadership encompasses genomics research and advanced sequencing technologies. With the historic completion of the first draft of the human genome, work on the frontiers of genome science continues as a critical element of the DOE mission, not only by helping to protect against bio-terrorism but also by contributing to the broad goal of developing "a fundamental, comprehensive, and systematic understanding of life." DOE focus areas include research in energy-related biology, comparative genomics, organisms' responses to biological and environmental cues, and experimental and computational approaches to predictive understanding of microbes and microbial communities. The Genomes to Life program is based on the understanding that genomes, especially those of the simplest organisms, provide a window into the basic mechanics of life. The program addresses energy, environmental, and national security needs and also promises advances in medical treatment.

The American Museum is home to a preeminent molecular research program and is deeply engaged in genome research closely tied to DOE's mission areas and research priorities. In the era of genomics, museum collections have become critical baseline resources for the assessment of genetic diversity of natural populations.

Studying genomic data in a natural history context makes it possible to more fully understand the impacts of new discoveries in genomics and molecular biology.

Frozen Tissue Collection

The Museum offers unique research resources in support of its molecular program. It has expanded its collections to include biological tissues and isolated DNA preserved in a super-cold storage facility. Because this collection preserves genetic material and gene products from rare and endangered organisms that may become extinct before science fully exploits their potential, it is an invaluable research resource in many fields, including genetics, comparative genomics, and biodefense. Capable of housing 1 million specimens, it will be the largest super-cold tissue collection of its kind. Since it was launched 3 years ago, 22,000 specimens not available at any other institute or facility have already been accessioned.

Cluster Computing

DOE science programs are committed to "providing extraordinary tools for extraordinary science." The Museum, too, is a leader in developing computational tools, as parallel computing is an essential enabling technology for phylogenetic (evolutionary) analysis and intensive, efficient sampling of a wide array of study organisms. Museum scientists have constructed an in-house 700-processor computing facility that is the fastest parallel computing cluster in an evolutionary biology laboratory and one of the fastest installed in a non-defense environment. Their pioneering efforts in cluster computing, algorithm development, and evolutionary theory have been widely recognized and commended for their broad applicability for biology as a whole. The bioinformatics tools Museum scientists are creating will not only help to generate evolutionary scenarios, but also will inform and make more efficient large genome sequencing efforts. Many of the parallel algorithms and implementations (especially cluster-based) will be applicable in other informatics contexts such as annotation and assembly, breakpoint analysis, and non-genomic areas of evolutionary biology and other disciplines.

Institute of Comparative Genomics

Building on its strengths in comparative genomics, and in concert with the scientific goals of DOE, in 2001 the Museum established an Institute for Comparative Genomics so as to contribute its unique resources and expertise to the Nation's genomic research enterprise. The Institute is positioned to be one of the world's premier research facilities for mapping the genome across a comprehensive spectrum of life forms.

The Institute has already established a record of significant research achievements. These include obtaining a patent for an innovative approach to analyzing microarray data that will facilitate improved diagnoses of diseases such as cancer and development of drugs to treat such diseases; developing computational techniques to analyze chromosomal sequence data; building a comprehensive database of all known finished and incomplete genomes of microbial species; developing effective methods of culturing difficult to culture species as well as new methods for obtaining embryos for antibody staining; conducting whole genome analysis of disease causing microorganisms to understand the evolutionary changes that take place in a genome to make it more or less virulent; and developing phylogenetic techniques to advance understanding of bacterial genomics and the evolution of pathogenicity. Institute scientists have also won major grants to lead international research teams in assembling the "tree of life."

The Institute's research programs are complemented by an ambitious agenda of genomics-related exhibitions, conferences, and public education programming, including the landmark exhibition, The Genomic Revolution in 2001. Education and afterschool programs introduce students to genome science, and the Museum has held several international conferences on important genomics topics: Sequencing the Human Genome: New Frontiers in Science and Technology, in Fall 2000; Conservation Genetics in the Age of Genomics in Spring 2001; New Directions in Cluster Computing in June 2001; and in 2002, an international meeting to examine current knowledge of life's history, Assembling the Tree of Life: Science, Relevance, and Challenges. The March 2004 symposium presents Expanding the Ark: The Emerging Science and Practice of Invertebrate Conservation.

As it moves forward, the Institute, working in cooperation with New York's outstanding biomedical research and educational institutions, is focusing on molecular and microbial systematics, on constructing large genomic databases, and on expanding our understanding of the evolution of life on earth and the evolution of critical organismal form and function through analysis of the genomes of selected microbes and other non-human organisms. Development of Institute activities entails expanding expertise in microbial systematics and the molecular laboratory program that

now trains dozens of graduate students every year; utilizing the latest sequencing technologies; employing parallel computing applications that allow scientists to solve combinatorially complex problems involving large real world datasets; and developing of K–12 curriculum materials, scientific conferences, and exhibits.

As the foregoing makes clear, the research interests and expertise of DOE and the Museum are closely aligned in key areas pertinent to the agency's biological and environmental research, including comparative and microbial genomics, bioinformatics, and computational science. We are mutually committed to the importance to humans of nonhuman organisms' DNA sequences, to developing the computational tools to integrate and understand data, and to modeling complex biological systems. We seek a partnership with DOE to further these mutual goals, advancing projects such as the following:

—*New strategies for studying complex microbial communities*.—Investigations into the molecular characterization and phylogenic analysis of genes involved in biofilm formation to offer new insights into the formation, properties, and evolution of microbial communities.

—*New approaches to bioinformatics and algorithm development*.—Using statistical physics analogues to model NP-hard problems in evolutionary tree construction in order ultimately to aid in the design of novel approaches to long-standing biological problems and generate new insights into the processes of interest to DOE.

—*New strategies for characterizing microbial communities in nature*.—Analysis of samples of uncultured microbial communities, stored in the Museum's frozen tissue collection at temperatures that preserve nucleic acids and proteins, to complement field analysis, and to provide access for the scientific community to this information through the collection's database and informatics tools.

The Museum requests $3 million to partner with DOE and to employ the unique capacities of the Institute of Comparative Genomics for advancing shared research and education priorities in genomics science. The Institute's comparative and microbial research programs support DOE's biological and environmental research function (the BER account); and its diverse strengths and unique resources in comparative genomics will help to further DOE's goals for building a scientific research capacity to enable advances and discoveries in DOE science through world-class research. The Museum intends to support the Institute with funds from non-Federal as well as Federal sources and proposes to use the requested $3 million towards overall costs for the Institute's microbial genomics research program, including equipping the molecular laboratories to accommodate additional senior scientists, graduate and postdoctoral trainees; upgrading instrumentation with the latest high-throughput technology; and scientific outreach and dissemination via website, online databases, and other means.

PREPARED STATEMENT OF THE UNIVERSITY OF MEDICINE AND DENTISTRY OF NEW JERSEY

The following is the testimony of the University of Medicine and Dentistry of New Jersey (UMDNJ), the largest freestanding public university of the health sciences in the Nation. The University is located on five State-wide campuses and contains three medical schools, and schools of dentistry, nursing, health related professions, public health and graduate biomedical sciences. UMDNJ also comprises a University-owned acute care hospital, three core teaching hospitals, an integrated behavioral healthcare delivery system, and affiliations with more than 200 health care and educational institutions State-wide.

We appreciate the opportunity to bring to your attention our priority projects that are consistent with the biomedical research mission of the Department of Energy. These projects are State-wide in scope and include collaborations both within the University system and with our affiliates.

Our first priority is the development of the Regional Biocontainment Laboratory at UMDNJ-New Jersey Medical School in Newark. The 2001 terrorist attacks on the United States, the release of anthrax through the United States mail, and the proliferation of biological weapons materials and technologies have resulted in an unprecedented sense of urgency for greater bioterrorism preparedness. In 2003 the NIH-National Institute for Allergy and Infectious Diseases (NIAID) selected the Northeast BioDefense Center (NBC), a consortium of research organizations spread across four States, as one of eight Regional Centers of Excellence for BioDefense and Emerging Infectious Diseases Research. Scientists at UMDNJ, along with researchers at Rutgers University and the Public Health Research Institute, are key part-

ners in helping the NBC frame practical solutions to public health threats emanating from both bioterror and emerging infectious diseases.

Following NIAID's designation of the Northeast BioDefense Center as a Regional Center of Excellence, UMDNJ-New Jersey Medical School was awarded almost $21 million from the NIH to build a 13,000-square-foot regional biocontainment (Bio Safety Level-3) laboratory at the International Center for Public Health (ICPH) in Newark, New Jersey. NIH views the construction of the regional biocontainment laboratories as critical components of the planned network of extramural Regional Centers of Excellence to accelerate research on the highly dangerous and infectious pathogens in the biodefense field.

This new BSL–3 facility augments two other existing laboratory facilities at the ICPH and on the UMDNJ Newark campus, and once operational, will bring the total BSL–3 space in Newark to 21,500 square feet, creating one of the largest focal points of containment space in the country. Of the 208 scientists participating in the NBC program, more than 50 percent work within 25 miles of Newark. The construction of the laboratory will allow a critical mass of biodefense scientists to be assembled in Newark, forming the heart of biodefense and infectious disease research in the region. The strategic location of the new laboratory is well suited to provide infrastructure support to regional public health agencies in the event of a national bioterrorism emergency. UMDNJ respectfully seeks $10 million in targeted appropriations to supplement the NIAID award as the received funds do not fully provide for the laboratory's construction.

Our second priority is the development of the Child Health Institute of New Jersey at UMDNJ-Robert Wood Johnson Medical School (RWJMS) in New Brunswick. As part of the State's public higher education system, the medical school encompasses 21 basic science and clinical departments and integrates diverse clinical programs conducted at 34 hospital affiliates and numerous ambulatory care sites in the region. RWJMS ranks among the top one-third of medical schools in the Nation in terms of grant support per faculty member. It is home to The Cancer Institute of New Jersey, the only NCI-designated comprehensive cancer center in New Jersey; The Center for Advanced Biotechnology and Medicine; the Environmental and Occupational Health Sciences Institute, one of the leading environmental health programs in the country; and the Child Health Institute of New Jersey.

