106TH CONGRESS, 1st Session | HOUSE OF REPRESENTATIVES | REPT. 106–99 Part 1

EARTHQUAKE HAZARDS REDUCTION AUTHORIZATION ACT OF 1999

APRIL 19, 1999.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

Mr. SENSENBRENNER, from the Committee on Sceince, submitted the following

REPORT

[To accompany H.R. 1184]

[Including cost estimate of the Congressional Budget Office]

The Committee on Science, to whom was referred the bill (H.R. 1184) to authorize appropriations for carrying out the Earthquake Hazards Reduction Act of 1977 for fiscal years 2000 and 2001, and for other purposes, having considered the same, report favorably thereon with an amendment and recommend that the bill as amended do pass.

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The amendment is as follows:

Strike out all after the enacting clause and insert in lieu thereof the following:

SECTION 1. SHORT TITLE.

This Act may be cited as the "Earthquake Hazards Reduction Authorization Act of 1999".

SEC. 2. AUTHORIZATION OF APPROPRIATIONS.

(a) FEDERAL EMERGENCY MANAGEMENT AGENCY.—Section 12(a) of the Earthquake Hazards Reduction Act of 1977 (42 U.S.C. 7706(a)) is amended—

(1) by striking "(1) GENERAL.—" and all that follows through "(7) There" and inserting "GENERAL.—There";

(2) by striking "1998, and" and inserting "1998,"; and

(3) by inserting ", $19,800,000 for the fiscal year ending September 30, 2000, and $20,400,000 for the fiscal year ending September 30, 2001" after "September 30, 1999".

(b) UNITED STATES GEOLOGICAL SURVEY.—(1) Section 12(b) of the Earthquake Hazards Reduction Act of 1977 (42 U.S.C. 7706(b)) is amended—

(A) by inserting "There are authorized to be appropriated to the Secretary of the Interior for purposes of carrying out, through the Director of the United States Geological Survey, the responsibilities that may be assigned to the Director under this Act $46,100,000 for fiscal year 2000, of which $3,500,000 shall be used for the Global Seismic Network and $100,000 shall be used for the Scientific Earthquake Studies Advisory Committee established under section 6 of the Earthquake Hazards Reduction Authorization Act of 1999; and $47,500,000 for fiscal year 2001, of which $3,600,000 shall be used for the Global Seismic Network and $100,000 shall be used for the Scientific Earthquake Studies Advisory Committee established under section 6 of the Earthquake Hazards Reduction Authorization Act of 1999." after "operated by the Agency.";

(B) by striking "and" at the end of paragraph (1);

(C) by striking the comma at the end of paragraph (2) and inserting a semicolon; and

(D) by inserting after paragraph (2) the following new paragraphs:

"(3) $9,000,000 of the amount authorized to be appropriated for fiscal year 2000; and

"(4) $9,500,000 of the amount authorized to be appropriated for fiscal year 2001,".

(2) Section 2(a)(7) of the Act entitled "An Act to authorize appropriations for carrying out the Earthquake Hazards Reduction Act of 1977 for fiscal years 1998 and 1999, and for other purposes" is amended by inserting ", $1,600,000 for fiscal year 2000, and $1,650,000 for fiscal year 2001" after "1998 and 1999".

(c) NATIONAL SCIENCE FOUNDATION.—Section 12(c) of the Earthquake Hazards Reduction Act of 1977 (42 U.S.C. 7706(c)) is amended—

(1) by striking "1998, and" and inserting "1998,"; and

(2) by striking the period at the end and inserting ", and (5) $19,000,000 for engineering research and $10,900,000 for geosciences research for the fiscal year ending September 30, 2000. There are authorized to be appropriated to the National Science Foundation $19,600,000 for engineering research and $11,200,000 for geosciences research for fiscal year 2001.".

(d) NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY.—Section 12(d) of the Earthquake Hazards Reduction Act of 1977 (42 U.S.C. 7706(d)) is amended—

(1) by striking "1998, and"; and inserting "1998,"; and

(2) by inserting ", $2,200,000 for fiscal year 2000, and $2,265,000 for fiscal year 2001" after "September 30, 1999".

SEC. 3. REPEALS.

Section 10 and subsections (e) and (f) of section 12 of the Earthquake Hazards Reduction Act of 1977 (42 U.S.C. 7705d and 7706 (e) and (f)) are repealed.

SEC. 4. ADVANCED NATIONAL SEISMIC RESEARCH AND MONITORING SYSTEM.

The Earthquake Hazards Reduction Act of 1977 (42 U.S.C. 7701 et seq.) is amended by adding at the end the following new section:

"SEC. 13. ADVANCED NATIONAL SEISMIC RESEARCH AND MONITORING SYSTEM.

"(a) ESTABLISHMENT.—The Director of the United States Geological Survey shall establish and operate an Advanced National Seismic Research and Monitoring System. The purpose of such system shall be to organize, modernize, standardize, and stabilize the national, regional, and urban seismic monitoring systems in the United States, including sensors, recorders, and data analysis centers, into a coordinated system that will measure and record the full range of frequencies and amplitudes exhibited by seismic waves, in order to enhance earthquake research and warning capabilities.

"(b) MANAGEMENT PLAN.—Not later than 120 days after the date of the enactment of the Earthquake Hazards Reduction Authorization Act of 1999, the Director of the United States Geological Survey shall transmit to the Congress a 5-year management plan for establishing and operating the Advanced National Seismic Research and Monitoring System. The plan shall include annual cost estimates for both modernization and operation, milestones, standards, and performance goals, as well as plans for securing the participation of all existing networks in the Advanced National Seismic Research and Monitoring System and for establishing new, or enhancing existing, partnerships to leverage resources.

"(c) AUTHORIZATION OF APPROPRIATIONS.—

"(1) EXPANSION AND MODERNIZATION.—In addition to amounts appropriated under section 12(b), there are authorized to be appropriated to the Secretary of the Interior, to be used by the Director of the United States Geological Survey to establish the Advanced National Seismic Research and Monitoring System—

"(A) $33,500,000 for fiscal year 2000;
"(B) $33,700,000 for fiscal year 2001;
"(C) $35,100,000 for fiscal year 2002;
"(D) $35,000,000 for fiscal year 2003; and
"(E) $33,500,000 for fiscal year 2004.

"(2) OPERATION.—In addition to amounts appropriated under section 12(b), there are authorized to be appropriated to the Secretary of the Interior, to be used by the Director of the United States Geological Survey to operate the Advanced National Seismic Research and Monitoring System—

"(A) $4,500,000 for fiscal year 2000; and
"(B) $10,300,000 for fiscal year 2001.".

SEC. 5. NETWORK FOR EARTHQUAKE ENGINEERING SIMULATION.

The Earthquake Hazards Reduction Act of 1977 (42 U.S.C. 7701 et seq.) is amended by adding at the end the following new section:

"SEC. 14. NETWORK FOR EARTHQUAKE ENGINEERING SIMULATION.

"(a) ESTABLISHMENT.—The Director of the National Science Foundation shall establish a Network for Earthquake Engineering Simulation that will upgrade, link, and integrate a system of geographically distributed experimental facilities for earthquake engineering testing of full-sized structures and their components and partial-scale physical models. The system shall be integrated through networking software so that integrated models and databases can be used to create model-based simulation, and the components of the system shall be interconnected with a computer network and allow for remote access, information sharing, and collaborative research.

"(b) AUTHORIZATION OF APPROPRIATIONS.—In addition to amounts appropriated under section 12(c), there are authorized to be appropriated, out of funds otherwise authorized to be appropriated to the National Science Foundation, $7,700,000 for fiscal year 2000 for the Network for Earthquake Engineering Simulation. In addition to amounts appropriated under section 12(c), there are authorized to be appropriated to the National Science Foundation for the Network for Earthquake Engineering Simulation—

"(1) $28,200,000 for fiscal year 2001;
"(2) $24,400,000 for fiscal year 2002;
"(3) $4,500,000 for fiscal year 2003; and
"(4) $17,000,000 for fiscal year 2004.".

SEC. 6. SCIENTIFIC EARTHQUAKE STUDIES ADVISORY COMMITTEE.

(a) ESTABLISHMENT.—The Director of the United States Geological Survey shall establish a Scientific Earthquake Studies Advisory Committee.

(b) ORGANIZATION.—The Director shall establish procedures for selection of individuals not employed by the Federal Government who are qualified in the seismic sciences and other appropriate fields and may, pursuant to such procedures, select up to ten individuals, one of whom shall be designated Chairman, to serve on the Advisory Committee. Selection of individuals for the Advisory Committee shall be

based solely on established records of distinguished service, and the Director shall ensure that a reasonable cross-section of views and expertise is represented. In selecting individuals to serve on the Advisory Committee, the Director shall seek and give due consideration to recommendations from the National Academy of Sciences, professional societies, and other appropriate organizations.

(c) MEETINGS.—The Advisory Committee shall meet at such times and places as may be designated by the Chairman in consultation with the Director.

(d) DUTIES.—The Advisory Committee shall advise the Director on matters relating to the United States Geological Survey's participation in the National Earthquake Hazards Reduction Program, including the United States Geological Survey's roles, goals, and objectives within that Program, its capabilities and research needs, guidance on achieving major objectives, and establishing and measuring performance goals. The Advisory Committee shall issue an annual report to the Director for submission to Congress on or before September 30 of each year. The report shall describe the Advisory Committee's activities and address policy issues or matters that affect the United States Geological Survey's participation in the National Earthquake Hazards Reduction Program.

SEC. 7. BUDGET COORDINATION.

Section 5 of the Earthquake Hazards Reduction Act of 1977 (42 U.S.C. 7704) is amended—

(1) in subsection (b)(1)—

(A) by striking subparagraph (A) and redesignating subparagraphs (B) through (F) as subparagraphs (A) through (E), respectively; and

(B) by moving subparagraph (E), as so redesignated by subparagraph (A) of this paragraph, so as to appear immediately after subparagraph (D), as so redesignated; and

(2) by adding at the end the following new subsection:

"(c) BUDGET COORDINATION.—

"(1) GUIDANCE.—The Agency shall each year provide guidance to the other Program agencies concerning the preparation of requests for appropriations for activities related to the Program, and shall prepare, in conjunction with the other Program agencies, an annual Program budget to be submitted to the Office of Management and Budget.

"(2) REPORTS.—Each Program agency shall include with its annual request for appropriations submitted to the Office of Management and Budget a report that—

"(A) identifies each element of the proposed Program activities of the agency;

"(B) specifies how each of these activities contributes to the Program; and

"(C) states the portion of its request for appropriations allocated to each element of the Program.".

SEC. 8. REPORT ON AT-RISK POPULATIONS.

Not later than one year after the date of the enactment of this Act, and after a period for public comment, the Director of the Federal Emergency Management Agency shall transmit to the Congress a report describing the elements of the Program that specifically address the needs of at-risk populations, including the elderly, persons with disabilities, non-English-speaking families, single-parent households, and the poor. Such report shall also identify additional actions that could be taken to address those needs, and make recommendations for any additional legislative authority required to take such actions.

SEC. 9. PUBLIC ACCESS TO EARTHQUAKE INFORMATION.

Section 5(b)(2)(A)(ii) of the Earthquake Hazards Reduction Act of 1977 (42 U.S.C. 7704(b)(2)(A)(ii)) is amended by inserting ", and development of means of increasing public access to available locality-specific information that may assist the public in preparing for or responding to earthquakes" after "and the general public".

SEC. 10. LIFELINES.

Section 4(6) of the Earthquake Hazards Reduction Act of 1977 (42 U.S.C. 7703(6)) is amended by inserting "and infrastructure" after "communication facilities".

II. PURPOSE OF THE BILL

The purpose of the bill is to authorize appropriations for Fiscal Years 2000 and 2001 for the National Earthquake Hazards Reduction Program, a multi-agency program involving the Federal Emer-

gency Management Agency, U.S. Geological Survey, National Science Foundation, and National Institute of Standards and Technology. In addition, it provides five-year authorizations for the Advanced National Seismic Research and Monitoring System and the Network for Earthquake Engineering Simulation. The bill authorizes: $145.3 million for Fiscal Year 2000; $174.815 million for Fiscal Year 2001; $59.5 million for Fiscal Year 2002; $39.5 million for Fiscal Year 2003; and $50.5 million for Fiscal Year 2004.

III. Background and Need for Legislation

Congress created the National Earthquake Hazards Reduction Program (NEHRP) in P.L. 95–124, the Earthquake Hazards Reduction Act of 1977, in response to a recognized national threat posed by earthquakes and to reduce losses in life and property from seismic events. Over the years, NEHRP activities have led to significant advances in our knowledge of the geologic and engineering aspects of earthquake risk reduction.

Since its inception, NEHRP has focused on seismic research, engineering research, and mitigation through various activities. NEHRP is executed by four separate federal agencies—the Federal Emergency Management Agency (FEMA), U.S. Geological Survey (USGS), National Science Foundation (NSF), and National Institute of Standards and Technology (NIST).

As the designated lead agency for NEHRP, FEMA is charged with the responsibility of coordinating the activities of the other principal agencies, conducting planning for and managing of federal responses to earthquakes, and funding state and local preparedness activities. USGS conducts and supports earth science investigations to understand the origins of earthquakes, characterize earthquake hazards, and predict the geologic effects of earthquakes. USGS also operates, through partnerships, seismic monitoring networks. NSF funds earthquake engineering research, basic earth sciences research, and earthquake-related social sciences research. Earthquake engineering research includes assessing the impact of earthquakes on buildings and lifelines. NIST conducts and supports engineering studies to improve seismic provisions of standards, codes, and practices for buildings and lifelines. (Additional federal agencies contribute to NEHRP through research activities consistent with their primary missions. For example, the Department of Energy has studied the seismic safety of nuclear reactor designs as part of their nuclear energy research program.)

In the 103rd Congress, NEHRP was authorized for Fiscal Years 1996 and 1997 (P.L. 103–374). In addition to authorizations of $103 million for Fiscal Year 1995 and $106 million for Fiscal Year 1996, this Act directed the President to conduct an assessment of earthquake engineering research and testing facilities in the United States. NSF and NIST commissioned the Earthquake Engineering Research Institute (EERI) to conduct the assessment. A report released by EERI made findings and recommendations regarding the state of the nation's earthquake engineering testing facilities. Chief among these was a recommendation advocating a comprehensive plan for upgrading existing earthquake engineering research and testing facilities be developed and implemented.

NEHRP was last authorized in the 105th Congress and was signed into law on October 1, 1997. P.L. 105–47 provides authorizations totaling $108.8 million for Fiscal Year 1998 and $111.9 million for Fiscal Year 1999. It also authorizes the development of real-time seismic hazard warning systems through the use of prototypes, requests an assessment of regional seismic networks in the United States, and requires NSF, working with the other Program agencies, to develop a plan to upgrade and integrate earthquake engineering research facilities. The authorizations for appropriations for NEHRP expire at the end of Fiscal Year 1999.

IV. Summary of Hearings

The Subcommittee on Basic Research of the Committee on Science held a hearing on February 23, 1999 to heart testimony on the Administration's Fiscal Year 2000 budget request for NEHRP and to examine issues related to a two-year authorization for the Program. Appearing as witnesses before the Subcommittee were: Michael J. Armstrong, Associate Director, Mitigation Directorate, FEMA; P. Patrick Leahy, Chief Geologist, USGS; Joseph Bordogna, Acting Deputy Director, NSF; Raymond G. Kammer, Director, NIST; Daniel P. Abrams, Hanson Engineers Professor of Civil Engineering, University of Illinois at Urbana-Champaign and Director, Mid-America Earthquake Center; and Christopher Arnold, President, Earthquake Engineering Research Institute.

Mr. Armstrong began his testimony by stating that FEMA, in concert with the other NEHRP agencies, has developed a draft strategic plan. Informing this plan is a vision of a future in which all seismically-vulnerable regions of the United States shall have practices and policies in place that minimize the impact of earthquakes. Four specific goals are part of the plan: They are: (1) to accelerate the implementation of earthquake loss-reduction practices and policies; (2) to improve techniques to reduce seismic vulnerability at facilities and systems; (3) to improve the quality and use of seismic hazard identification and risk-assessment methods; and (4) to improve the understanding of earthquakes and their effects.

Mr. Armstrong mentioned many of the successes of the Program over the past two years and highlighted the interagency cooperation that made them possible. The creation of the NEHRP strategic plan, he said, was another good example of interagency cooperation and participation.

Regarding FEMA, Mr. Armstrong noted its work in establishing code guidelines for new and existing buildings through the uniform and model code organizations, rehabilitation and retrofitting guidelines, the steel moment frame study, the wood frame study, the lifelines initiative, the hazards U.S. loss estimation methodology, and other activities.

USGS's Dr. Leahy reprised the three roles that his agency plays in NEHRP: (1) to produce products for earthquake-loss reduction, such as earthquake hazards assessments, national seismic hazard maps, and "getting the geology into the codes"; (2) to provide timely and accurate notifications of earthquakes and information on their location, size, and damage potential; and (3) to conduct and support research on the occurrence and effects of earthquakes. USGS also

plays an important role in the Global Seismograph Network, maintaining 71 of the 107 stations comprising the system.

Dr. Leahy's testimony also included a discussion of three areas of concern. First, although the 1998 NEHRP bill authorized $3.0 million in each of Fiscal Years 1998 and 1999 for real-time seismic warning system development, appropriations matching these authorizations did not materialize. Nevertheless, USGS has continued to push ahead with the Tri-Net pilot project in Southern California and for Fiscal Year 2000 requests $1.6 million to initiate similar projects in San Francisco, Seattle, and Salt Lake City. Second, USGS is nearing completion of an assessment of the U.S. seismic monitoring system. The current system is based on 1960s technology and was developed *ad hoc.* It is USGS's view that the entire seismic monitoring infrastructure is in need of attention. Third, because of the scientific complexity of the technical issues involved in fulfilling USGS's role within NEHRP, USGS would benefit from the advice of an external advisory committee.

Dr. Bordogna discussed NSF'S NEHRP-related research activities, highlighting two of them. The first is NSF's proposal for a Network for Earthquake Engineering Simulation—or NEES—which grew out of the 1998 NEHRP language calling for modernization of the Nation's earthquake engineering research facilities. The National Science Board gave NSF approval to include the costs for initiating this five-year, $81.8 million project in its Fiscal year 2000 budget. When completed, the Network will be an integrated system of new and upgraded experimental research facilities for testing full-size structures and their components in partial-scale physical models. The components of the system will be distributed at various sites across the country and include such items as shake tables, large-reaction walls for psuedo-dynamic testing, centrifuges for testing soils and earthquake loads, and new testing facilities (e.g., mobile shakers). These components will be inter-connected with a computer network allowing for remote access, data-sharing, and collaborative research.

The second is NSF's support for the Incorporated Research Institutes in Seismology (IRIS), a consortium of universities conducting seismological research. NSF's support provides facilities necessary to monitor earthquakes worldwide, study the tectonic structure of active seismic zones, and provide rapid response to after-shock of major earthquakes. IRIS, in cooperation with USGS, operates the Global Seismic Network, the primary means of locating and characterizing, in near real time, seismic events around the world. Dr. Bordogna also noted that tests are being conducted on the deep ocean floor to determine the best technology for monitoring ocean areas.

Mr. Kammer's testimony began with a discussion of NIST's role in the Program. Primarily, NIST conducts research to improve practices, codes, and standards for buildings and lifelines that, when in place, will allow a building or lifeline to survive an earthquake. Additionally, NIST: (1) promotes better building practices among architects and engineers; (2) works with national standards and model building code organizations to encourage implementation of research results; and (3) works with national standards or-

ganizations to develop seismic standards for new and existing lifelines.

Mr. Kammer stated that, in support of the NEHRP Strategic Plan, NIST's activities would contribute principally to the goals of accelerating the implementation of earthquake loss-reduction practices and improving techniques to reduce seismic vulnerability at facilities through three activities: (1) leadership and participation in the Interagency Committee on Seismic Safety in Construction; (2) problem-focused research to improve codes, standards, and practices; and (3) leadership and participation in standards and international activities.

The focus of Dr. Abrams' testimony was on the engineering aspects of earthquake loss reduction. He argued that funding for earthquake research was justified, pointing to the difference in damage between the Armenia, Columbia earthquake, where damage was severe, and the Loma Prieta and Northridge earthquakes in California, where the damage was much less severe. He attributed the difference to the advanced seismic integrity of U.S. buildings, the result of earthquake engineering research. He also cited the accomplishments of NEHRP since 1977, particularly investigations that led to improvements in three areas: (1) knowledge of how constructed facilities respond to earthquakes; (2) national standards and practices for planning, design, and construction of earthquake resistant facilities and lifelines; and (3) methods for assessing vulnerability, retrofit, and repair of existing facilities to earthquakes. Looking to the future, Dr. Abrams stated that earthquake losses can be reduced greatly by adapting technologies from other disciplines. He said that research will follow new perspectives driven by the needs of the public and private sectors, new findings from future earthquakes, new systems-orientated approaches, and the occurrence of related natural hazards.

Mr. Arnold also reviewed NEHRP accomplishments and commented that while we may be winning the war against death and injury, the war against destruction caused by earthquakes is far from over. Engineers have learned in the past few years that the process of building design and construction must undergo significant change. Performance-based design is intended to achieve this. He also suggested that the main threat remains the Nation's stock of existing buildings. This realization led to FEMA issuing a guidance document providing rehabilitation approaches to existing structures.

Mr. Arnold also spoke in favor of NSF's NEES project. He further noted that while basic research provides knowledge, problem-focused research provides solutions. In the latter context, he mentioned the FEMA-led studies on steel-frame and wood-frame buildings, which in his view represent a new dimension for the Program. He also spoke to how social science research can promote loss reduction by improving our knowledge of the social and economic scope of the earthquake problem.

V. Committee Actions

As summarized above, the Subcommittee on Basic Research of the Committee on Science heard testimony relevant to NEHRP at a hearing held on February 23, 1999.

On March 18, 1999, Mr. Nick Smith, Chairman of the Subcommittee on Basic Research, joined by Mrs. Constance Morella, Chairwoman of the Subcommittee on Technology, introduced H.R. 1184, the Earthquake Hazards Reduction Authorization Act of 1999, a bill to authorize appropriations for NEHRP for Fiscal Years 2000 and 2001.

The Full Science Committee met to consider H.R. 1184 on Thursday, March 25, 1999, and entertained the following amendments and report language.

Amendment 1.—Mr. Wu (OR) offered an amendment to add to the authorizations for equipment for the Advanced National Seismic Research and Monitoring System an additional $1.4 million for each of Fiscal Years 2003 and 2004 for portable seismic arrays. This amendment corrected a mistake in the equipment funding profile made available to the Committee by USGS. It was adopted by voice vote.

Amendment 2.—Mr. Wu (OR) offered an amendment that would have authorized $15.9 million for Fiscal Year 2002, $22.6 million for Fiscal Year 2003, and $28.9 million for Fiscal Year 2004 for operating the Advanced National Seismic Research and Monitoring System. However, in offering the amendment Mr. Wu noted that fully funding the operation of the Advanced Seismic System would require extending the base USGS authorization an additional three years. He therefore withdrew his amendment and, in so doing, urged the Committee to include report language stating its intention to authorize full funding for the operation of the Advanced Seismic System in future authorization bills.

Amendment 3.—Ms. Woolsey (CA) offered an amendment that would require FEMA to submit to Congress within one year a study on elements of NEHRP that address the needs of at-risk populations. The amendment was adopted by voice vote.

Amendment 4.—Mr. Larson (CT) offered an amendment to require FEMA, as part of its responsibilities laid out in the 1977 Act, to develop the means to increase public access to locality-specific information that may assist the public in preparing for earthquakes. The amendment was adopted by voice vote.