The mission of the Child Health Institute is to build a comprehensive biomedical research center focused on the health and wellness of children. In this program, medical researchers direct efforts towards the prevention and cure of environmental and genetic diseases of infants and children at molecular and cellular levels.

The Child Health Institute will be the cornerstone institution of a major research and clinical effort to understand, prevent and treat childhood diseases. It is integral to the long-term plan for the enhancement of research at UMDNJ–RWJMS in developmental genetics, particularly as it relates to disorders that affect a child's development and growth, physically and cognitively. The program will enable the medical school to expand and strengthen basic research efforts with clinical departments at the Robert Wood Johnson University Hospital (RWJUH) and, in particular, those involved with the new Bristol-Myers Squibb Children's Hospital at RWJUH, especially obstetrics, pediatrics, neurology, surgery and psychiatry. The construction of the Child Health Institute at RWJMS will fill a critical gap through the expansion, by new recruitment, of a intellectual base upon which basic molecular programs in child development and health will build.

At the Child Health Institute, research will serve as the basis for new treatments, therapies and cures for such devastating and debilitating childhood syndromes as asthma, autism, diabetes, muscular dystrophy, birth defects and neuro-developmental disorders. Research will focus on the molecular and genetic mechanisms which direct the development of human form, subsequent growth, and acquisition of function. Broadly, the faculty and students will investigate disorders that occur during the process of development to discover and study the genes contributing to developmental disabilities and childhood diseases; to determine how genes and the environment interact to cause childhood diseases; and to identify the causes and possible avenues of treatment of cognitive disorders broadly found among conditions such as mental retardation, autism and related neurological disorders.

Research at the Child Health Institute will focus on molecular mechanisms of early embryonic development, a natural, but vulnerable, water-based environment. Normal child development is a water dependent process, reflecting water quality, quantity and its "management" by cells and tissues. A critical component of the research infrastructure being developed within the Child Health Institute is an Imaging Core Facility. Through this facility researchers will be able to better visualize the dynamics of structures within cells and cells within developing tissues. Under-

standing these dynamics is crucial to expanding knowledge of the processes involved in embryonic and later development.

The Child Health Institute of New Jersey builds on existing significant strengths in genetic, environmental, and neurosciences research within the UMDNJ–RWJMS and associated joint programs with Rutgers University and other research institutes. For example, the Environmental and Occupational Health Sciences Institute (EOHSI) is a National Institute of Environmental Health Sciences (NIEHS) recognized center of excellence which investigates environmental influences on normal and disordered functions; The Cancer Institute of New Jersey (CINJ), a National Cancer Institute-designated Comprehensive Cancer Center, studies disordered cell growth; and the Center for Advanced Biotechnology and Medicine (CABM) characterizes gene structure and function.

The CHI will act as a magnet for additional growth in research and healthcare program development in New Jersey. The Institute will encompass 150,000 gross square feet and will house more than 40 research laboratories and associated support facilities. Fourteen senior faculty will direct teams of M.D. and Ph.D. researchers, visiting scientists, postdoctoral fellows, graduate students and technicians, for a full complement of some 130 employees.

Construction costs for the Institute are estimated to be approximately $72 million; approximately half of this figure is generally associated with local employment. At maturity, the Institute is expected to attract $7 to $9 million of new research funding annually. The Institute's total annual operating budget is projected to be $10 to $12 million, with total economic impact on the New Brunswick area projected to be many times this amount.

The Child Health Institute has assembled more than $40 million to fund its building and programs through a strong partnership among private, corporate and government entities. The support of the Congress has resulted in more than $6 million in directed appropriations for the CHI over the past 4 years, including appropriations from this committee in fiscal years 2001 and 2002.

We respectfully seek $2 million to complement support already received in Federal participation to further advance the development of the Child Health Institute of New Jersey. Requested funding will be utilized for the purchase of analytical equipment, including laser scanning and photon microscopes for the Imaging Core Facility within the Child Health Institute.

Support is also requested in fiscal year 2005 to enable the Informatics Institute of the University of Medicine and Dentistry of New Jersey to recruit additional faculty and build core research facilities for modern drug discovery. This initiative will strengthen the University's graduate program in bioinformatics that is training the next generation of scientists in the field, and will accelerate the work of UMDNJ scientists to convert research findings into novel drug candidates.

Bioinformatics is revolutionizing biomedical research by integrating mathematics, computer science, molecular biology and genetics. Scientists use bioinformatics to accelerate the discovery of new drugs and vaccines for the prevention and treatment of many diseases. The Informatics Institute was established in 2001 to strengthen informatics-driven activities at the University of Medicine and Dentistry of New Jersey and to forge new academic/industry partnerships in this emerging area. The University's first graduate program in bioinformatics, funded by a $2.3 million grant from the State of New Jersey, is helping to meet a critical shortage of skilled workers in bioinformatics and related disciplines.

Academic collaborations already established by the Informatics Institute are advancing priority Federal goals in homeland security and the discovery of cures and treatments for major diseases. Partnerships forged by the Institute complement and enhance significant Federal resources that have strengthened UMDNJ's centers of excellence in biodefense and infectious disease research, cancer research and treatment, environmental health and toxicology, and biomedical polymer engineering.

UMDNJ presently supports a broad array of research programs engaged in the discovery and characterization of potential drug targets (genes, proteins). However, the full value of these substantial research accomplishments is often lost, due to the absence of capacity for translating these targets into novel drug candidates. This capability can be provided only through major investment in resources for modern drug discovery: bioinformatics, computer-aided molecular modeling and design, medicinal chemistry, and high-throughput synthesis and screening of drug candidates. The opportunity is especially compelling in New Jersey, which is home for 15 of the world's largest pharmaceutical companies and more than 150 biotechnology companies and which ranks highest in per capita number of scientists and engineers in the Nation.

The sustained growth of our graduate program and other informatics initiatives requires a major investment in computational facilities and the recruitment of addi-

tional bioinformatics faculty and staff. We respectfully seek Federal participation of $6 million in fiscal year 2005 to recruit additional bioinformatics and medicinal chemistry faculty and postdoctoral researchers, and to build core research facilities for modern drug discovery.

We thank this committee for its strong support of biomedical research and for the University's programs.

PREPARED STATEMENT OF THE CALIFORNIA GOVERNMENT AND PRIVATE SECTOR COALITION FOR OPERATION CLEAN AIR'S SUSTAINABLE INCENTIVE PROGRAM

Mr. Chairman and members of the subcommittee, on behalf of the California Government and Private Sector Coalition for Operation Clean Air's (OCA) Sustainable Incentive Program, we are pleased to submit this statement for the record in support of our fiscal year 2005 funding request of $11,000,000 for OCA as part of a Federal match for the $180 million already contributed by California State and local agencies and the private sector for incentive programs. This request consists of $11,000,000 from DOE for alternative fuels and utility infrastructure funding.

California's great San Joaquin Valley is in crisis. Home to over 3.3 million people, its 25,000 square miles now has the unhealthiest air in the country. Even Los Angeles, long known as the smog capital of the Nation, can boast better air quality by certain standards. While peak concentrations of air pollutants are still greater in Los Angeles, for the past 4 years, the San Joaquin Valley has exceeded Los Angeles in violations of the ozone 8-hour Federal health standard.

A combination of geography, topography, meteorology, tremendous population growth, urban sprawl and a NAFTA corridor of two major highways with over 5 million diesel truck miles per day, have collided to produce an air basin in which over 300,000 people, nearly 10 percent of the population, suffer from chronic breathing disorders. In Fresno County, at the heart of the San Joaquin Valley, more than 16 percent of all children suffer from asthma, a rate substantially higher than any other place in California. The extreme summertime heat creates smog even though smog-forming gases are less than half the amount in the Los Angeles basin. There is no prevailing wind to flush the natural geologic bathtub and, as a result, pollutants and particulates stagnate, accumulate, and create unhealthy air.

Degradation of human health is not the only consequence of poor quality air. In December 2003, the San Joaquin Valley Air Pollution Control District Board decided to become the first Air District in the Nation to voluntarily declare itself an "extreme" non-attainment area. This designation, if approved by USEPA, will defer until 2010 the date for attainment of Federal standards of air quality, but comes at a cost of imposing permitting on thousands of more businesses and even further discouraging business expansion or relocation. More Valley's businesses will be required to obtain permits and comply with increasingly burdensome regulations imposed by Federal and State law and the Air Pollution Control District, resulting in added cost in compliance, reporting and record keeping. At the same time, the area is burdened by chronic unemployment rates of nearly 20 percent. Encouraging business expansion in or relocation to the San Joaquin Valley to combat unemployment will be extremely difficult in the face of such regulatory burdens.

The San Joaquin Valley is home to the most productive agricultural land in the world. Over 350 crops are produced commercially on 28,000 farms encompassing more than 5 million irrigated acres. While the agricultural industry has made great strides at considerable expense to replace old diesel engines and manage fugitive dust and other emissions, farming does contribute to the problem. However, it is a $14 billion industry that forms the backbone of the Valley's economy, and its vitality is crucial.

Industry alone is not the source of the Valley's poor air quality. Population growth rates exceeding those in the rest of the State and most of the Nation, in an area without effective mass transit, where cheap land has led to a landscape of suburbia and sprawl, results in excessive over-reliance on the automobile. Trucking has increased dramatically with the increase in population, and Federal free trade policies. Other factors such as fireplace burning in the winter, open field agricultural burning because of lack of sufficient alternatives, and wild fires resulting from lack of controlled burning in the nearby foothills and mountains all contribute to the problem.

Despite the challenges listed above, much progress has been made. The State has spent nearly $80 million on improvement and compliance programs. Local government and private industry have spent over $100 million on technology and compliance. As specific examples, over one-half of the diesel operated irrigation pumps used by agriculture have been replaced with cleaner engines. The City of Tulare has

converted its entire fleet of vehicles to natural gas as have several other private fleet operators. A $45 million federally financed comprehensive study of ozone and particulate matter is nearing completion. As a result, the number of 1-hour EPA health standard exceedences has been reduced by 40 percent since 1989.

But much more needs to be done. The District estimates that daily emissions must be reduced by 300 tons to achieve attainment. There is no single or short-term quick fix. The entire Valley (an area the size of the State of Connecticut) is part of the problem and the entire Valley will need to be part of the solution.

Operation Clean Air is a coalition of business, government, health care, and environmental groups throughout the eight-county San Joaquin Valley Air Pollution Control District. Its goal is to clean the Valley's air and increase its economic prosperity. The coalition seeks to catalogue efforts that have produced positive effects and identify those strategies that could produce even greater effects if supported by sufficient resources. At the heart of its efforts will be an array of sustainable, voluntary practices and activities that can and will be undertaken by all of the residents of the San Joaquin Valley, both public and private, to improve air quality.

This unique public-private partnership has invested considerable resources in this project to date, and will continue to do so, but Federal funding is both imperative and justified to help address what is essentially an unfounded Federal mandate.

For fiscal year 2005, our Coalition is seeking funding of $11,000,000 from the Department of Energy's (DOE) Energy Supply Program for the installation and operation of alternative fuels infrastructure throughout the San Joaquin Valley Air Basin. Infrastructure for both mobile and stationary engines is included and will allow for the accelerated introduction of alternatively fueled vehicles in municipal fleets, public school fleets, and private fleets as well as for stationary, agricultural irrigation pump engines in the rural areas. The widespread use of lower-emitting engines will provide significant improvement to air quality in the San Joaquin Valley while furthering the goals of the President's National Energy Policy, which recommends enhancement of the supply of reliable energy while protecting our environment. OCA believes, like DOE, that there is direct applicability of alternative fuel (e.g. natural gas) engine expertise to the development and deployment of hydrogen power systems. OCA wants to see the San Joaquin Valley as the first area in the Nation for hydrogen infrastructure development and hydrogen vehicle deployment. This is in direct alignment with the Secretary's long-term vision of a zero mission future, free of reliance on imported energy. Development of alternative fuel infrastructure will augment the low-emission vehicle program by providing much needed compressed natural gas (CNG) and liquefied natural gas (LNG) fueling facilities.

Thank you very much your consideration of our requests.

PREPARED STATEMENT OF THE UNIVERSITY OF ROCHESTER

PROGRAM

DOE Inertial Confinement Fusion Program—DOE [National Nuclear Security Agency (NNSA)] Defense Programs for fiscal year 2005.

BACKGROUND

The inertial confinement fusion (ICF) program is a key element in the Department of Energy's (DOE) Stockpile Stewardship Program (SSP) authorized by Public Law 103–160 to "establish a stewardship program to ensure the preservation of the core intellectual and technical competencies of the United States in nuclear weapons." The OMEGA laser at the University of Rochester's Laboratory for Laser Energetics (LLE) is the principal laser research facility for the University and three national laboratories (Los Alamos, Sandia, and Livermore) for ICF and SSP experiments. LLE is the only facility that also trains significant numbers of graduate students in inertial fusion. The OMEGA laser, the highest-power ultraviolet fusion laser in the world, is the principal laser facility for SSP activities for DOE in fiscal year 2005 and for a number of years to come. The Secretary of Energy Advisory Board (SEAB) National Ignition Facility Laser System Task Force Report noted the importance of continuing scientific contact with ". . . the laser-based research at the University of Rochester."

LLE (since 1970) is the only ICF program that has been jointly supported by the Federal Government, State government, industry, utilities, and a university. LLE makes fundamental scientific contributions to the national program. The Laboratory transfers technology to the public and private sectors through the training of graduate students and interactions with industry and other Federal laboratories. The

Laboratory also serves as a National Laser Users' Facility benefiting scientists throughout the country.

The present primary mission of LLE's research is to validate the direct-drive option for ICF intended for use on the National Ignition Facility (NIF) in order to demonstrate ignition and energy gain. DOE proclaimed that OMEGA is also needed to meet mission-critical requirements for ignition on NIF, and to conduct experiments to support the SSP mission, including some that are classified, in collaboration with the national laboratories.

The OMEGA laser at LLE is the only operating experimental facility that can demonstrate the scientific potential of direct drive to provide a modest- to high-gain energy option for the Nation. For fiscal year 2005 funds are also requested to continue construction of the extended performance capability (EP) to the OMEGA facility and funds to continue to develop petawatt technologies for the national program. DOE has approved the mission need and purchase of long-lead procurements during fiscal year 2003, and approval of the final design is expected during fiscal year 2004. The Congress provided $20,000,000 to continue the OMEGA EP project in the fiscal year 2004 Energy and Water Development Appropriation Act, which will significantly expand the research capabilities of the existing OMEGA facility. OMEGA EP provides the Nation with an enhanced capability to perform SSP experiments, to test high-gain ICF concepts, and to provide a premier high-intensity-laser interaction facility for the United States. The University of Rochester is providing a new building ($20 million) for the OMEGA EP project at no cost to the government. Because the new cost-shared facility will keep the research at the LLE technologically current, LLE will be able to continue to be a national and world leader in its field, and serve as an important, cost-effective support facility to assure the success of the NIF. This represents an unusually successful partnership among the private sector, academia, and the State and Federal governments. The OMEGA facility will be the only large laser implosion facility for NNSA in the United States until at least 2008 when NIF construction is completed.

REQUESTED ACTION

To provide the support for program deliverables and the operation and extension of OMEGA (for both ICF experiments and SSP experiments), and to maintain the related training programs at Rochester, a total of $69,469,000 for the University of Rochester for fiscal year 2005 is required. This amount includes $41,469,000 for operating funds and $4,000,000 for the OMEGA EP facility included in the administration's request, and an additional $21,000,000 for the OMEGA extended performance capability, and $3,000,000 for petawatt technology development required to maintain the cost and schedule of the project.

DISCUSSION

Thermonuclear fusion is the process by which nuclei of low atomic weight such as hydrogen combine to form higher atomic weight nuclei such as helium. In this process some of the mass of the original nuclei is lost and transformed to energy in the form of high-energy particles. Energy from fusion reactions is the most basic form of energy in the universe; our sun and all other stars produce energy by thermonuclear fusion reactions occurring in their interior. Fusion is also the process that provides the vast destructive power of thermonuclear weapons. The most significant long-term potential commercial application of fusion is the generation of electric power.

To initiate fusion reactions, the fuel must be heated to tens of millions of degrees. In stellar bodies, containment is possible because of the large gravitational force. On earth, two approaches are being investigated to demonstrate controlled fusion: magnetic confinement fusion and inertial confinement fusion (ICF). ICF involves the heating and compression of fusion fuel by the action of intense laser or particle beam drivers. There are two approaches to ICF, direct and indirect drive: indirect drive involves the conversion of beam energy to X-rays to compress a fuel capsule in an enclosure called a hohlraum; direct drive involves the direct irradiation of spherical fuel capsules by energy from a laser and may be more energetically efficient than indirect drive. For either approach, if very extreme density and temperature conditions are produced, it is possible to produce many times more energy in these fusion reactions than the energy provided by the drivers.

OMEGA EXTENDED PERFORMANCE (OMEGA EP) FACILITY AT UR/LLE

The University of Rochester's Laboratory for Laser Energetics (UR/LLE) is the lead laboratory for direct-drive inertial confinement fusion (ICF) and is the location of the OMEGA laser facility. Only three facilities, OMEGA at Rochester, Z at

Sandia National Laboratory, and a few operating beamlines of NIF are available to conduct high-energy-density physics experiments in support of the Nation's Stockpile Stewardship Program (SSP) and ICF. (In fiscal year 2003, over half of the OMEGA shots, 742, were for outside users, including 578 for the national laboratories.) OMEGA and the National Ignition Facility (NIF) under construction at the Lawrence Livermore National Laboratory are designed to support SSP and ICF by performing planar-target and spherical-implosion experiments at high laser irradiation intensities. Using high-energy, high-power lasers, a highly compressed core of deuterium-tritium fuel can be assembled that, with the full energy of NIF, will achieve controlled thermonuclear ignition and gain. (Ignition refers to initiating a self-sustaining fusion reaction, and gain refers to achieving more energy out of the reaction than was used to initiate it.)

Three years ago UR/LLE proposed to construct a super-high-intensity, high-energy laser facility. DOE has approved the mission need and purchase of long-lead procurements in fiscal year 2003, and approval of the final design is expected during fiscal year 2004. The Fiscal Year 2004 Energy and Water Development Appropriations Act provided $20,000,000 to continue this project. The project schedule and cost, based on actual funding received to date, are shown in the table below. The total cost ($82,000,000 in as-spent dollars) is unchanged from the previous request. The University of Rochester is providing a building, estimated to cost about $20,000,000 to house the new facility. The new building is under construction and is slated for completion by January 2005.

OMEGA EP will significantly benefit SSP and ICF through the ability to produce intense photon, proton, and electron beams for radiography and by conducting experiments to test advanced computer codes relevant to nuclear weapons, basic science, and astrophysics. There are additional exciting basic science applications that enhance our national ability to attract and retain the scientific expertise required for the United States' nuclear weapons program in the future.