Amendment 5.—Mr. Larson (CT) offered an amendment to add the phrase "and infrastructure" to that part of the definition of lifelines concerning "electric power and communications facilities" to make it clear that the Internet is considered a critical lifeline. The amendment was adopted by voice vote.

Report Language.—Mr. Smith (MI) offered report language with respect to re-invigorating FEMA's coordination activities among NEHRP agencies, state and local governments, and research facilities. The language was agreed to by voice vote.

Mr. Weldon (PA) also raised the issue of coordination between the Department of Defense and USGS earthquake monitoring programs, and Chairman Sensenbrenner instructed Committee staff to inquire as to the extent of coordination between the programs in these agencies.

With a quorum present, Mr. Brown moved that the Committee report the bill, H.R. 1184, as amended, to the House, that the staff prepare the legislative report and make technical and conforming changes, and that the Chairman take all necessary steps to bring

the bill before the House for consideration. The motion was approved by voice vote.

Mr. Sensenbrenner asked and received unanimous consent that Committee Members have two subsequent calendar days in which to submit supplemental, minority or additional views on the measure, and that, pursuant to Clause 1 of Rule XX of the Rules of the House of Representatives, the Committee authorize the Chairman to offer such motions as may be necessary in the House to go to conference with the Senate on H.R. 1184 or a similar Senate bill.

VI. Summary of Major Provisions of the Bill

H.R. 1184 authorizes: $145.3 million for Fiscal Year 2000; $174.815 million for Fiscal Year 2001; $59.5 million for Fiscal Year 2002; $39.5 million for Fiscal Year 2003; and $50.5 million for Fiscal Year 2004 (see Table 1). These authorizations include the Advanced National Seismic Research and Monitoring System and the Network for Earthquake Engineering Simulation, both of which are five-year projects.

For Fiscal Year 2000, H.R. 1184 authorizes $99.6 million for the base earthquake programs at four agencies—the Federal Emergency Management Agency, U.S. Geological Survey, National Science Foundation, and National Institute of Standards and Technology—just slightly above the Administration request. This includes: $3.5 million for the Global Seismic Network; $100,000 for the USGS Scientific Earthquake Studies Advisory Committee; and $1.6 million for the Real-Time Seismic Warning System pilot program. At least $9.0 million of the funds authorized for Fiscal Year 2000 are to be used for external research at USGS.

TABLE 1.—H.R. 1184, THE EARTHQUAKE HAZARDS REDUCTION AUTHORIZATION ACT OF 1999

[In thousands of dollars]

Agency	FY 2000 request	FY 2000 authorization	FY 2001 authorization	FY 2002 authorization	FY 2003 authorization	FY 2004 authorization
FEMA[1]	19,800	19,800	20,400	NA	NA	NA
USGS:						
General Activities[2]	45,996	46,100	47,500	NA	NA	NA
Real-Time Seismic Warning System	1,600	1,600	1,650	NA	NA	NA
Adv. Nat'l Seismic Research & Monitoring System:						
Equipment	0.0	33,500	33,700	35,100	35,000	33,500
Operation	0.0	4,500	10,300	NA	NA	NA
Total, Adv. Nat'l Seismic Research & Monitoring System	0.0	38,000	44,000	35,100	35,000	33,500
Total, USGS	47,596	85,700	93,150	35,100	35,000	33,500
NSF:						
Engineering & Geosciences Research	29,900	29,900	30,800	NA	NA	NA
Network for Earthquake Engineering Simulation	7,700	7,700	28,200	24,400	4,500	17,000
Total, NSF	37,600	37,600	59,000	24,400	4,500	17,000
NIST	2,198	2,200	2,265	NA	NA	NA
Total, NEHRP	107,194	145,300	174,815	59,500	39,500	50,500

[1] Figures include $4.4 million for the NEHRP contribution to the Executive Direction for Emergency Management Performance Grant program.

[2] For Fiscal Year 2000, the figure includes: $3.5 million for the Global Seismic Network; $100,000 for the Scientific Earthquake Studies Advisory Committee; and a minimum of $9.0 million for external research. For Fiscal Year 2001, the figure includes: $3.6 million for the Global Seismic network; $100,000 for the Scientific Earthquake Studies Advisory Committee; and a minimum of $9.5 million for external research.

For Fiscal Year 2001, H.R. 1184 authorizes $102.615 million for the base earthquake programs, a three percent increase over the Fiscal Year 2000 authorization. This includes: $3.6 million for the Global Seismic Network; $100,000 for the USGS Scientific Earthquake Studies Advisory Committee; and $1.65 million for the Real-Time Seismic Warning System pilot program. At least $9.5 million of the funds authorized for Fiscal Year 2000 are to be used for external research at USGS.

The bill also authorizes USGS to establish and operate an Advanced National Seismic Research and Monitoring System, providing a five-year authorization (Fiscal Years 2000–2004) totaling $170.8 million for the purchase of monitors and communications equipment and a two-year authorization (Fiscal Years 2000 and 2001) totaling $14.8 million to cover the incremental costs of operating the advanced system.

In addition, H.R. 1184 authorizes NSF to establish a Network for Earthquake Engineering Simulation, which will interconnect earthquake engineering research facilities and upgrade and expand major earthquake testing facilities. The bill provides for a five-year authorization (Fiscal Years 2000–2004) totaling $81.8 million.

Finally, the bill: repeals obsolete provisions of the 1977 Act; provides a two-year authorization for USGS to establish a Scientific Earthquake Studies Advisory Committee; requires greater coordination in the formulation and presentation of the NEHRP budget; directs FEMA to submit to Congress a study on how the Program serves at-risk populations; and directs FEMA to make publicly available locality-specific earthquake information.

VII. Section-by-Section Analysis

H.R. 1184 authorizes appropriations for carrying out the Earthquake Hazards Reduction Act of 1977 (Act of 1977) as follows:

Sec. 1. Short title

Cites the Act as the "Earthquake Hazards Reduction Authorization Act of 1999."

Sec. 2. Authorization of appropriations

Provides two-year authorizations for the agencies participating in the National Earthquake Hazards Reduction Program as follows:

(a) Federal Emergency Management Agency.—Amends subsection 12(a) of the Act of 1977 to authorize $19.8 million for Fiscal Year 2000 and $20.4 million for Fiscal Year 2001.

(b) U.S. Geological Survey.—

(1) Amends subsection 12(b) of the Act of 1977 to authorize $46.1 million for Fiscal Year 2000 (which includes $3.5 million for the Global Seismic Network and $100,000 for the Advisory Committee on External Earthquake Research) and $47.5 million for Fiscal Year 2001 (which includes $3.6 million for the Global Seismic Network and $100,000 for the Advisory Committee on External Earthquake Research). Of these amounts, $9.0 million for Fiscal Year 2000 and $9.5 million for Fiscal Year 2001 are to be used for external research;

(2) Amends section 2(a)(7) of the Earthquake Hazards Reduction Act for Fiscal Years 1998 and 1999 to authorize $1.6 million for

Fiscal Year 2000 and $1.65 million for Fiscal Year 2001 for the Seismic Hazard Warning System pilot program.

(c) National Science Foundation.—Amends subsection 12(c) of the Act of 1977 to authorize out of sums otherwise authorized $29.9 million ($19.0 million for engineering and $10.9 million for geosciences research) for Fiscal Year 2000 and to authorize without reference to existing authorizations $30.8 million ($19.6 million for engineering and $11.2 million for geosciences research) for Fiscal Year 2001.

(d) National Institute of Standards and Technology.—Amends subsection 12(d) of the Act of 1977 to authorize out of sums otherwise authorized $2.2 million for Fiscal Year 2000 and $2.265 million for Fiscal Year 2001.

Sec. 3. Repeals

Repeals section 10 and subsections 12(e) and (f) of the 1977 Act, each of which is obsolete.

Sec. 4. Advanced National Seismic Research and Monitoring System

Amends the Act of 1977 by adding the following Section:

"Sec. 13. Advanced National Seismic Research and Monitoring System.

"(a) Authorizes the Director of USGS to establish an Advanced National Seismic Research and Monitoring System.

"(b) Requires within 120 days of enactment a five-year management plan for deploying and operating the Advanced Seismic System.

"(c) Authorizes for USGS: $33.5 million for Fiscal Year 2000; $33.7 million for Fiscal Year 2001; $35.1 million for Fiscal Year 2002; $35.0 million for Fiscal Year 2003; and $33.5 million for Fiscal Year 2004 for expansion and modernization of the monitoring system.

"(d) Authorizes for USGS: $4.5 million for Fiscal Year 2000 and $10.3 million for Fiscal Year 2001 for operating the Advanced Seismic System.

Sec. 5. Network for Earthquake Engineering Simulation

Amends the Act of 1977 by adding the following section:

"Sec. 14. Network for Earthquake Engineering Simulation.

"(a) Defines terms and authorizes NSF to establish a Network for Earthquake Engineering Simulation that will upgrade, link, and integrate a complete system of test facilities in earthquake engineering.

"(b) Authorizes out of funds otherwise authorized to be appropriated to NSF $7.7 million for Fiscal Year 2000 and authorizes without reference to existing authorizations $28.2 million for Fiscal Year 2001; $24.4 million for Fiscal Year 2002; $4.5 million for Fiscal Year 2003; and $17.0 million for 2004 for the Network for Earthquake Engineering Simulation.

Sec. 6. Scientific Earthquake Studies Advisory Committee

(a) Authorizes the Director of USGS to establish a Scientific Earthquake Studies Advisory Committee to provide USGS with sci-

entific advice regarding its participation in the National Earthquake Hazards Reduction Program.

(b) Directs the USGS Director to establish procedures for the selection of up to ten qualified individuals not employed by the Federal Government, one of whom shall be designated Chairman, to serve on the Advisory Committee. Individuals shall be selected solely on established records of distinguished service, and the Director shall ensure that the Advisory Committee represents a cross-section of views and expertise. The Director also shall seek and give due consideration to recommendations from the National Academy of Science, professional societies, and other appropriate organizations.

(c) Establishes procedures for calling meetings of the Advisory Committee. The Advisory Committee shall meet at such times and places as may be designated by the Chairman in consultation with the Director.

(d) Explains the duties of the Advisory Committee. It shall provide advice to the Director on matters relating to the USGS earthquake program—including USGS's roles, goals and objectives, capabilities and research needs, and performance goals—and shall issue an annual report to the Director for submission to Congress on or before September 30 of each year. The report shall describe the Advisory Committee's activities and address policy issues or matters that affect the Geological Survey's participation in the Program.

Sec. 7. Budget coordination

Amends section 5 of the Act of 1977 by:

(1) Striking the language on budget responsibilities in subjection 5(b)(1)(A) (which subsequently is incorporated in new subsection 5(c)).

(2) Adding the following at the end of section 5:

"(c) Budget Coordination.—

"(1) Requires greater coordination on the budget for the Program. Instructs FEMA, the lead agency, to provide guidance to each Program agency in preparing annual budget requests.

"(2) Requires FEMA, in conjunction with the other Program agencies, to prepare an annual budget to submit to OMB."

Sec. 8. Report on at-risk populations

Requires FEMA, within one year after the date of enactment, to transmit to Congress a report describing elements of the Program that specifically address the needs of at-risk populations, including the elderly, the disabled, non-English speaking people, single-parent households, and the poor. The report also shall identify additional actions to address these needs and recommend legislative language that may be needed.

Sec. 9. Public access to earthquake information

Amends subsection 5(b)(2)(A)(ii) of the 1977 Act to require FEMA to develop the means to make available locality-specific information that may assist the public in preparing for earthquakes.

Sec. 10. Lifelines

Amends subsection 4(6) of the 1977 Act to add the phrase "and infrastructure" to that part of the definition of lifelines concerning "electrical power and communications facilities."

VIII. Committee Views

GENERAL

In the report accompanying H.R. 2249, the Earthquake Hazards Reduction Act of 1977 Reauthorization, in the 105th Congress, the Committee voiced its concern about level or declining funding for NEHRP. The Committee is pleased to note that for Fiscal Year 2000, when changes in accounting structure are taken into account, the Administration has proposed an increase of $11.063 million over the amount enacted for Fiscal Year 1999.