Super high-intensity, high-energy laser sources will significantly advance ignition physics. Very high intensities allow the ICP and SSP programs to test advanced concepts that can increase the gain of an ICF target. During the past year, LLE scientists have examined using NIF for direct drive (laser light directly drives the target). Calculations indicated that the gain is potentially at least three times larger than can be achieved using indirect drive (conversion of laser light to X-rays that drive the target). Since a conversion of laser light to X-rays is not required for direct drive, the efficiency of the process is higher. With direct drive, the target absorbs about five times more energy, and it is this increased energy that is responsible for the higher gain.

OMEGA EP, when completed, will support the SSP and ICF programs. Concomitantly, with the delay of the NIF this added capability would contribute substantially to the critical need to recruit and retain graduate students, postdoctoral associates, University faculty members, and national laboratory scientists in areas of national need.

OMEGA is the only facility capable of assembling an highly compressed deuterium-tritium core from a cryogenic target; it is the only location where advanced concepts for ignition and gain can be tested. Other advantages include (1) operating synergies with OMEGA will reduce operating costs, (2) UR/LLE has an established scientific user base, and (3) UR/LLE has a proven track record of delivering similar-sized projects on time and on budget as well as operating and maintaining large-scale laser systems.

The construction time line and cost for this extended capability is as follows:

[In millions of dollars]

		Fiscal Year 2004	Fiscal Year 2005	Fiscal Year 2006	Fiscal Year 2007
Design & Long Lead Procurement	13	.....	.....	.....	.....
Procurement and Assembly	.....	20	25	.....	.....
Integration & Commissioning	.....	.....	.....	17	7

Total Project Cost.—$82,000,000 (OMEGA EP) plus $20,000,000 (building) plus $1,500,000 from New York State (auxiliary target chamber) equals $103,500,000. (This is for OMEGA EP, $82 million from the Federal Government, $20 million from the University, and $1.5 million from New York State. Not included is the operating and research cost that are included in the administration's request annually.)

PREVIOUS FEDERAL FUNDING

	Amount
Fiscal Year 2004 Appropriation	$63,132,000
Fiscal Year 2003 Appropriation	47,878,800
Fiscal Year 2002 Appropriation	34,693,000
Fiscal Year 2001 Appropriation	33,150,000

REQUESTED ACTION

To provide the support for program deliverables and the operation and extension of OMEGA (for both ICF experiments and SSP experiments), and to maintain the related training programs at Rochester, a total of $69,469,000 for the University of Rochester for fiscal year 2005 is required. This amount includes $41,469,000 for operating funds and $4,000,000 for the OMEGA EP facility included in the administration's request, an additional $21,000,000 for the OMEGA extended performance capability, and $3,000,000 for petawatt technology development required to maintain the cost and schedule of the project.

PREPARED STATEMENT OF THE ENERGY SCIENCES COALITION

Chairman Domenici, the Energy Sciences Coalition expresses its great appreciation for the leadership you have shown as chairman of the Energy and Water Development Appropriations Subcommittee. We applaud your vision of how the programs of the Department of Energy's Office of Science will lead to research discoveries and technological developments benefiting this and future generations. We are requesting $3.8 billion for the Office in fiscal year 2005.

The Energy Sciences Coalition is a broadly based organization representing scientists, engineers and mathematicians in universities, industry, professional societies, and national laboratories. We share your belief that the research supported by the Office of Science has and will make significant contributions to our Nation's security and standard of living.

The coalition supports the findings of several reviews of the programs of the Office of Science, and the pressing need to augment its funding. Last fall, Secretary Spencer Abraham's Advisory Board released a report on the department's science programs. This task force panel was chaired by MIT President Charles Vest, including the former president of the NASDAQ Stock Market; industry, university, and association CEOs; and senior policy analysts. Among their findings and conclusions are:

"America can be free, secure and economically strong in the 21st century only if we continue to excel in science and advanced technology." "America can meet its energy needs if and only if we make a strong and sustained investment in research in physical science, engineering, and applicable areas of life science, and if we translate advancing scientific knowledge into practice." "DOE science budgets have not received the priority merited by their importance to our Nation's future energy, security, and economy." "The federal investment in physical science and engineering has been stagnant for over thirty years. During this same period, the Department's national laboratories have suffered from decay and deferred maintenance, and U.S. industry has largely phased out its basic research programs and organizations. As a result, the U.S. is no longer the clear leader in some important areas of science."

Groundbreaking research supported by the Office of Science is conducted in universities and other institutions across the United States.

Our Nation benefits not only from the discoveries that will be made with this support, but also from the training of America's next generation of researchers. Such training will be instrumental in maintaining our Nation's technological superiority in the international marketplace. The Office of Science also plays an extremely important and unique role in the design, construction, and operation of large-scale user facilities used by researchers supported by the Department of Energy, National Institutes of Health, and the National Science Foundation.

Enclosed please find a copy of the Energy Sciences Coalition's fiscal year 2005 funding statement. After carefully considering the President's science goals in areas such as hydrogen energy, fusion, the human genome, climate change, and a review of the 20-year facilities and strategic plans, the Coalition recommends an increase in the budget for the Office of Science of not less than $350 million to a level over $3.8 billion.

In closing, I again express the coalition's gratitude for the leadership that you and your colleagues have demonstrated in supporting the important work of the Office of Science. Please do not hesitate to contact me if the Coalition can be of any assistance.

The Energy Sciences Coalition (ESC) supports the Department of Energy (DOE) Office of Science funding levels approved by both the House and Senate in their respective versions of the Energy Policy Act. These funding levels are easily justifiable given the tremendous scientific opportunities that currently exist, as well as the broad range of other science-related issues that the Office of Science is uniquely positioned to address. These opportunities, and the facilities and projects needed to achieve them, are well documented and outlined in both the Department's 20-year scientific facilities plan released in November 2003 and the Secretary of Energy Advisory Board's (SEAB) December 2003 report on DOE science.

However, the Energy Sciences Coalition is also aware of the significant fiscal constraints facing the administration and Congress this year. Weighing the economic and national security value of investments in these science programs against current fiscal constraints, the Energy Sciences Coalition urges an fiscal year 2005 increase of not less than $350 million for the DOE Office of Science, bringing the total DOE Office of Science budget to a level over $3.8 billion. While significantly less than the fiscal year 2005 levels contained in the House and Senate passed energy policy bills cited above, this figure is similar to the funding levels these bills contained for fiscal year 2004.

We believe that growth for the DOE Office of Science at a rate lower than 10 percent in fiscal year 2005 and in the next few years—a growth rate which is less than what is called for in the House and Senate authorization bills—will make it virtually impossible for the Department to move forward with the initiatives and recommendations outlined in the 20-year plan and by SEAB without severely damaging already existing and very successful DOE science programs.

FISCAL YEAR 2005 ESC FUNDING STATEMENT ENDORSEES

American Chemical Society; American Institute of Physics; American Mathematical Society; American Physical Society; American Society of Agronomy; American Society of Plant Biologists; Association of American Universities; Battelle; Crop Science Society of America; Fusion Power Associates; General Atomics; Krell Institute; Massachusetts Institute of Technology; Michigan State University; National Association of State Universities and Land-Grant Colleges; North Carolina State University; Ohio State University; Optical Society of America; Princeton University; Purdue University; Society for Industrial and Applied Mathematics; Soil Science Society of America; Southeastern Universities Research Association; Stanford University; Stony Brook University; Universities Research Association, Inc.; University of California; University of Chicago; University of Cincinnati; University of Houston; University of Pittsburgh; University of Southern California; University of Tennessee; University of Washington; University of Wisconsin-Madison.

PREPARED STATEMENT OF THE UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH

On behalf of the University Corporation for Atmospheric Research (UCAR) and the university community involved in weather and climate research and related education, training and support activities, I submit this written testimony for the record of the Senate Committee on Appropriations, Subcommittee on Energy and Water Development.

UCAR is a 68-university member consortium that manages and operates the National Center for Atmospheric Research (NCAR) and additional programs that support and extend the country's scientific research and education capabilities. In addition to its member research universities, UCAR has formal relationships with approximately 100 additional undergraduate and graduate schools including several historically black and minority-serving institutions, and 40 international universities and laboratories. UCAR's principal support is from the National Science Foundation (NSF) with additional support from other Federal agencies including the Department of Energy (DOE).

DOE OFFICE OF SCIENCE

We were extremely pleased to see the recommendations of the task force of the Secretary of Energy Advisory Board contained in the Final Report of the Task Force on the Future of Science Programs at the Department of Energy. The scientific com-

munity is aware that the report recommendation to strengthen the Federal investment in the physical sciences and advanced engineering research is supported by many members of Congress; it is a recommendation on which I am sure many subcommittee members would like to act.

DOE is the largest Federal sponsor of basic research in the physical sciences, but the level of funding for DOE's core science programs has remained stagnant for years, while the number of "congressionally directed projects" has increased. While many of these add-ons seem worthy, they are diverting DOE's base funding from peer-reviewed research programs that are planned well in advance to accomplish DOE's mission in service to the country and are competed among the country's top researchers.

In the House Science Committee's recently released "Views and Estimates" for fiscal year 2005, the committee acknowledges the very difficult budget decisions Congress will have to make this year. However, as it has in past years, it criticizes the administration's budget request for DOE's Office of Science, calling it "inadequate" and "dwarfed" by support for the life sciences in recent years. Two bills, H.R. 34 and S. 915, authorize increased funding for the Office of Science, essentially doubling its budget. The conference report to H.R. 5, The Energy Policy Act of 2003, recommends that the Office of Science budget be funded at $4.2 billion, a 23 percent increase over the fiscal year 2004 amount.

As you are well aware, a healthy science budget ensures a vital workforce, strong economy, and contributes directly to national security. The administration's fiscal year 2005 request cuts DOE's Office of Science by 2 percent. I urge the subcommittee to fund the DOE Office of Science at the level of the fiscal year 2004 Original Appropriation plus Adjustments, or $3.5 billion, at the very least, and to enable the agency to apply the entire appropriated amount toward planned agency research priorities. This level of research funding will critically augment and reinvigorate the work of researchers throughout the Nation.

BIOLOGICAL AND ENVIRONMENTAL RESEARCH

Within the Office of Science, the Biological and Environmental Research (BER) program develops the knowledge necessary to identify, understand, and anticipate the potential health and environmental consequences of energy production and use. These are issues that are absolutely critical to our country's well-being and security, yet the request of $496.6 million for BER research is down over 29 percent from the fiscal year 2004 enacted level of $641.5 million. This reduction eliminates over $80.0 million worth of "extra projects" funded last year.

Peer-reviewed university research programs play a critical role in the BER program involving the best researchers the Nation's institutions of higher learning have to offer, and developing the next generation of researchers. Approximately half of BER basic research funding supports university-based activities directly and indirectly. All BER research projects, other than those in the "extra projects" category, undergo regular peer review and evaluation. In step with the recommendation made above for the Office of Science, I urge the subcommittee to fund Biological and Environmental Research at the level of the fiscal year 2004 Original Appropriation plus Adjustments, or $641.5 million, and to enable BER to apply the entire appropriated amount toward planned agency research priorities that are peer-reviewed and involve the best researchers to be found within the Nation's university research community as well as the DOE labs.

CLIMATE CHANGE RESEARCH

Within BER, the Climate Change Research long-term goal is to deliver improved climate data and models for policy makers to determine safe levels of greenhouse gases for the Earth system. This work is critical to the health of the planet. The extremely important target capability for fiscal year 2005 is to enable studies of the interactions between the carbon cycle and climate and between secondary sulfur aerosols and climate. The Climate Change Research Request of $142.9 million is flat with the fiscal year 2004 Original Appropriation level. I urge the subcommittee to fund Climate Change Research at a level that is consistent with the request for BER stated above.

Climate Change Research is composed of several programs of great importance to the atmospheric sciences community and the Nation. Climate and Hydrology contains Climate Modeling which develops the best coupled atmospheric-ocean general circulation models, and Atmospheric Radiation Measurement (ARM) Research which contributes to our understanding of the processes that control solar and thermal infrared radiative transfer through clouds and at the earth's surface. ARM supports a number of scientific "Fellows," making an important contribution to the develop-

ment of the next generation of climate scientists. Both Climate Modeling and ARM are programs that are of critical importance to the Nation's overall climate change research efforts. Climate and Hydrology receives a 0.6 percent increase in the fiscal year 2005 request. I urge the subcommittee to fund Climate and Hydrology at a level that is consistent with the request for BER and Climate Change Research stated above.

Also within Climate Change Research, Atmospheric Chemistry and Carbon Cycle is a program that includes Atmospheric Science, the work of which is essential for assessing the effects of energy production on air quality and climate through the quantification of the impacts of energy-related aerosols on climate. This work will be closely linked with the ARM program described above. I urge the subcommittee to fund Atmospheric Chemistry and Carbon Cycle at a level that is consistent with the request for BER and Climate Change Research stated above.

GLOBAL CHANGE EDUCATION PROGRAM (GCEP)

Within the Climate Change Research program, the Global Change Education Program funds the DOE's Summer Undergraduate Experience and Graduate Research Environmental Fellowships, as well as positions in the Significant Opportunities in Atmospheric Research and Science (SOARS) program, which is managed by UCAR. The DOE education programs are not slated to receive an increase, which has been the case for many years. DOE participation in the multi-agency funded SOARS program has been eliminated completely by BER program managers because of funding issues.

The lack of ethnic diversity among advanced-degree atmospheric science graduates is well documented. SOARS is a model mentoring program, which received the prestigious Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring in 2001. Now in its eighth year, SOARS provides a unique, 4-year experience for underrepresented students interested in graduate work in the atmospheric and related sciences. If funding for the Climate Change Research Program does not increase over the fiscal year 2005 requested level, underrepresented students will be turned away from this invaluable SOARS experience.

ADVANCED SCIENTIFIC COMPUTING RESEARCH (ASCR)

DOE's ASCR provides advances in computer science and the development of specialized software tools that are necessary to research the major scientific question being addressed by the Office of Science. ASCR's continued progress is of particular importance to atmospheric scientists involved with complex climate model development, research that takes enormous amounts of computing power. By their very nature, problems dealing with the interaction of the earth's systems and global climate change cannot be solved by traditional laboratory approaches. The Intergovernmental Panel on Climate Change (IPCC) has begun work on its Fourth Assessment Report to be completed in 2007, and ASCR's contribution to this international document will be critical. In order to maintain our international leadership in advanced computing, I urge the subcommittee to provide ASCR with the requested level of $204.3 million.

CONCLUSION

On behalf of UCAR and the atmospheric sciences research community, I want to thank the subcommittee for the important work you do for U.S. scientific research. We appreciate your attention to the recommendations of our community concerning the fiscal year 2005 budget of the Department of Energy. We understand and appreciate that the Nation is undergoing significant budget pressures at this time, but a strong Nation in the future depends on the investments we make in science and technology today.

PREPARED STATEMENT OF THE SOUTHERN STATES ENERGY BOARD

Mr. Chairman, the Southern States Energy Board (SSEB) is pleased to provide this statement for the record to the U.S. Senate Appropriations Subcommittee on Energy and Water Development as it considers fiscal year 2005 funding for the U.S. Department of Energy (DOE), Office of Energy Efficiency and Renewable Energy (EERE), and specifically related to the biomass/biofuels fiscal year 2005 budget request. SSEB governors recommend that the Congress appropriate $5,000,000 to the State/Regional Biomass Partnership and direct the Department to work with regional governors' organizations, specifically the Southern States Energy Board, the Coalition of Northeast Governors Policy Institute, the Council of Great Lakes Gov-

ernors and the Western Governors' Association, to make the Partnership even more successful.

This line item, which would continue an appropriation that has appeared in every Federal budget since fiscal year 1983, is for the purpose of promoting economic development by fostering the use of biobased products and bioenergy, and takes advantage of and sustains existing networks and infrastructure developed throughout the Nation by the regional governors' organizations.

The Board commends Congress for restoring $3,000,000 to the U.S. DOE Regional Biomass Energy Program (RBEP) in the Fiscal Year 2003 Omnibus Bill and $2,000,000 in the Fiscal Year 2004 Energy and Water Development Appropriations bill. In addition, the Board wishes to commend the administration for reinstating the State/regional biomass partnership in the fiscal year 2005 budget request. SSEB and other regional governors organizations received new cooperative agreements for the fiscal year 2003 funding on March 2, 2004.

Energy independence is a critical element in the administration's Energy Policy and can be significantly enhanced by developing viable domestic alternative energy sources. Funding for the State/regional biomass partnership greatly enhances the States' ability to participate in the development of biomass energy markets.

As the precursor to the State/Regional Biomass Partnership, the Regional Biomass Energy Program was created by Congress in 1983 under the Energy and Water Development Appropriations bills Public Law 97–88 and Public Law 98–50. The enabling legislation instructed DOE to design its national program to work with States on a regional basis, taking into account regional biomass resources and energy needs.

The five regional partnerships, working with representatives in all 50 States, Puerto Rico and the Virgin Islands, and hosted primarily by regional governors' organizations (Southern States Energy Board, Coalition of Northeastern Governors, the Council of Great Lakes Governors and the Western Governors' Association) are recognized nationally for their combined experience related to biomass technologies and policies. SSEB and other regional governors' organizations hosting State/regional biomass energy partnerships are critical to DOE for formulating policies and facilitating private sector deployment of advanced energy technologies and practices into target markets.

Beyond the potential economic development benefits, participating States gain the opportunity to strengthen and integrate the work of energy, agriculture, forestry, environmental and other State agencies. Where issues are the same among several States, strategies can be developed to address these issues across State borders. Examples include the development of similar State legislative actions, working with the private sector with multi-State locations, and multi-State training and outreach to economize resources.

In the past, the southern States have participated in this strategy through the Southeastern Regional Biomass Energy Program (SERBEP) which has provided over $5.8 million in project funds since 1992 with a cost-share of over $21 million by leveraging State and private funding for technology development and deployment. In 1999, SSEB was selected as the "host organization" for the SERBEP and received funding through a 5-year cooperative agreement.

SSEB is an interstate compact organization with enabling legislation in each member State, covering the 16 States plus Puerto Rico and the U.S. Virgin Islands, all members of the Southern Governors Association. To assure broad based representation, SSEB is governed by a board composed of the governor and a member of the House and Senate from each member State and a Federal representative named by the President under Public Law 87–563 and Public Law 92–440. Over the years of administering the SERBEP, SSEB has created awareness and support for bioenergy/biobased products in the executive and legislative branches of State government, improved the effectiveness of State/regional biomass activities, provided more formal interaction between the States and improved policy development and coordination in particular.

We urge Congress to include this modest but vital appropriation in the fiscal year 2005 Energy and Water Development Appropriations bill to protect the Federal Government's 20-year investment in State/regional biomass activities, and to continue the promotion of the strong Federal interest in viable and growing biobased products and bioenergy.

PREPARED STATEMENT OF THE AMERICAN SOCIETY FOR MICROBIOLOGY

The American Society for Microbiology (ASM), the largest single life science organization in the world, with more than 43,000 members, appreciates the opportunity

to provide written testimony on the fiscal year 2005 budget for the Department of Energy (DOE) science programs. The ASM represents scientists working in academic, medical, governmental, and industrial institutions worldwide. Microbiological research is focused on human health and the environment and is directly related to DOE programs involving microbial genomics, climate change, bioremediation, and basic biological processes important to energy sciences.