Details of the authorizations in H.R. 1184 are provided in Table 1. For the base earthquake programs, H.R. 1184 authorizes appropriations slightly above the Administration request. In addition, the bill provides authorizations for two new projects—the Advanced National Seismic Research and Monitoring System and the Network for Earthquake Engineering Simulation (NEES)—the former of which was not included in the Administration's Fiscal Year 2000 request for the Program. When these projects are included, total authorizations in H.R. 1184 for Fiscal Year 2000 are 40.7 percent above the level enacted for Fiscal Year 1999 and 35.5 percent above the Administration request for Fiscal Year 2000 (see Table 2).

For Fiscal Year 2001, H.R. 1184 authorizes a three percent increase in funding for the base program and additional funding for the Advanced Seismic System and NEES, consistent with the funding profiles for the two projects. In total, the Fiscal Year 2001 authorization is $29.515 million, or 20.3 percent, above the Fiscal Year 2000 authorization, largely because of increased authorizations for NEES and the Advanced Seismic System.

The Committee supports increasing NEHRP funding by the amounts authorized in H.R. 1184. Its main concern is to reduce the loss of life associated with major earthquakes. The results of these events can be devastating. In 1976, and earthquake measuring 8.0 on the Richter scale struck the city of Tangshan, China, killing over 600,000 people. The Mexico City earthquake of 1985 killed an estimated 3,500 people, and, more recently, the Armenia, Columbia earthquake killed an estimated 1,000 people. A strong earthquake in a heavily-populated area of the United States could result in catastrophic losses.

TABLE 2.—H.R. 1184, THE EARTHQUAKE HAZARDS REDUCTION AUTHORIZATION ACT OF 1999: COMPARISON OF FISCAL YEAR 1999 ENACTED, FISCAL YEAR 2000 REQUEST, AND FISCAL YEARS 2000 AND 2001 AUTHORIZATIONS

[in thousands of dollars]

Agency	FY 1999 enacted	FY 2000 request	FY 2000 authorization	FY 2001 authorization	FY 2000 authorization change + or − from				FY 2001 authorization change (+ or − from	
					FY 1999 enacted	Percent	FY 2000 request	Percent	FY 2000 authorization	Percent
FEMA	18,900	19,800	19,800	20,400	900	4.8	0	0.0	600	3.0
USGS	52,391	47,596	85,700	93,150	33,309	63.6	41,585	94.3	7,450	8.7
NSF	29,900	37,600	37,600	59,000	7,700	25.8	0	0.0	21,400	56.9
NIST	2,060	2,198	2,200	2,265	140	6.8	2	0.1	65	3.0
Total	103,251	107,194	145,300	174,815	42,049	40.7	38,106	35.5	29,515	20.3

The economic losses associated with earthquakes also provide ample justification for increased funding. Annually, the average loss from earthquakes in the United States is about $4.4 billion, but these losses can sometimes be much greater. For example, the Loma Prieta earthquake of 1989 and the Northridge earthquake of 1994 resulted in damages of $6 billion and $40 billion, respectively.

If history is any guide, powerful earthquakes are in store for many parts of the country. Missouri (1811 and 1812), Southern California (1857), Hawaii (1868), South Carolina (1886), Alaska (1899), and Northern California (1906) all have experienced violent earthquakes that, if they occurred today, would be very destructive.

It is the Committee's view that the Federal Government has an appropriate role in play in using science to protect lives and property. Through improved preparedness, NEHRP represents a long term investment that will pay for itself many times over in saved lives and reduced property losses. Earthquakes may be inevitable, but catastrophic losses in life and property need not be if we use science to help communities prepare.

GLOBAL SEISMIC NETWORK

For the Global Seismic Network, H.R. 1184 includes authorizations of $3.5 million for Fiscal Year 2000, slightly above the requested level of $3.481, and $3.6 million for Fiscal Year 2001, an increase of 2.9 percent over the Fiscal Year 2000 authorization.

EXTERNAL GRANTS

The Committee recognizes that USGS has made a great progress in its external grants program. The Committee places a high priority on competitive external grants programs, which is the reason it placed in statute language establishing an external grants program at USGS in the 1997 earthquake bill (P.L. 105–47). For Fiscal Years 2000 and 2001, H.R. 1184 requires a minimum of $9.0 million and $9.5 million, respectively, for external research. As USGS currently spends in excess of these amounts for external research, this requirement should not affect other programs at USGS, nor should it affect staffing levels. Indeed, the Committee expects that USGS will be able to maintain, if not increase, the amount currently going towards external research.

ADVANCED NATIONAL SEISMIC RESEARCH AND MONITORING SYSTEM

The seismic monitoring system now in operation is comprised of 41 individual networks, which range in size from networks of three or four stations to networks of hundreds of seismographs. Most of the monitors used in these networks, the majority of which are based on outdated technology, are unable to capture the full range of frequencies and amplitudes of seismic waves. Indeed, modern broad-band instruments capable of recording both very small and fairly large earthquakes on-scale make up only about 6 percent of the instruments currently in operation. Many also lack digital recording capability. As seismic monitoring is the foundation upon which all earthquake warning and mitigation efforts are based, the importance of accurate, complete, and timely information cannot be overstated.

Advances in electronics, computers, networking, and seismic sensors have made it possible to improve the collection and processing of earthquake data. Recognizing this, P.L. 105–47 required USGS to examine the status of current seismic monitoring systems and the need for upgrading them. This assessment was furnished in a recently-issued USGS report, An Assessment of Seismic Monitoring in the United States: Requirement for an Advanced Seismic System. In the Committee's view, the report makes a compelling case for an Advanced Seismic System. Such a system will improve warning times and provide a wealth of information to scientists and engineers. Direct applications of the Advanced Seismic System include: earthquake, volcano, and tsunami warning and emergency response; seismic hazard assessment; earthquake engineering; scientific research; and public information and education.

H.R. 1184 authorizes for USGS $170.80 million over Fiscal Years 2000–2004 for equipment—including $2.8 million for portable seismic arrays—and a further $14.8 million over Fiscal Years 2000 and 2001 for the incremental costs of operating the system. It should be noted that the authorizations for Fiscal Years 2000 and 2001 for operating the Advanced Seismic System are in addition to the approximately $18 million USGS spends annually on systems operations (and which is included in USGS's base funding).

While the Committee is reasonably comfortable with the out-year figures for equipment, it has less confidence in the out-year figures for operations. The Committee believes, therefore, that at this time it is premature to provide a five-year authorization for operating the system, which would require extending the authorization for USGS base funding for five-years, as well. To avoid the need for separate authorizations for operations in future bills, the Committee expects USGS to roll together the operating funds for the old and new systems in its FY 2002 and subsequent budget requests.

The Committee also would draw attention to the bill language requiring USGS, in its implementation plan, to establish new, or enhance existing, partnerships to leverage resources. It is the Committee's hope that operating costs can be reduced significantly through partnerships with industry and state and local governments, and it expects USGS to look for creative ways to reduce operating costs.

While it is the Committee's intention to see that system operations are authorized in future authorizations, it believes the two-year authorization in H.R. 1184 is fiscally prudent and provides incentives to leverage resources and reduce costs. The Committee will re-examine operating costs for this system when NEHRP next comes up for reauthorization in two years.

NETWORK FOR EARTHQUAKE ENGINEERING SIMULATION

For the Network for Earthquake Engineering Simulation, H.R. 1184 provides NSF a five-year authorization totaling $81.8 million. NEES will interconnect earthquake engineering research facilities and upgrade and expand major earthquake testing facilities.

The idea for NEES developed from provisions in P.L. 105–47, which required NSF to work with the other NEHRP agencies to develop a comprehensive plan for earthquake engineering research,

including upgrades of existing facilities and equipment and integration of new, innovative testing approaches to the research infrastructure. More than 30 institutions operate earthquake engineering facilities. NEES funds will be used to: purchase new and upgrade existing shaketables; build centrifuges and tsunami testing tanks; build new reaction walls, load simulators, and response modifiers; and create field test facilities, such as mobile equipment, field sites, and post-earthquake laboratories. In addition, using existing software and high-speed networking infrastructure, NEES will provide remote access and make available to the earthquake engineering community a complete, integrated system of testing and experimental facilities.

The Committee supports full funding for NEES. Once completed, NEES should revolutionize the way earthquake engineering research is conducted and advance our understanding and capabilities considerably.

BUDGET COORDINATION

The Committee is concerned at the seeming inability to get timely, accurate budget figures from some of the agencies participating in NEHRP; in some cases, elements of the Program were not even apparent in the detailed budget justifications submitted to Congress by the agencies. The Committee expects a greater degree of interagency coordination in preparing the Program's budget and more information than is currently available in budget justifications. H.R. 1184 contains language that would make FEMA, the Lead Agency, responsible for preparing a NEHRP budget for submission to the Office of Management and Budget. The Committee expects that future agency budget submissions will lay out clearly the elements of the Program, and it will look to FEMA to provide the necessary coordination.

SCIENTIFIC EARTHQUAKE STUDIES ADVISORY COMMITTEE

H.R. 1184 provides authorizations of $100,000 for each of Fiscal Years 2000 and 2001 for a Scientific Earthquake Studies Advisory Committee at USGS. The Advisory Committee was sought by USGS, which would benefit from the perspectives, advice, and guidance of a standing panel of external experts. H.R. 1184 provides authorizations of $100 thousand for each of Fiscal Years 2000 and 2001. When NEHRP is considered for reauthorization in two years, the Committee will revisit this issue and assess the need to extend the authorization of the Advisory Committee beyond the two years provided in the bill.

COORDINATION ACTIVITIES OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY

The Committee expects FEMA to reinvigorate its coordination activities among NEHRP agencies. Additionally, FEMA, as the lead agency shall identify a list of federal, state, and local agencies and research institutions that have earthquake-related programs that contribute towards the goals of NEHRP. An associate agency would be defined as a Federal agency other than a NEHRP agency that administers program(s) that either perform earthquake-related re-

search or develop standards, codes or other material related earthquake losses. FEMA will convene a series of meetings of senior level officials (Assistant Secretary or equivalent level), establish points of contact, and determine avenues of mutual cooperation with respective associate agencies. If agreeable to the parties, the NEHRP "core" will be expanded to include broader participation by associate agencies. These agencies will participate, at a minimum, at the Interagency Coordination Committee level as set forth in the statute.

COORDINATION OF DEFENSE AND USGS SEISMIC MONITORING PROGRAMS

The Committee is aware that the Department of Defense (DOD) operates seismic monitoring systems as part of its mission to ensure compliance with the provisions of the Comprehensive Test Ban Treaty. The Committee fully supports this mission and recognizes its importance to our national security. However, the Committee also is mindful of the potential for overlap between DOD and USGS monitoring programs.

The seismic monitoring programs at DOD and USGS should be coordinated to the greatest extent possible and should complement, not duplicate, each other. The Committee believes that the Memorandum of Agreement between DOD and USGS, "Concerning Cooperation on Matters Pertaining to the Comprehensive Test Ban Treaty," which was signed by the agencies in September 1997, provides a good framework for reaffirming the roles and responsibilities of DOD and USGS in carrying out their respective missions. For USGS, these responsibilities include monitoring, analyzing, and reporting on seismic events in the United States and overseas, in accordance with P.L. 95–124, as amended.

The Committee will conduct oversight and work with the Armed Services Committee to ensure that DOD and USGS observe the particular roles and responsibilities laid out for each agency in the Memorandum of Agreement.

IX. COMMITTEE COST ESTIMATE

Rule XIII, clause 3(d)(2) of the House of Representatives requires each committee report accompanying each bill or joint resolution of a public character to contain: (1) an estimate, made by such committee, of the costs which would be incurred in carrying out such bill or joint resolution in the fiscal year in which it is reported, and in each of the five fiscal years following such fiscal year (or for the authorized duration of any program authorized by such bill or joint resolution, if less than five years); (2) a comparison of the estimate of costs described in subparagraph (1) of this paragraph made by such committee with an estimate of such costs made by any Government agency and submitted to such committee; and (3) when practicable, a comparison of the total estimated funding level for the relevant program (or programs) with the appropriate levels under current law. However, House Rule XIII, clause 3(d)(3)(B) provides that this requirement does not apply when a cost estimate and comparison prepared by the Director of the Congressional Budget Office under section 403 of the Congressional Budget Act

of 1974 has been timely submitted prior to the filing of the report and included in the report pursuant to House Rule XIII, clause 3(c)(3). A cost estimate and comparison prepared by the Director of the Congressional Budget Office under section 403 of the Congressional Budget Act of 1974 has been timely submitted prior to the filing of this report and is included in Section IX of this report pursuant to House Rule XIII, clause 3(c)(3).

Rule XIII, clause 3(c)(2) of the House of Representatives requires each committee report that accompanies a measure providing new budget authority (other than continuing appropriations), new spending authority, or new credit authority, or changes in revenues or tax expenditures to contain a cost estimate, as required by section 308(a)(1) of the Congressional Budget Act of 1974 and, when practicable with respect to estimates of new budget authority, a comparison of the total estimated funding level for the relevant program (or programs) to the appropriate levels under current law. H.R. 1184 does not contain any new budget authority, credit authority, or changes in revenues or tax expenditures. Assuming that the sums authorized under the bill are appropriated, H.R. 1184 does authorize additional discretionary spending, as described in the Congressional Budget Office report on the bill, which is contained in Section IX of this report.

X. Congressional Budget Office Cost Estimate

U.S. Congress,
Congressional Budget Office,
Washington, DC, April 12, 1999.

Hon. F. James Sensenbrenner, Jr.,
Chairman, Committee on Science,
House of Representatives, Washington, DC.

Dear Mr. Chairman: The Congressional Budget Office has prepared the enclosed cost estimate for H.R. 1184, the Earthquake Hazards Reduction Authorization Act of 1999.

If you wish further details on this estimate, we will be pleased to provide them. The CBO staff contacts for federal costs are Megan Carroll, Gary Brown, Kathy Gramp, and Mark Hadley. The contact for the state and local impact is Lisa Cash Driskill.

Sincerely,

Barry B. Anderson
(For Dan L. Crippen, Director).

Enclosure.

H.R. 1184—Earthquake Hazards Reduction Authorization Act of 1999

Summary: H.R. 1184 would authorize the appropriation of $537 million over the 2000–2004 period (including $38 million that is already authorized under current law) for programs aimed at the potential reduction of earthquake hazards. Assuming appropriation of the authorized amounts, CBO estimates that the bill would result in additional discretionary spending of $477 million over the 2000–2004 period. The bill would not affect direct spending or receipts; therefore, pay-as-you-go procedures would not apply. H.R. 1184 contains no intergovernmental or private-sector mandates as de-

fined in the Unfunded Mandates Reform Act (UMRA) and would impose no costs on state, local, or tribal governments.

H.R. 1184 would authorize appropriations totaling $202 million over the 2000–2001 period for the Federal Emergency Management Agency (FEMA), the U.S. Geological Survey (USGS), the National Science Foundation (NSF), and the National Institute of Standards and Technology (NIST) to carry out provisions of the Earthquake Hazards Reduction Act of 1977 (Public Law 95–124). In addition, the bill would authorize a total of $253 million over the 2000–2004 period for a new system of seismic research and monitoring to be administered by USGS. H.R. 1184 also would authorize appropriations totaling $82 million over the 2000–2004 period for NSF to establish a network for engineering simulations of earthquakes. The amounts authorized for NSF include $38 million that was previously authorized in Public Law 105–207 for fiscal year 2000. (H.R. 1184 would amend that existing authorization to earmark $38 million for reducing earthquake hazards.)

Estimated cost to the Federal Government: For the purposes of this estimate, CBO assumes that all amounts authorized in H.R. 1184 will be appropriated by the start of each fiscal year and that outlays will follow the historical spending patterns for these and similar programs. The estimated cost of the bill is shown in the following table. The costs of this legislation fall within budget functions 250 (general science, space, and technology), 300 (natural resources and environment), 370 (commerce and housing credit), and 450 (community and regional development).

	By fiscal year, in millions of dollars					
	1999	2000	2001	2002	2003	2004
SPENDING SUBJECT TO APPROPRIATIONS						
Spending Under Current Law:						
Budget Authority/Authorization Level [1]	103	38	0	0	0	0
Estimated Outlays	69	32	25	8	2	1
Proposed Changes:						
FEMA:						
Authorization Level	0	20	20	0	0	0
Estimated Outlays	0	11	17	8	3	1
USGS:						
Authorization Level	0	86	93	51	58	62
Estimated Outlays	0	76	98	53	57	62
NSF:						
Authorization Level	0	0	59	24	5	17
Estimated Outlays	0	0	13	34	25	14
NIST:						
Authorization Level	0	2	2	0	0	0
Estimated Outlays	0	2	2	1	([2])	0
Total:						
Authorization Level	0	108	174	75	63	79
Estimated Outlays	0	89	130	96	85	77
Spending Under H.R. 1184:						
Authorization Level	103	146	174	75	63	79
Estimated Outlays	69	121	155	104	87	78

[1] The 1999 level is the amount appropriated for that year. The amount for 2000 is part of an NSF authorization under Public Law 105–207. H.R. 1184 would amend that law to earmark $30 million specifically for the Earthquake Hazards Reduction Program and $8 million for Earthquakes Engineering Simulation.
[2] Less than $500,000.

Pay-as-you-go considerations: None.

Intergovernmental and private-sector impact: H.R. 1184 contains no intergovernmental or private-sector mandates as defined in

UMRA and would impose no costs on state, local, or tribal governments. The bill would authorize funds to USGS, FEMA, NIST, and NSF, some of which would fund earthquake research grants to public universities. It also would set aside $18.5 million of funds authorized for USGS over the next two fiscal years for grants that could go to state and local governments. Finally, state and local governments would benefit from technical assistance and hazard mitigation planning grants provided by FEMA.

Estimate prepared by: Federal Costs: Megan Carroll, Gary Brown, Kathy Gramp, Mark Hadley; Impact on State, Local, and Tribal Governments: Lisa Cash Driskill.

Estimate approved by: Paul N. Va de Water, Assistant Director for Budget Analysis.

XI. Compliance With Public Law 104–4

H.R. 1184 contains no unfunded mandates.

XII. Committee Oversight Findings and Recommendations

Rule XIII, clause 3(c)(1) of the House of Representatives requires each committee report to include oversight findings and recommendations required pursuant to clause 2(b)(1) of rule X. The Committee has no oversight findings.

XIII. Oversight Findings and Recommendations by the Committee on Government Reform and Oversight

Rule XIII, clause 3(c)(4) of the House of Representatives requires each committee report to contain a summary of the Oversight findings and recommendations made by the House Government Reform and Oversight Committee pursuant to clause 4(c)(2) of rule X, whenever such findings and recommendations have been submitted to the Committee in a timely fashion. The Committee on Science has received no such findings or recommendations from the Committee on Government Reform and Oversight.

XIV. Constitutional Authority Statement

Rule XIII, clause 3(d)(1) of the House of Representatives requires each report of a committee on a bill or joint resolution of a public character to include a statement citing the specific powers granted to the Congress in the Constitution to enact the law proposed by the bill or joint resolution. Article I, section 8 of the Constitution of the United States grants Congress the authority to enact H.R. 1184.

XV. Federal Advisory Committee Statement

The functions of the advisory committee, Scientific Earthquake Studies Advisory Committee, authorized in H.R. 1184, are not currently being nor could they be performed by one or more agencies or by enlarging the mandate of another existing advisory committee.

XVI. Congressional Accountability Act

The Committee finds that H.R. 1184 does not relate to the terms and conditions of employment or access to public services or accommodations within the meaning of section 102(b)(3) of the Congressional Accountability Act (Public Law 104–1).

XVII. Changes in Existing Law Made by the Bill, as Reported

In compliance with clause 3(e) of rule XIII of the Rules of the House of Representatives, changes in existing law made by the bill, as reported, are shown as follows (existing law proposed to be omitted is enclosed in black brackets, new matter is printed in italic, existing law in which no change is proposed is shown in roman):

EARTHQUAKE HAZARDS REDUCTION ACT OF 1977

* * * * * * *

SEC. 4. DEFINITIONS.

As used in this Act, unless the context otherwise requires:

(1) * * *

* * * * * * *

(6) The term "lifelines" means public works and utilities, including transportation facilities and infrastructure, oil and gas pipelines, electrical power and communication facilities *and infrastructure*, and water supply and sewage treatment facilities.

* * * * * * *

SEC. 5. NATIONAL EARTHQUAKE HAZARDS REDUCTION PROGRAM.

(a) Establishment.—There is established a National Earthquake Hazards Reduction Program.

(b) Responsibilities of Program Agencies.—

(1) Lead agency.—The Federal Emergency Management Agency (hereafter in this Act referred to as the "Agency") shall have the primary responsibility for planning and coordinating the Program. In carrying out this paragraph, the Director of the Agency shall—

[(A) prepare, in conjunction with the other Program agencies, an annual budget for the Program to be submitted to the Office of Management and Budget;]

[(B)] *(A)* ensure that the Program includes the necessary steps to promote the implementation of earthquake hazard reduction measures by Federal, State, and local governments, national standards and model building code organizations, architects and engineers, and others with a role in planning and constructing buildings and lifelines;

[(C)] *(B)* prepare, in conjunction with the other Program agencies, a written plan for the Program, which shall include specific tasks and milestones for each Program agency, and which shall be submitted to the Congress and updated at such times as may be required by significant Program events, but in no event less frequently than every 3 years;

[(D)] *(C)* prepare, in conjunction with the other Program agencies, a biennial report, to be submitted to the Con-

gress within 90 days after the end of each even-numbered fiscal year, which shall describe the activities and achievements of the Program during the preceding two fiscal years;

[(E)] *(D)* request the assistance of Federal agencies other than the Program agencies, as necessary to assist in carrying out this Act; and

[(F)] *(E)* work with the National Science Foundation, the National Institute of Standards and Technology, and the United States Geological Survey, to develop a comprehensive plan for earthquake engineering research to effectively use existing testing facilities and laboratories (existing at the time of the development of the plan), upgrade facilities and equipment as needed, and integrate new, innovative testing approaches to the research infrastructure in a systematic manner.

The principal official carrying out the responsibilities described in this paragraph shall be at a level no lower than that of Associate Director.

* * * * * * *

(c) BUDGET COORDINATION.—

(1) GUIDANCE.—The Agency shall each year provide guidance to the other Program agencies concerning the preparation of requests for appropriations for activities related to the Program, and shall prepare, in conjunction with the other Program agencies, an annual Program budget to be submitted to the Office of Management and Budget.

(2) REPORTS.—Each Program agency shall include with its annual request for appropriations submitted to the Office of Management and Budget a report that—

(A) identifies each element of the proposed Program activities of the agency;

(B) specifies how each of these activities contributes to the Program; and

(C) states the portion of its request for appropriations allocated to each element of the Program.

* * * * * * *

[SEC. 10. NON-FEDERAL COST SHARING FOR SUPPLEMENTAL FUNDS.

[A grant under this Act to a State from the Agency that is made with funds appropriated under the Fiscal Year 1990 Dire Emergency Supplemental to Meet the Needs of Natural Disasters of National Significance (Public Law 101–130; 103 Stat. 775) shall not include a requirement for cost sharing in an amount greater than 25 percent of the cost of the project for which the grant is made, and any cost sharing requirement may be satisfied through in-kind contributions.]

* * * * * * *

SEC. 12. AUTHORIZATION OF APPROPRIATIONS.