DOE OFFICE OF SCIENCE

The scientific enterprise and the overall economy continue to benefit enormously from investments in the basic sciences made by the DOE Office of Science. The DOE Office of Science, the Nation's primary supporter of the physical sciences, is also an essential partner in the areas of biological and environmental science research as well as in mathematics, computing, and engineering. Furthermore, the Office of Science supports a unique system of programs based on large-scale, specialized user facilities that bring together working teams of scientists focused on such challenges as global warming, genomic sequencing, and energy research. The Office of Science is also an invaluable partner in certain scientific programs of the National Institutes of Health (NIH) and the National Science Foundation (NSF) and supports peer-reviewed, basic research in DOE-relevant areas of science in universities and colleges across the United States. These cross-disciplinary programs contribute enormously to the knowledge base and training of the next generation of scientists, while providing worldwide scientific cooperation in physics, chemistry, biology, environmental science, mathematics, and advanced computational sciences.

The Office of Science will play an increasingly important role in the administration's goal of U.S. energy independence in this decade. Many DOE scientific research programs share the goal of producing and conserving energy in environmentally responsible ways. Programs include basic research projects in microbiology, as well as, extensive development of biotechnology-based systems to produce alternative fuels and chemicals, to recover and improve the process for refining fossil fuels, to remediate environmental problems, and to reduce wastes and pollution.

The administration's proposed budget for fiscal year 2005 includes $3.4 billion for the Office of Science, representing a decrease of $68 million compared to fiscal year 2004. The 2 percent cut proposed for fiscal year 2005 for the Office of Science is a significant departure from the congressionally authorized level of $4 billion. The proposed budget for Biological and Environmental Research (BER) in fiscal year 2005 is $502 million or $140 million below fiscal year 2004. The proposed budget for Basic Energy Sciences (BES) in fiscal year 2005 would provide $1.06 billion, representing an increase of $53 million, or 5.2 percent, over the prior year.

BIOLOGICAL AND ENVIRONMENTAL RESEARCH PROGRAMS

DOE is the lead Federal agency supporting genomic sequencing of non-pathogenic microbes through its Genomics: GTL Program. This sequence information provides clues into how we can design biotechnological processes that will function in extreme conditions and potentially solve pressing national priorities, such as energy and environmental security, global warming, and energy production. The administration has requested $67.5 million for fiscal year 2005, compared to funding of $63.5 million for fiscal year 2004. These requests include a $4 million increase for research on function and control of molecular-scale machines for energy and environmental applications, as well as $5 million for Project Engineering and Design of the first Genomics: GTL project, the Facility for Production and Characterization of Proteins and Molecular Tags.

In view of the valuable insights and tremendous practical potential from microbial genomic sequencing, the ASM recommends that Congress provide an additional $25 million for the GTL Program in fiscal year 2005. ASM believes that these additional funds will be vital if DOE's role in this science frontier is to expand.

BER GENOMICS: GTL PROGRAM

Since microbes power the planet's carbon and nitrogen cycles, clean up our wastes, and make important transformations of energy, they are an important source of biotechnology products, making DOE research programs extremely valuable for advancing our knowledge of the non-medical microbial world. Knowing the complete DNA sequence of a microbe provides important keys to the biological capabilities of the organism and is the first step in developing strategies to more efficiently detect, use, or reengineer that microbe to address an assortment of national issues. The DOE Genomics: GTL genomic sequencing program has an important impact on nearly every other activity within BER. In addition to this program itself, a substantial portion of the DOE Joint Genome Institute's (JGI) sequencing capacity

continues to be devoted to the sequencing of microbial genomes as well as DNA in mixed genomes obtained from microbial communities dwelling within specialized ecological niches. As part of these efforts, DOE continues to complete DNA sequences of genomes in microbes with potential uses in energy, waste cleanup, and carbon sequestration.

About 40 percent of the JTI capacity is dedicated to serving direct DOE needs, primarily through the Genomics: GTL program, while the remaining 60 percent of this capacity serves as a state-of-the-art DNA sequencing facility for whose use scientists submit proposals that are subject to merit review. These sequencing projects will be conducted at no additional cost for the extramural scientific community. These efforts are expected to have a substantial impact on the BER Environmental Remediation Sciences program, reflecting the fact that much of this program is focusing on the use and role of microbes in environmental remediation. In addition, the Genomics: GTL program will continue to have a major impact on the BER Climate Change Research program because of the role microbes play in the global carbon cycle and the potential for developing biology-based solutions for sequestering carbon.

The ASM applauds DOE's leadership in recognizing this important need in science and endorses expansion of its microbial genome sequencing efforts, particularly in using DNA sequencing to learn more about the functions and roles of the preponderance of microorganisms that cannot yet be grown in culture. The ASM also sees this program as the basis for an expanded effort to understand more broadly how genomic information can be used to understand life at the cellular and higher levels, and thus urges Congress to fully support this exciting program.

ENVIRONMENTAL REMEDIATION

The overall goal of the DOE Environmental Management Science Program (EMSP), which was transferred from Environmental Management to the BER program, is to support basic research that improves the science base underpinning the clean up of DOE sites. Traditional clean up strategies may not work or be cost effective for many of the challenges that could prevent the successful closure of DOE sites. The EMSP, through its support of basic research, aims to develop and validate technical solutions to complex problems, providing innovative new technologies to overcome major obstacles that lead to future risk reduction and cost and time savings. It is the intent or the expectation of the EMSP that the basic research projects funded are directed toward specific issues and uncertainties at the DOE cleanup sites.

DOE bioremediation activities are centered on the Natural and Accelerated Bioremediation Research (NABIR) program, a basic research program focused on determining how and where bioremediation may be applicable as a reliable, efficient, and cost-effective approach for cleaning up or containing metals and radionuclides in contaminated subsurface environments. In the NABIR program, research advances will be made from molecular to field scales; on genes and proteins used in bioremediation and in overcoming physicochemical impediments to bacterial activity; in non-destructive, real-time measurement techniques; on species interaction and response of microbial ecology to contamination; and in understanding microbial processes for altering the chemical state of metallic and radionuclide contaminants. NABIR activities have a substantial involvement of academic scientists.

Additional EMSP research efforts will focus on contaminant fate and transport in the subsurface, nuclear waste chemistry and advanced treatment options, and novel characterization and sensor tools. In addition, studies on bioremediation of organic contaminants are conducted in EMSP, complementing EMSP projects will continue to be funded through a competitive peer review process. The most scientifically meritorious research proposals and applications will be funded based on availability of funds and programmatic relevance to ensure a complete and balanced research portfolio that addresses DOE needs. Research will be funded at universities, national laboratories, and at private research institutes and industries. This research will be conducted in collaboration with the Office of Environmental Management. Funding is reduced to increase research at and development of Field Research Centers through the NABIR program.

The administration's proposed budget for Bioremediation research, including the NABIR program, is $105 million, a $2.8 million decrease compared to fiscal year 2004. The ASM considers these DOE environmental remediation programs to be of considerable importance, and recommends that funding for fiscal year 2005 be increased by an additional $5 million.

CLIMATE CHANGE RESEARCH

The ASM is pleased to see the administration's support of Climate Change Research continue in its fiscal year 2005 budget. The ASM endorses the President's proposed $143 million budget for fiscal year 2005, which is about equivalent with levels in fiscal year 2004. The Climate Change Research subprogram seeks to apply the latest scientific knowledge (i.e., genomic, new computational methods) to the potential effects of greenhouse gas and aerosol emissions on the climate and the environment. This program is DOE's contribution to the interagency U.S. Global Change Research Program proposed by President Bush in 1989 and codified by Congress in the Global Change Research Act of 1990 (Public Law 101–106). This program is vital if science is to advance its understanding of the radiation balance between the surface of the Earth and the uppermost portions of the atmosphere and how this will affect the planet's climate and ecosystems.

The Ecological Processes portion of the subprogram is focused on understanding and simulating the effects of climate and atmospheric changes on the biological structure and functioning of planetary ecosystems. Research will also identify potential feedbacks from changes in the climate and atmospheric composition. This research is critical if we are to better understand the changes occurring in our ecosystems from increasing levels of atmospheric pollutants.

The ASM urges Congress to support this important research within the Office of Science budget. The Climate Change Research subprogram is a key component in developing more accurate climate modeling and ecosystem data, and promises to yield new technologies to address future climate shifts.

BASIC ENERGY SCIENCE

The administration's requested funding for the Office of Basic Energy Sciences (BES) for fiscal year 2005 is $1.06 billion, representing an increase of $53 million over fiscal year 2004. This program is a principal sponsor of fundamental research for the Nation in the areas of materials sciences, chemistry, geosciences, and biosciences as it relates to energy. Program initiatives include microbiological and plant sciences focused on harvesting and converting energy from sunlight into energy feedstock such as cellulose and other products of photosynthesis, as well as how those chemicals may be further converted into energy rich molecules such as methane, hydrogen and ethanol. Alternative and renewable energy sources will remain of strategic importance in the Nation's energy portfolio, and DOE is well positioned to advance basic research in this area. The advances in genomic technologies have given this research area a tremendous new resource for advancing the Agency's bioenergy goals.

NEW TECHNOLOGIES AND UNIQUE FACILITIES

New technologies and advanced instrumentation derived from DOE's expertise in the physical sciences and engineering have become increasingly valuable to biologists. The beam lines and other advanced technologies for determining molecular structures of cell components are at the heart of current advances to understand cell function and have practical applications for new drug design. DOE advances in high throughput, low cost DNA sequencing; protein mass spectrometry, cell imaging and computational analyses of biological molecules and processes are other unique contributions of DOE to the Nation's biological research enterprise. The budget request for the DOE Nanoscale Science program includes an increase of $8.7 million to a level of $211 million for fiscal year 2005. Furthermore, DOE has unique field research facilities for environmental research important to understanding biogeochemical cycles, global change and cost-effective environmental restoration. In short, DOE's ability to conduct large-scale science projects and draw on its unique capabilities in physics, computation and engineering is critical for future biological research.

The ASM strongly supports the basic science agenda across the scientific disciplines and encourages Congress to maintain its commitment to the Department of Energy research programs. Such commitment will help maintain U.S. leadership in science and technology.