(a)[(1) GENERAL.—There are authorized to be appropriated to the President to carry out the provisions of section 5 and 6 of this Act (in addition to any authorizations for similar purposes included in other Acts and the authorizations set forth in subsections (b) and

(c) of this section), not to exceed $1,000,000 for the fiscal year ending September 30, 1978, not to exceed $2,000,000 for the fiscal year ending September 30, 1979, and not to exceed $2,000,000 for the fiscal year ending September 30, 1980.

[(2) There are authorized to be appropriated to the Director to carry out the provisions of sections 5 and 6 of this Act for the fiscal year ending September 30, 1981—

[(A) $1,000,000 for continuation of the Interagency Committee on Seismic Safety in Construction and the Building Seismic Safety Council programs,

[(B) $1,500,000 for plans and preparedness for earthquake disasters,

[(C) $500,000 for prediction response planning,

[(D) $600,000 for architectural and engineering planning and practice programs,

[(E) $1,000,000 for development and application of a public education program,

[(F) $3,000,000 for use by the National Science Foundation in addition to the amount authorized to be appropriated under subsection (c), which amount includes $2,400,000 for earthquake policy research and $600,000 for the strong ground motion element of the siting program, and

[(G) $1,000,000 for use by the Center for Building Technology, National Bureau of Standards in addition to the amount authorized to be appropriated under subsection (d) for earthquake activities in the Center.

[(3) There are authorized to be appropriated to the Director for the fiscal year ending September 30, 1982, $2,000,000 to carry out the provisions of section 5 and 6 of this Act.

[(4) There are authorized to be appropriated to the Director, to carry out the provisions of section 5 and 6 of this Act, $1,281,000 for the fiscal year ending September 30, 1983.

[(5) There are authorized to be appropriated to the Director, to carry out the provisions of section 5 and 6 of this Act, for the fiscal year ending September 30, 1984, $3,705,000 and for the fiscal year ending September 30, 1985, $6,096,000.

[(6) There are authorized to be appropriated to the Director, to carry out the provisions of section 5 and 6 of this Act, for the fiscal year ending September 30, 1986, $5,596,000, and for the fiscal year ending September 30, 1987, $5,848,000.

[(7) There] *GENERAL.—There* are authorized to be appropriated to the Director of the Agency, to carry out this Act, $5,778,000 for the fiscal year ending September 30, 1988, $5,788,000 for the fiscal year ending September 30, 1989, $8,798,000 for the fiscal year ending September 30, 1990, $14,750,000 for the fiscal year ending September 30, 1991, $19,000,000 for the fiscal year ending September 30, 1992, $22,000,000 for the fiscal year ending September 30, 1993, $25,000,000 for the fiscal year ending September 30, 1995, $25,750,000 for the fiscal year ending September 30, 1996, $20,900,000 for the fiscal year ending September 30, 1998, [and] $21,500,000 for the fiscal year ending September 30, 1999, *$19,800,000 for the fiscal year ending September 30, 2000, and $20,400,000 for the fiscal year ending September 30, 2001.*

(b) GEOLOGICAL SURVEY.—There are authorized to be appropriated to the Secretary of the Interior for purposes for carrying out, through the Director of the United States Geological Survey, the responsibilities that may be assigned to the Director under this Act not to exceed $27,500,000 for the fiscal year ending September 30, 1978; not to exceed $35,000,000 for the fiscal year ending September 30, 1979; not to exceed $40,000,000 for the fiscal year ending September 30, 1980; $32,484,000 for the fiscal year ending September 30, 1981; $34,425,000 for the fiscal year ending September 30, 1982; $31,843,000 for the fiscal year ending September 30, 1983; $35,524,000 for the fiscal year ending September 30, 1984; $37,300,200 for the fiscal year ending September 30, 1985 $35,578,000 for the fiscal year ending September 30, 1986; $37,179,000 for the fiscal year ending September 30, 1987; $38,540,000 for the fiscal year ending September 30, 1988; $41,819,000 for the fiscal year ending September 30, 1989; $55,283,000 for the fiscal year ending September 30, 1990, of which $8,000,000 shall be for earthquake investigations under section 11; $50,000,000 for the fiscal year ending September 30, 1991; $54,500,000 for the fiscal year ending September 30, 1992; $62,500,000 for the fiscal year ending September 30, 1993; $49,200,000 for the fiscal year ending September 30, 1995; $50,676,000 for the fiscal year ending September 30, 1996; $52,565,000 for the fiscal year ending September 30, 1998, of which $3,800,000 shall be used for the Global Seismic Network operated by the Agency; and $54,052,000 for the fiscal year ending September 30, 1999, of which $3,800,000 shall be used for the Global Seismic Network operated by the Agency. *There are authorized to be appropriated to the Secretary of the Interior for purposes of carrying out, through the Director of the United States Geological Survey, the responsibilities that may be assigned to the Director under this Act $46,100,000 for fiscal year 2000, of which $3,500,000 shall be used for the Global Seismic Network and $100,000 shall be used for the Scientific Earthquake Studies Advisory Committee established under section 6 of the Earthquake Hazards Reduction Authorization Act of 1999; and $47,500,000 for fiscal year 2001, of which $3,600,000 shall be used for the Global Seismic Network and $100,000 shall be used for the Scientific Earthquake Studies Advisory Committee established under section 6 of the Earthquake Hazards Reduction Authorization Act of 1999.* Of the amounts authorized to be appropriated under this subsection, at least—

(1) $8,000,000 of the amount authorized to be appropriated for the fiscal year ending September 30, 1998; **[**and**]**

(2) $8,250,000 of the amount authorized for the fiscal year ending September 30, 1999**[**,**]***;*

(3) $9,000,000 of the amount authorized to be appropriated for fiscal year 2000; and

(4) $9,500,000 of the amount authorized to be appropriated for fiscal year 2001,

shall be used for carrying out a competitive, peer-reviewed program under which the Director, in close coordination with and as a complement to related activities of the United States Geological Survey, awards grants to, or enters into cooperative agreements with,

State and local governments and persons or entities from the academic community and the private sector.

(c) NATIONAL SCIENCE FOUNDATION.—To enable the Foundation to carry out responsibilities that may be assigned to it under this Act, there are authorized to be appropriated to the Foundation not to exceed $27,500,000 for the fiscal year ending September 30, 1978; not to exceed $35,000,000 for the fiscal year ending September 30, 1979; not to exceed $40,000,000 for the first year ending September 30, 1980; $26,600,000 for the fiscal year ending September 30, 1981; $27,150,000 for the fiscal year ending September 30 1982; $25,000,000 for the fiscal year ending September 30, 1983; $25,800,000 for the fiscal year ending September 30, 1984; $28,665,000 for the fiscal year ending September 30, 1985 $27,760,000 for the fiscal year ending September 30, 1986; $29,009,000 for the fiscal year ending September 30, 1987; $28,235,000 for the fiscal year ending September 30, 1988; $31,634,000 for the fiscal year ending September 30, 1989; $38,454,000 for the fiscal year ending September 30, 1990. Of the amounts authorized for Engineering under section 101(d)(1)(B) of the National Science Foundation Authorization Act of 1988, $24,000,000 is authorized for carrying out this Act for the fiscal year ending September 30, 1991, and of the amounts authorized for Geosciences under section 101(d)(1)(D) of the National Science Foundation Authorization Act of 1988, $13,000,000 is authorized for carrying out this Act for the fiscal year ending September 30, 1991. Of the amounts authorized for Research and Related Activities under section 101(e)(1) of the National Science Foundation Authorization Act of 1988, $29,000,000 is authorized for engineering research under this Act, and $14,750,000 is authorized for geosciences research under this Act, for the fiscal year ending September 30, 1992. Of the amounts authorized for Research and Related Activities under section 101(f)(1) of the National Science Foundation Authorization Act of 1988, $34,500,000 is authorized for engineering research under this Act, and $17,500,000 is authorized for geosciences research under this Act, for the fiscal year ending September 30, 1993. There are authorized to be appropriated, out of funds otherwise authorized to be appropriated to the National Science Foundation: (1) $16,200,000 for engineering research and $10,900,000 for geosciences research for the fiscal year ending September 30, 1995, (2) $16,686,000 for engineering research and $11,227,000 for geosciences research for the fiscal year ending September 30, 1996, (3) $18,450,000 for engineering research and $11,920,000 for geosciences research for the fiscal year ending September 30, 1998, [and] (4) $19,000,000 for engineering research and $12,280,000 for geosciences research for the fiscal year ending September 30, 1999[.]*, and (5) $19,000,000 for engineering research and $10,900,000 for geosciences research for the fiscal year ending September 30, 2000. There are authorized to be appropriated to the National Science Foundation $19,600,000 for engineering research and $11,200,000 for geosciences research for fiscal year 2001.*

(d) NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY.—To enable the National Institute of Standards and Technology to carry out responsibilities that may be assigned to it under this Act, there are authorized to be appropriated $425,000 for the fiscal year end-

ing September 30, 1981; $425,000 for the fiscal year ending September 30, 1982; $475,000 for the fiscal year ending September 30, 1983; $475,000 for the fiscal year ending September 30, 1984; $498,750 for the fiscal year ending September 30, 1985 $499,000 for the fiscal year ending September 30, 1986; $521,000 for the fiscal year ending September 30, 1987; $525,000 for the fiscal year ending September 30, 1988; $525,000 for the fiscal year ending September 30, 1989; $2,525,000 for the fiscal year ending September 30, 1990; $1,000,000 for the fiscal year ending September 30, 1991; $3,000,000 for the fiscal year ending September 30, 1992; and $4,750,000 for the fiscal year ending September 30, 1993. There are authorized to be appropriated, out of funds otherwise authorized to be appropriated to the National Institute of Standards and Technology, $1,900,000 for the fiscal year ending September 30, 1995, $1,957,000 for the fiscal year ending September 30, 1996, $2,000,000 for the fiscal year ending September 30, 1998, [and] $2,060,000 for the fiscal year ending September 30, 1999, *$2,200,000 for fiscal year 2000, and $2,265,000 for fiscal year 2001.*

[(e) FUNDS FOR CERTAIN REQUIRED ADJUSTMENTS.—For each of the fiscal years ending September 30, 1982, September 30, 1983, September 30, 1984, and September 30, 1985, there are authorized to be appropriated such further sums as may be necessary for adjustments required by law in salaries, pay, retirement, and employee benefits incurred in the conduct of activities for which funds are authorized by the preceding provisions of this section.

[(f) AVAILABILITY OF FUNDS.—Funds appropriated for fiscal years 1991, 1992, and 1993 pursuant to this section shall remain available until expended.]

SEC. 13. ADVANCED NATIONAL SEISMIC RESEARCH AND MONITORING SYSTEM.

(a) ESTABLISHMENT.—The Director of the United States Geological Survey shall establish and operate an Advanced National Seismic Research and Monitoring System. The purpose of such system shall be to organize, modernize, standardize, and stabilize the national, regional, and urban seismic monitoring systems in the United States, including sensors, recorders, and data analysis centers, into a coordinated system that will measure and record the full range of frequencies and amplitudes exhibited by seismic waves, in order to enhance earthquake research and warning capabilities.

(b) MANAGEMENT PLAN.—Not later than 120 days after the date of the enactment of the Earthquake Hazards Reduction Authorization Act of 1999, the Director of the United States Geological Survey shall transmit to the Congress a 5-year management plan for establishing and operating the Advanced National Seismic Research and Monitoring System. The plan shall include annual cost estimates for both modernization and operation, milestones, standards, and performance goals, as well as plans for securing the participation of all existing networks in the Advanced National Seismic Research and Monitoring System and for establishing new, or enhancing existing, partnerships to leverage resources.

(c) AUTHORIZATION OF APPROPRIATIONS.—

(1) EXPANSION AND MODERNIZATION.—In addition to amounts appropriated under section 12(b), there are authorized to be appropriated to the Secretary of the Interior, to be used by the Di-

rector of the United States Geological Survey to establish the Advanced National Seismic Research and Monitoring System—

(A) $33,500,000 for fiscal year 2000;

(B) $33,700,000 for fiscal year 2001;

(C) $35,100,000 for fiscal year 2002;

(D) $35,000,000 for fiscal year 2003; and

(E) $33,500,000 for fiscal year 2004.

(2) OPERATION.—In addition to amounts appropriated under section 12(b), there are authorized to be appropriated to the Secretary of the Interior, to be used by the Director of the United States Geological Survey to operate the Advanced National Seismic Research and Monitoring System—

(A) $4,500,000 for fiscal year 2000; and

(B) $10,300,000 for fiscal year 2001.

SEC. 14. NETWORK FOR EARTHQUAKE ENGINEERING SIMULATION.

(a) ESTABLISHMENT.—The Director of the National Science Foundation shall establish a Network for Earthquake Engineering Simulation that will upgrade, link, and integrate a system of geographically distributed experimental facilities for earthquake engineering testing of full-sized structures and their components and partial-scale physical models. The system shall be integrated through networking software so that integrated models and databases can be used to create model-based simulation, and the components of the system shall be interconnected with a computer network and allow for remote access, information sharing, and collaborative research.

(b) AUTHORIZATION OF APPROPRIATIONS.—In addition to amounts appropriated under section 12(c), there are authorized to be appropriated, out of funds otherwise authorized to be appropriated to the National Science Foundation, $7,700,000 for fiscal year 2000 for the Network for Earthquake Engineering Simulation. In addition to amounts appropriated under section 12(c), there are authorized to be appropriated to the National Science Foundation for the Network for Earthquake Engineering Simulation—

(1) $28,200,000 for fiscal year 2001;

(2) $24,400,000 for fiscal year 2002;

(3) $4,500,000 for fiscal year 2003; and

(4) $17,000,000 for fiscal year 2004.

SECTION 2 OF THE ACT OF OCTOBER 1, 1997

AN ACT To authorize appropriations for carrying out the Earthquake Hazards Reduction Act of 1977 for fiscal years 1998 and 1999, and for other purposes.

SEC. 2. AUTHORIZATION OF REAL-TIME SEISMIC HAZARD WARNING SYSTEM DEVELOPMENT, AND OTHER ACTIVITIES.

(a) AUTOMATIC SEISMIC WARNING SYSTEM DEVELOPMENT.—

(1) * * *

* * * * * * *

(7) AUTHORIZATION OF APPROPRIATIONS.—In addition to the amounts made available to the Director under section 12(b) of the Earthquake Hazards Reduction Act of 1977 (42 U.S.C. 7706(b)), there are authorized to be appropriated to the Department of the Interior, to be used by the Director to carry out paragraph (2), $3,000,000 for each of fiscal years 1998 and

1999, *$1,600,000 for fiscal year 2000, and $1,650,000 for fiscal year 2001.*

* * * * * * *

XVIII. Committee Recommendations

On March 25, 1999, a quorum being present, the Committee favorably reported H.R. 1184, the Earthquake Hazards Reduction Authorization Act of 1999, by a voice vote, and recommended its enactment.

XIX. Committee Correspondence

Committee on Resources,
Washington, DC, April 16, 1999.

Hon. F. James Sensenbrenner, Jr.,
Chairman, Committee on Science,
Washington, DC.

Dear Mr. Chairman: H.R. 1184, to authorize appropriations for carrying out the Earthquake Hazards Reduction Act of 1997 for fiscal years 2000 and 2001, was referred to the Committee on Science and additionally to the Committee on Resources. The Committee on Resources has jurisdiction over the "Geological Survey" under Rule X of the Rules of the House of Representatives, and major portions of the Earthquake Hazards Reduction Act are implemented by the Director of the United States Geological Survey (USGS).

I have reviewed the bill as ordered reported from the Committee on Science on March 25, 1999, and have no objection to the provisions affecting USGS. Therefore, I would be happy to waive the Committee on Resources' jurisdiction over H.R. 1184 to allow it to be scheduled for Floor consideration as soon as possible. Representing a State that has been devastated by earthquakes in the past, I know first hand the need for this program.

This waiver of Committee jurisdiction should not be construed to affect any future referrals of bills dealing with the same subject matter. I also receive the right to request that the Committee on Resources be represented on any conference on this bill or related legislation if a conference becomes necessary. Finally, I ask that this letter be made part of the report on the bill.

Thank you for keeping me and my staff apprised of the progress on H.R. 1184 and I look forward to its enactment.

Sincerely,

Don Young, *Chairman.*

XX. Proceedings of Full Committee Markup

THURSDAY, MARCH 25, 1999

Chairman Sensenbrenner. The next bill on the agenda is H.R. 1184, the Earthquake Hazards Reduction Act of 1999. Briefly, this bill authorizes the existing earthquake programs at FEMA, USGS, NSF, and NIST for Fiscal Years 2000 and 2001, and authorizes two new projects, the Advanced National Seismic Research and Monitoring Network, and the Network for Earthquake Engineering Sim-

ulation. I believe this is an excellent bill that will revolutionize earthquake and engineering research.

I yield to the gentleman from California for whatever opening statement he would like to make.

Mr. BROWN. Mr. Chairman, I think I will waive an opening statement right at this point.

Chairman SENSENBRENNER. The Subcommittee Chair, the gentleman from Michigan.

Mr. SMITH of Michigan. Mr. Chairman, thank you very much. The Ranking Member noted earlier the possibility that we are moving quickly ahead. Because of the importance of the California delegation, we thought it was appropriate to move speedily with the earthquake reduction bill. This bill, H.R. 1184, authorizes $145.3 million for Fiscal Year 2000, an increase over the President's request, and $174.8 million for 2001 for the National Earthquake Hazard Reduction Program.

In addition, it provides authorization for three additional years for two new projects. Four agencies participate in NEHRP: the Federal Emergency Management Agency, the U.S. Geological Survey, and the National Science Foundation, and the National Institute for Standards and Technology. For the year 2000, this bill authorizes $99.6 million for the base earthquake program, slightly above the requested level. This authorization includes a $3.5 million for the operation of the global seismic network, $1.6 million for the real-time seismic warning system pilot program, and $100,000 for the advisory committee at the U.S. Geological Survey.

The bill promotes external research, authorizing at least $9 million for USGS external grants program, and for Fiscal 2001, the bill authorizes a 3 percent increase in base funding. That would be $102.6 million.

As the Chairman mentioned, the bill also includes multi-year authorization for what we are calling the Advanced National Seismic Research and Monitoring System, and the Network for Earthquake Engineering Simulation, both of which were started in the 1998 NEHRP bill. The case for Advanced National Seismic Research and Monitoring System was laid out in the USGS report that was required by the Committee two years ago. It will improve warning times, replace some 30-year old equipment, and provide a wealth of information to scientists and engineers. The bill authorizes $168 million to USGA over five years.

For the Network for Earthquake Engineering Simulation, the bill provides NSF a five-year authorization totaling $81.8 million. The NEES will interconnect earthquake engineering research facilities and upgrade and expand earthquake testing the facilities. Once completed, it should advance our earthquake engineering capabilities considerably.

Finally, the bill authorizes the establishment of a scientific earthquake studies advisory committee at the U.S. Geological Survey. It requires greater coordination in the formulation of NEHRP budget, and repeals obsolete provisions of the law. Using science to protect lives and property is one of the most important things this Committee does. With earthquakes, it is not a question of if, but as I have learned starting low on the learning curve for the problem of earthquakes in this country, the question is when the next

one will strike and where, in what part of the country it might happen.

Though its emphasis on monitoring research and mitigation, H.R. 1184 will help the Nation prepare for the inevitable. I would like to thank the Chairman for his efforts in preparing this bill, certainly our Subcommittee staff that has done a great deal of work, and I recommend it to my colleagues for their approval.

Chairman SENSENBRENNER. The gentleman yields back the balance of his time.

Does the gentlewoman from Texas, Ms. Johnson, have an opening statement? The gentleman from California will make an opening statement by proxy.

Mr. BROWN. I would feel greatly remiss if I didn't say something about an earthquake bill. [Laughter.]

This is a legislation again, that moved through the Congress back in the mid-1970's, in which I and Senator Cranston were the primary authors, as I recall. The legislation has—the value of the legislation has been borne out from the progress that has been made in saving lives and reducing damage from earthquakes over this quarter of a century. I had that called to my attention last Friday when I attended the opening of a new $600 million advanced technology hospital in my district, just a few miles from where I live, and of course just a few miles from the San Andreas fault. This is built and designed with the latest state-of-the-art equipment. It is a county hospital, not a federal structure. It has gone far further that the Federal Government has in using base isolation, for example, and other divides to reduce damage and save lives in the event of an earthquake.

We need to follow that kind of an example, and the Federal Government needs to follow it. It hasn't been doing as well as it should. Private builders of all kinds, particularly high rise buildings, reinforced concrete buildings and so on, need to put into practice what we now know about safe earthquake-resistant construction.

We still don't know enough about the incidents of earthquakes. For that reason, this bill is particularly valuable because it provides for the funding Earthquake Advanced Seismic Monitoring System, which I want to thank the Chairman for including. It is something that will give us a base of knowledge necessary to pinpoint the location of earthquake faults. Whether you can believe it or not, we are still discovering new faults in the southern California region that we didn't even know existed before. We need to identify these and to make sure that in the most serious cases, we provide adequate zoning so that there is some protection from the very start in terms of the type of buildings that can be placed in certain locations to protect our communities.

So this bill is actually an extremely good bill. If continues for another several years this very important program. As I say, we continue both to develop scientific knowledge about what is going on, and we continue to improve the practice of siting and constructing buildings in such a fashion that we gain many times more than the cost of this bill in terms of damage to lives and structures.

So I am very commendatory of all those who worked on it, and the Chairman's cooperation in moving this bill through promptly.

Chairman SENSENBRENNER. Does the gentleman yield back the balance of his time?

Mr. BROWN. I yield back the balance of my time.

Chairman SENSENBRENNER. Without objection, further opening statements will be placed in the record at this point.

[The information follows:]

OPENING STATEMENT OF CONGRESSWOMAN DEBBIE STABENOW OF THE 8TH DISTRICT, STATE OF MICHIGAN

Mr. Chairman, Ranking Member Brown, thank you for holding today's markup and addressing this legislation. The bills before us today build on recent House priorities concerning disaster mitigation, the commercialization of federal research, and easing the regulatory burden for business. I support all of these concepts and applaud the Committee for its efforts.

Representing a district in Michigan which relies on the auto industry, I am particularly interested in H.R. 1183, The Fastener Quality Act Amendment of 1999. I have been monitoring the discussions between the Committee staffs and the Fastener Reform Coalition, and am pleased that all sides agree that the bill before us today and the anticipated amendments are an important step forward. I understand that the Commerce Committee still has some concerns with this legislation, and I look forward to continuing our work to reach a final agreement. While safety must always be our foremost concern, wherever possible we must endeavor to give U.S. industries the most flexible environment to work in to ensure global competitiveness.

The other bills for before us, H.R. 209, The Technology Transfer Commercialization Act, and H.R. 1184, The Earthquake Hazards Reduction Act of 1999, are also important. Michigan State University is located in the heart of my district and conducts a great deal of federally-funded research. The health of the U.S. economy is greatly improved when we take full advantage of the innovations fostered at our national labs and universities, and H.R. 209 will help us optimize the commercialization of these ideas. H.R. 1184 will reauthorize the National Earthquake Hazards Reduction Program, which will help mitigate future damage from these natural disasters. This program also places a focus on developing earth science teaching materials for elementary and secondary schools, which fits nicely with the emphasis the Committee places on science and math education.

Mr. Chairman, thank you again for addressing these issues today. I am sure we will have a productive session.

Chairman SENSENBRENNER. I ask unanimous consent that the bill be considered as read, and open to amendment at any point.

[The information follows:]

A Bill to authorize appropriations for carrying out the Earthquake Hazards Reduction Act of 1977 for fiscal years 2000 and 2001, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Earthquake Hazards Reduction Authorization Act of 1999".

SEC. 2. AUTHORIZATION OF APPROPRIATIONS.