SCHEDULE OF FEDERAL AWARDS 2004

Federal Grantor/Pass-through Grantor/Program Title	Cost Center	Federal CFDA Number	Program or Award Amount	Grants Receivable 1/1/2004	Receipts or Revenue Recognized	Disbursements/ Expenditures	Grants Receivable 12/31/2004
MAJOR PROGRAMS:							
Resident Postdoctoral Research	783	93.283	$999,381.00	$89,902.49			$89,902.49
Total Major Programs			999,381.00	89,902.49			89,902.49
OTHER FEDERAL ASSISTANCE:							
HHS:							
NIGMS-MARC	789	93.88	431,300.00				0
Environmental Micoorganisms	694	93.856	10,000.00				0
DNA Repair and Mutagenesis	457	93.393	25,000.00				0
Summer Institute	848	93.856	24,000.00	532.99			532.99
Conf Biofilms	425	93.121	25,000.00	25,000.00			25,000.00
Environmental Pathogens	694	93.856	10,000.00				0
Microbial Triggers of Disease	666	93.855	5,000.00				0
Candida and Candidiasis	434	93.121	10,000.00				
National Science Foundation:							
Plant Biotechnology	678	47.074	15,000.00				0
Pathogens	697	47.074	110,000.00	33,608.72			33,608.72
Sub Contract BioSciEd Net	787	47.076	100,000.00	30,838.75			30,838.75
Beyond Microbial Genomics	691	47.074	15,000.00				
U.S. Department of Energy:							
DNA Repair and Mutagenesis	457	81.049	20,000.00				0
Prokaryotic Development	472	81.049	10,000.00				0
Geobiology	675	81.049	15,000.00				0
Microbial Ecology and Genomics	676	81.049	25,000.00				0
Multicellular Cooperation	671	81.049	15,000.00				0
Systems Microbiology	691		10,000.00	6,461.06			6,461.06
USDA:							
Conference Salmonella	421	10.206	10,000.00	10,000.00			10,000.00
Pre-harvest Food Safety	663	10.001	5,000.00	5,000.00			5,000.00
Pre-harvest Food Safety	663	10.2	25,000.00	19,350.00			19,350.00
Pre-harvest Food Safety	663	10.206	10,000.00	7,000.00			7,000.00
Conf Salmonella Pathogenesis	421	10.206	10,000.00				0
EPA:							
Microbial Eolocy	676	66.5	20,000.00				0

Infectious Disease GI Tract	670	66.606	50,000.00				0
PO HHS/FDA Pre-harvest Food	663		10,000.00	10,000.00			10,000.00
PO US Dept of Army	475		10,000.00				0
Total Other Awards			1,025,300.00	147,791.52	$0.00	$0.00	147,791.52
Total Federal Awards			2,024,681.00	237,694.01	0.00	0.00	237,694.01

PREPARED STATEMENT OF THE NUCLEAR ENERGY INSTITUTE

On behalf of the nuclear energy industry, I thank you for your support of nuclear technology-related programs in the Energy Department (DOE) and your oversight of the Nuclear Regulatory Commission (NRC) for fiscal 2004.

The Nuclear Energy Institute is responsible for developing policy for the U.S. nuclear industry. NEI's 270 corporate and other members represent a broad spectrum of interests, including every U.S. energy company that operates a nuclear power plant. NEI's membership also includes nuclear fuel cycle companies, suppliers, engineering and consulting firms, national research laboratories, manufacturers of radiopharmaceuticals, universities, labor unions and law firms.

My statement for the record addresses three key points for your consideration this year:

(1) Congress should reclassify the Nuclear Waste Fund, reorienting it to its original purpose and ensuring adequate funding for the Yucca Mountain repository project.

(2) Increased research and development (R&D) on advanced nuclear technology is essential to maintain America's leadership role in commercial nuclear technologies.

(3) The NRC's budget and staffing should be reassessed in light of current trends.

I also will discuss briefly several important programs that the nuclear energy industry supports, including research into the health effects of low levels of radiation.

CONGRESS SHOULD RECLASSIFY THE NUCLEAR WASTE FUND

The Nuclear Waste Fund was established in 1982 as a separate account in the Federal treasury. However, congressional efforts to control deficit spending in the 1980's and 1990's changed the status of the fund. Currently, Congress funds the used fuel programs within the confines of the discretionary spending allocation for the Energy and Water Development Appropriations bill. As a result, annual appropriations for Yucca Mountain and related programs have been reduced $723 million below DOE's budget requests in the past 11 years—significantly hampering DOE's progress toward accepting the Nation's used nuclear fuel. Funding shortfalls in past years have forced DOE to defer important programs, including procuring transportation containers for used reactor fuel; acquiring transportation and logistics services; creating the final grant process for providing emergency responder assistance; developing a transportation infrastructure in Nevada; and working with regional, State, tribal and local representatives on transportation planning.

The industry urges Congress to reclassify the Nuclear Waste Fund this year, as proposed by the president's fiscal 2005 budget and introduced as H.R. 3981, to prevent future funding shortfalls for Yucca Mountain. The Nuclear Waste Fund has three unique characteristics that justify modifying the current budget rules governing its use in this way:

—The Federal Government is obligated by law and contracts signed with electric companies that operate nuclear power plants to implement the used fuel management program.

—The fund is intended to cover the entire cost of the Federal Government's commercial used fuel management program over several decades.

—The disposal of used nuclear fuel from commercial reactors is financed entirely through a fee established by Federal law and paid by consumers of electricity generated at nuclear power plants.

INDUSTRY SUPPORTS BUDGET REQUEST OF $880 MILLION FOR YUCCA MOUNTAIN

The industry greatly appreciates the House for its report language emphasizing the need for early action on infrastructure development for the used nuclear fuel disposal program. The committee's direction resulted in an announcement by DOE on preferences for rail transport in Nevada and should lead to a record of decision on route selection this year.

Last year, the H.R. 6 conference report endorsed the highest level of funding for Yucca Mountain to date. At $580 million, DOE could address many technical challenges necessary for submitting an application to the NRC by December for a license to construct the repository.

NEI recognizes the challenge that the committee faces in fiscal 2005, based on assumptions included in the budget request on this issue and urges the committee to make allocations under section 302(b) of the Budget Act consistent with fully funding the administration request of $880 million for Yucca Mountain. Absent sufficient funding in fiscal 2005, the industry does not believe the program will meet key milestones for accepting used fuel in 2010, and these potential delays will result in higher costs for the program and increased liabilities to the government.

Although the repository program is the foundation of our national policy for managing used nuclear fuel, the nuclear industry also recognizes the value in researching emerging technology for used reactor fuel treatment and management. Such farsighted programs will allow our Nation to remain the world leader in nuclear technologies. However, technologies like transmutation—the conversion of used nuclear fuel into a smaller volume of less toxic materials—still require a Federal repository for disposal of the radioactive by-products generated from the process.

RESEARCH AND DEVELOPMENT OF NEW NUCLEAR ENERGY SYSTEMS NECESSARY

The industry supports increased funding for fiscal 2005 for DOE's R&D programs for the development of new nuclear energy systems. The nuclear energy industry urges the committee to approve at least $60 million for the Nuclear Energy Technology (NET) program. Within the NET program, $10 million should be earmarked for the early site permit process as requested by DOE. This is an important component of the revised NRC licensing process for new nuclear power plants passed by Congress in 1992, and testing is already under way. An additional $50 million should be used to begin a 6-year, cost-shared program to test the combined operating and construction license process for new nuclear plants, based on the industry's response to a DOE solicitation that will be awarded this year. DOE should support deployment of proven generation III-plus technology for this program.

The industry believes that the government has an early role in bringing advanced reactor concepts, known as Generation IV reactors, to the marketplace. NEI urges your support for a next-generation nuclear plant at the new Idaho National Laboratory, funded through the Generation IV Nuclear Energy Systems Initiative program. The industry also supports the Nuclear Hydrogen Initiative at $9 million.

Although DOE continues to fund the International Nuclear Energy Research Initiative (I–NERI), the domestic version of this program, NERI, has been terminated and a new initiative has been proposed. We believe the current program fills a vital need identified in a 1997 report by the President's Council of Advisers on Science and Technology (PCAST) and endorsed by the energy secretary's Nuclear Energy Research Advisory Committee. We do not support the change for NERI. Rather, the industry believes this collaborative program between national laboratories, industry and universities should be continued at $7 million for fiscal 2005.

PCAST also recommended another R&D initiative—the Nuclear Energy Plant Optimization (NEPO) program—to produce additional amounts of affordable energy from America's 103 commercial reactors. Through NEPO, DOE has been working with the nuclear industry and DOE's national laboratories to apply new technology to nuclear and non-nuclear equipment. The industry encourages the committee to allocate $10 million for the NEPO program to help fund important research on materials management issues at nuclear power plants, including improved availability and maintenance at nuclear plants; technology to predict and measure the extent of materials degradation from plant aging; introducing new materials in a cost-effective manner to mitigate materials effects; and as an underpinning to both the applied materials and technology development and deployment activities, advanced research tools and the evolving knowledge of materials properties. DOE has proposed no funding for the program in fiscal 2005 despite the obvious benefits that the national laboratories can bring to bear on these issues.

The industry also requests $27.5 million for DOE's University Support Program, which supports vital research and educational programs in nuclear science at the Nation's colleges and universities. With nuclear plant license renewal continuing at a brisk pace and the industry considering plans for new nuclear plants, demand for highly educated and trained professionals will continue. NEI encourages the committee to consider a new $2 million program within the Office of Nuclear Energy, Science and Technology to support universities that have undergraduate and graduate programs in health physics. The industry's most recent human resources survey reveals an increasing demand for health physics professionals. This need will become acute in the next few years when many will retire.

NRC BUDGET AND STAFFING SHOULD BE REASSESSED

Our Nation's focus on security has led to significant security enhancements at nuclear power plants. Nuclear power plant security was among the most robust in the industrial sector before the Sept. 11, 2001, terrorist attacks, and our facilities are even more secure today. By year's end, our industry will have invested an additional $1 billion over the past 2 years in security-related improvements, such as fortified perimeter security, improved background checks and tighter access control and detection ability at our plants. The nuclear energy industry has added one-third more security officers, for a total of 7,000 well-trained, armed security officers at our 67

nuclear power plant sites. The industry will continue to make these investments and improvements to enhance private industry's best security program.

The NRC's proposed fiscal 2005 budget totals $670.3 million, an increase of $44.2 from the fiscal 2004 budget, and the highest ever for this agency. Fiscal 2005 is an appropriate time for the NRC to review its budget and resource allocations in light of current demands and other resources available. The industry's 103 commercial reactors are operating at world-class levels of safety and reliability. Nearly 75 percent of the reactors have the NRC's highest safety performance indicator in all categories, and most of the others have only a single indicator in the next lower level. The excellent safety record of U.S. nuclear power plants lays the groundwork for refining regulatory oversight based on performance and safety insights. Additionally, insights from the reactor oversight process indicate that several major regulations for power reactors are not providing a significant safety value. A disciplined review of the regulatory process should be undertaken to focus on the more probable, safety-significant events rather than highly unlikely events.

INDUSTRY SUPPORT FOR ADDITIONAL ACTIVITIES

Nuclear Nonproliferation.—The industry supports the disposal of excess weapons-grade nuclear materials through the use of mixed-oxide fuel in reactors in the United States and Russia.

Low-Dose Radiation Health Effects Research.—The industry strongly supports continued funding for the DOE's low-dose radiation research program.

Nuclear Research Facilities.—The industry is concerned with the declining number of nuclear research facilities. We urge the committee to fully fund the request for a DOE lead lab in Idaho for nuclear energy research and development.

Uranium Facility Decontamination and Decommissioning.—The industry fully supports cleanup of the gaseous diffusion plants at Paducah, KY; Portsmouth, OH; and Oak Ridge, TN. Commercial nuclear power plants contribute more than $150 million to the Decontamination and Decommissioning Fund for government-managed uranium enrichment plants each year. Other important environmental, safety and/or health activities at these facilities should be paid for out of general revenues.

International Nuclear Safety Program and Nuclear Energy Agency.—NEI supports the funding requested for the DOE and NRC's international nuclear safety programs. They are programs aimed at improving the safe commercial use of nuclear energy worldwide.

Medical Isotopes Infrastructure.—The nuclear industry supports the administration's program for the production of medical and research isotopes.

PREPARED STATEMENT OF THE SOCIETY OF NUCLEAR MEDICINE

The Society of Nuclear Medicine (SNM) appreciates the opportunity to submit written comments for the record regarding funding for a National Isotope Program in fiscal year 2005. SNM is an international scientific and professional organization founded in 1954 to promote the science, technology and practical application of nuclear medicine. Its 14,000+ members are physicians, technologists and scientists specializing in the research and practice of nuclear medicine.

To that end, SNM advocates the creation of a National Isotope Program to ensure consistent radioisotope research and production programs as isotope availability is crucial to nuclear medicine procedures and innovation in this field. The Society stands ready to work with policymakers at the local, State, and Federal levels to advance policies and programs that will that our Nation have a steady supply of isotopes for the advancement of nuclear medicine research.

WHAT IS NUCLEAR MEDICINE?

Nuclear medicine is a medical specialty that involves the use of small amounts of radioactive pharmaceuticals, called "Radiotracers" or "Tracers," to help diagnose and treat a variety of diseases. These tracers are detected by special types of cameras that work with computers to provide nuclear medicine physicians and the patient's doctor precise pictures of the area of the body being imaged. It is a way to gather medical information that may otherwise be unavailable, require exploratory surgery, or necessitate more expensive diagnostic tests.

Nuclear medicine procedures, such as PET (positron emission tomography) and SPECT (single-photon emission tomography), often identify abnormalities very early in the progression of a disease—long before some medical problems are apparent with other diagnostic tests. This early detection allows a disease to be treated early in its course when there may be a more successful prognosis.

An estimated 16 million nuclear medicine imaging and therapeutic procedures are performed each year in the United States. Nuclear medicine procedures are among the safest diagnostic imaging tests available. The amount of radiation from a nuclear medicine procedure is comparable to that received during a diagnostic X-ray.

Some of the more frequently performed nuclear medicine procedures include:

—Bone scans to examine orthopedic injuries, fractures, tumors or unexplained bone pain.

—Cardiac scans to identify normal or abnormal blood flow to the heart muscle, measure heart function or determine the existence or extent of damage to the heart muscle after a heart attack.

—Breast scans which are used in conjunction with mammograms to more accurately detect and locate cancerous tissue in the breasts.

—Liver and gallbladder scans to evaluate liver and gallbladder function.

—Cancer imaging to detect tumors and determine the severity (staging) of various types of cancer.

—Treatment of thyroid diseases and certain types of cancer.

—Brain imaging to investigate problems within the brain itself or in blood circulation to the brain.

—Renal imaging in children to examine kidney function.

FUNDING CUTS AND PROGRAM RESTRUCTURING THREATEN NUCLEAR MEDICINE

The Nation needs a consistent, reliable supply of isotopes for medical, security, space power, and research uses. Today, new isotopes for diagnostic and therapeutic uses are not being developed, critical isotopes for national security are in short supply, and demand for isotopes critical to homeland security exceeds supply. Additionally, the national isotope infrastructure is chronically under funded at the DOE.

New science, such as molecular nuclear medicine, is emerging that will require reliable supplies of isotopes. By abandoning isotope research at the DOE, innovative medical research progress into radiopharmaceuticals will be lost, and the medical community will not benefit from valuable discoveries for the diagnosis and treatment of millions of Americans.

Isotopes for research & development (R&D) at reasonable prices are not available due to declining resources and policy change in the DOE Isotope Program. The DOE program and its resources have been declining for two decades, and recent policy changes by DOE have significantly worsened the situation and are impeding the development of new isotope applications. Recently DOE eliminated all R&D funding for DOE applications and production. Lost opportunities to develop new advanced technologies through isotope research will have major impacts on pressing needs of the United States in health care and national security.

The Advanced Nuclear Medicine Initiative (ANMI) at the DOE fostered peer-reviewed nuclear medicine research studies that advanced medical and clinical research and practice in this important area of medicine. The program was funded at $2.5 million in fiscal year 2000, 2001 and 2002. By abandoning this program in fiscal year 2003, innovative medical research progress into radiopharmaceuticals was lost.

Also, the fiscal year 2003 budget instituted an upfront payment policy for development and production of radionuclides for treatment or research. This restructuring severely hampered researcher's ability to obtain essential radioisotopes by imposing a much higher cost on researchers, and created a difficult payment situation, since researchers often cannot commit outlays until grants are issued and funds are received, with the end result being an adverse effect on public health. A resulting crisis in the availability of isotopes constrained existing nuclear medicine procedures and had a chilling effect on research into new procedures to diagnose and treat serious and life-threatening diseases, such as cancer.

Additionally, relying on foreign sources for radioisotopes severely hampers researcher's ability to obtain essential radioisotopes. Because no commercial isotope-producing reactors exist in the United States, there is a strong dependence on foreign sources for reactor-produced radioisotopes. The U.S. facilities for reactor-produced isotopes are limited to DOE and university reactors, primarily at the University of Missouri Research Reactor Center (MURR). The resulting crisis in the availability of isotopes will constrain existing nuclear medicine procedures and will have a chilling effect on research into new procedures to diagnose and treat serious and life-threatening diseases, such as cancer.

Decline in nuclear and radiochemistry education is not being addressed to avoid impacts on radioisotope production and applications R&D. A recent survey with 19 universities found a continuation of a long-term decline in the number of graduate programs, graduate students, and faculty in the United States in nuclear and

radiochemical fields. Currently, there are 5–10 U.S. Ph.D. graduates in these research fields each year while the projected demand in the near future at the DOE and within the nuclear medicine community will be several hundred Ph.D.'s. In the past, foreign graduates have solved the shortage of nuclear scientists. However, because of a worldwide decline in the number of young scientists in the field, foreign graduates are not available to address the shortage.

CREATION OF A NATIONAL ISOTOPE PROGRAM

Congress should realign isotope resources to create the National Isotope Program to produce essential isotopes, reestablish R&D for production and isotope applications, establish nuclear technology education activity, and support isotope production infrastructure of new and existing facilities.

Major components of a National Isotope Program include:

—Establishment of a national program to meet the national need for isotopes. The program should be supported at the Secretary of Energy level with the program director reporting at a high level in DOE;

—Collaboration with R&D, medical, and industrial users to assess isotope needs and transfer technologies to accelerate applications;

—Facilitation of the transfer of commercially viable isotope programs to the private sector;

—Investment in R&D to improve isotope production, processing, and utilization;

—Continuously monitoring the isotope needs of researchers and clinicians;

—Establishment of an education program to ensure that the next generation of nuclear and radiochemists are trained and available to support the Nation's needs; and

—Upgrade the capability at the University of Missouri and other existing facilities that produce isotopes.

A National Isotope Program will continue innovation in nuclear medicine to meet the health care needs of the Nation. To that end, SNM advocates the allocation of $25 million in fiscal year 2005 for the creation of the National Isotope Program.

CONCLUSION

The Society of Nuclear Medicine once again stands ready to work with policymakers to advance policies that will reduce and prevent suffering from disease for all Americans, while ensuring an adequate nuclear medicine workforce. Again, we thank you for the opportunity to present our views on funding for nuclear medicine workforce and research related programs and stand ready to answer any questions you may have.

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