(a) FEDERAL EMERGENCY MANAGEMENT AGENCY.—Section 12(a) of the Earthquake Hazards Reduction Act of 1977 (42 U.S.C. 7706(a)) is amended—

(1) by striking "(1) GENERAL.—" and all that follows through "(7) There" and inserting "GENERAL.—There";

(2) by striking "1998, and" and inserting "1998,"; and

(3) by inserting ", $19,800,000 for the fiscal year ending September 30, 2000, and $20,400,000 for the fiscal year ending September 30, 2001" after "September 30, 1999".

(b) UNITED STATES GEOLOGICAL SURVEY.—(1) Section 12(b) of the Earthquake Hazards Reduction Act of 1977 (42 U.S.C. 7706(b)) is amended—

(A) by inserting "There are authorized to be appropriated to the Secretary of the Interior for purposes of carrying out, through the Director of the United States Geological Survey, the responsibilities that may be assigned to the Director under this Act $46,100,000 for fiscal year 2000, of which $3,500,000 shall

be used for the Global Seismic Network and $100,000 shall be used for the Scientific Earthquake Studies Advisory Committee established under section 6 of the Earthquake Hazards Reduction Authorization Act of 1999; and $47,500,000 for fiscal year 2001, of which $3,600,000 shall be used for the Global Seismic Network and $100,000 shall be used for the Scientific Earthquake Studies Advisory Committee established under section 6 of the Earthquake Hazards Reduction Authorization Act of 1999." after "operated by the Agency.";

(B) by striking "and" at the end of paragraph (1);

(C) by striking the comma at the end of paragraph (2) and inserting a semicolon; and

(D) by inserting after paragraph (2) the following new paragraphs:

"(3) $9,000,000 of the amount authorized to be appropriated for fiscal year 2000; and

"(4) $9,500,000 of the amount authorized to be appropriated for fiscal year 2001,".

(2) Section 2(a)(7) of the Act entitled "An Act to authorize appropriations for carrying out the Earthquake Hazards Reduction Act of 1977 for fiscal years 1998 and 1999, and for other purposes" is amended by inserting ", $1,600,000 for fiscal year 2000, and $1,650,000 for fiscal year 2001" after "1998 and 1999".

(c) NATIONAL SCIENCE FOUNDATION.—Section 12(c) of the Earthquake Hazards Reduction Act of 1977 (42 U.S.C. 7706(c)) is amended—

(1) by striking "1998, and" and inserting "1998,"; and

(2) by striking the period at the end and inserting ", and (5) $19,000,000 for engineering research and $10,900,000 for geosciences research for the fiscal year ending September 30, 2000. There are authorized to be appropriated to the National Science Foundation $19,600,000 for engineering research and $11,200,000 for geosciences research for fiscal year 2001.".

(d) NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY.—Section 12(d) of the Earthquake Hazards Reduction Act of 1977 (42 U.S.C. 7706(d)) is amended—

(1) by striking "1998, and"; and

(2) by inserting ", $2,200,000 for fiscal year 2000, and $2,265,000 for fiscal year 2001" after "September 30, 1999".

SEC. 3. REPEALS.

Section 10 and subsections (e) and (f) of section 12 of the Earthquake Hazards Reduction Act of 1977 (42 U.S.C. 7705d and 7706 (e) and (f)) are repealed.

SEC. 4. ADVANCED NATIONAL SEISMIC RESEARCH AND MONITORING SYSTEM.

The Earthquake Hazards Reduction Act of 1977 (42 U.S.C. 7701 et seq.) is amended by adding at the end the following new section:

"SEC. 13. ADVANCED NATIONAL SEISMIC RESEARCH AND MONITORING SYSTEM.

"(a) ESTABLISHMENT.—The Director of the United States Geological Survey shall establish and operate an Advanced National Seismic Research and Monitoring System. The purpose of such system shall be to organize, modernize, standardize, and stabilize the national, regional, and urban seismic monitoring systems in the United States, including sensors, recorders, and data analysis centers, into a coordinated system that will measure and record the full range of frequencies and amplitudes exhibited by seismic waves, in order to enhance earthquake research and warning capabilities.

"(b) MANAGEMENT PLAN.—Not later than 120 days after the date of the enactment of the Earthquake Hazards Reduction Authorization Act of 1999, the Director of the United States Geological Survey shall transmit to the Congress a 5-year management plan for establishing and operating the Advanced National Seismic Research and Monitoring System. The plan shall include annual cost estimates for both modernization and operation, milestones, standards, and performance goals, as well as plans for securing the participation of all existing networks in the Advanced National Seismic Research and Monitoring System and for establishing new, or enhancing existing, partnerships to leverage resources.

"(c) AUTHORIZATION OF APPROPRIATIONS.—

"(1) EXPANSION AND MODERNIZATION.—In addition to amounts appropriated under section 12(b), there are authorized to be appropriated to the Secretary of the Interior, to be used by the Director of the United States Geological Survey to establish the Advanced National Seismic Research and Monitoring System—

"(A) $33,500,000 for fiscal year 2000;

"(B) $33,700,000 for fiscal year 2001;

"(C) $33,700,000 for fiscal year 2002;

"(D) $33,600,000 for fiscal year 2003; and

"(E) $33,500,000 for fiscal year 2004.

"(2) OPERATION.—In addition to amounts appropriated under section 12(b), there are authorized to be appropriated to the Secretary of the Interior, to be used by the Director of the United States Geological Survey to operate the Advanced National Seismic Research and Monitoring System—

"(A) $4,500,000 for fiscal year 2000; and

"(B) $10,300,000 for fiscal year 2001.".

SEC. 5. NETWORK FOR EARTHQUAKE ENGINEERING SIMULATION.

The Earthquake Hazards Reduction Act of 1977 (42 U.S.C. 7701 et seq.) is amended by adding at the end the following new section:

"SEC. 14. NETWORK FOR EARTHQUAKE ENGINEERING SIMULATION.

"(a) ESTABLISHMENT.—The Director of the National Science Foundation shall establish a Network for Earthquake Engineering Simulation that will upgrade, link, and integrate a system of geographically distributed experimental facilities for earthquake engineering testing of full-sized structures and their components and partial-scale physical models. The system shall be integrated through networking software so that integrated models and databases can be used to create model-based simulation, and the components of the system shall be interconnected with a computer network and allow for remote access, information sharing, and collaborative research.

"(b) AUTHORIZATION OF APPROPRIATIONS.—In addition to amounts appropriated under section 12(c), there are authorized to be appropriated, out of funds otherwise authorized to be appropriated to the National Science Foundation, $7,700,000 for fiscal year 2000 for the Network for Earthquake Engineering Simulation. In addition to amounts appropriated under section 12(c), there are authorized to be appropriated to the National Science Foundation for the Network for Earthquake Engineering Simulation—

"(1) $28,200,000 for fiscal year 2001;

"(2) $24,400,000 for fiscal year 2002;

"(3) $4,500,000 for fiscal year 2003; and

"(4) $17,000,000 for fiscal year 2004.".

SEC. 6. SCIENTIFIC EARTHQUAKE STUDIES ADVISORY COMMITTEE.

(a) ESTABLISHMENT.—The Director of the United States Geological Survey shall establish a Scientific Earthquake Studies Advisory Committee.

(b) ORGANIZATION.—The Director shall establish procedures for selection of individuals not employed by the Federal Government who are qualified in the seismic sciences and other appropriate fields and may, pursuant to such procedures, select up to ten individuals, one of whom shall be designated Chairman, to serve on the Advisory Committee. Selection of individuals for the Advisory Committee shall be based solely on established records of distinguished service, and the Director shall ensure that a reasonable cross-section of views and expertise is represented. In selecting individuals to serve on the Advisory Committee, the Director shall seek and give due consideration to recommendations from the National Academy of Sciences, professional societies, and other appropriate organizations.

(c) MEETINGS.—The Advisory Committee shall meet at such times and places as may be designated by the Chairman in consultation with the Director.

(d) DUTIES.—The Advisory Committee shall advise the Director on matters relating to the United States Geological Survey's participation in the National Earthquake Hazards Reduction Program, including the United States Geological Survey's roles, goals, and objectives within that Program, its capabilities and research needs, guidance on achieving major objectives, and establishing and measuring performance goals. The Advisory Committee shall issue an annual report to the Director for submission to Congress on or before September 30 of each year. The report shall describe the Advisory Committee's activities and address policy issues or matters that affect the United States Geological Survey's participation in the National Earthquake Hazards Reduction Program.

SEC. 7. BUDGET COORDINATION.

Section 5 of the Earthquake Hazards Reduction Act of 1977 (42 U.S.C. 7704) is amended—

(1) in subsection (b)(1)—

(A) by striking subparagraph (A) and redesignating subparagraphs (B) through (F) as subparagraphs (A) through (E), respectively; and

(B) by moving subparagraph (E), as so redesignated by subparagraph (A) of this paragraph, so as to appear immediately after subparagraph (D), as so redesignated; and

(2) by adding at the end the following new subsection:

"(c) BUDGET COORDINATION.—

"(1) GUIDANCE.—The Agency shall each year provide guidance to the other Program agencies concerning the preparation of requests for appropriations for activities related to the Program, and shall prepare, in conjunction with the other Program agencies, an annual Program budget to be submitted to the Office of Management and Budget.

"(2) REPORTS.—Each Program agency shall include with its annual request for appropriations submitted to the Office of Management and Budget a report that—

"(A) identifies each element of the proposed Program activities of the agency;

"(B) specifies how each of these activities contributes to the Program; and

"(C) states the portion of its request for appropriations allocated to each element of the Program.".

H.R. 1184—THE EARTHQUAKE HAZARDS REDUCTION AUTHORIZATION ACT OF 1999: SECTION-BY-SECTION SUMMARY

Sec. 1 Short title

Cities the Act as the "Earthquake Hazards Reduction Authorization Act of 1999."

Sec. 2. Authorization of appropriations

Provides two-year authorizations for the agencies participating in the National Earthquake Hazards Reduction Program as follows:

(a) Federal Emergency Management Agency.—Amends Act of 1977 to authorize $19.8 million for FY 2000 and $20.4 million for FY 2001.

(b) U.S. Geological Survey.—

(1) Amends Act of 1977 to authorize $46.1 million for FY 2000, which includes $3.5 million for the Global Seismic System and $100,000 for the Advisory Committee on External Earthquake Research, and $47.5 million for FY 2001, which includes $3.6 million for the Global Seismic System and $100,000 for the Advisory Committee on External Earthquake Research. Of these amounts, $9.0 million for FY 2000 and $9.5 million for FY 2001 are to be used for external research.

(2) Amends the Earthquake Hazards Reduction Act for FYs 1998 and 1999 to authorize $1.6 million for FY 2000 and $1.65 million for FY 2001 for the Seismic Hazard Warning System pilot program.

(c) National Science Foundation.—Amends Act of 1977 to authorize out of sums otherwise authorized $29.9 million ($19 million for engineering and $10.9 million for geosciences research) for FY 2000 and to authorize without reference to other authorizations $30.8 ($19.6 million for engineering and $11.2 million for geosciences research) for FY 2001.

(d) National Institute for Standards and Technology.—Amends Act of 1977 to authorize out of sums otherwise authorized $2.2 million for FY 2000 and $2.265 million for FY 2001.

Sec. 3. Repeals

Repeals Section 10 and subsections 12(e) and (f) of the 1977 Act, each of which is obsolete.

Sec. 4. Advanced National Seismic Research and Monitoring System

Amends the 1977 Act by adding the following Section:

"Sec. 13. Advanced National Seismic Research and Monitoring System.

"(a) Authorizes the Director of USGS to establish an Advanced National Seismic Research and Monitoring System (ANSRMS).

"(b) Requires within 120 days of enactment a five-year management plan for deploying and operating ANSRMS.

"(c) Authorizes in addition to sums authorized for USGS in section 12(b) of the 1977 Act: $33.5 million for FY 2000; $33.7 million for FY 2001; $33.7 million for FY 2002; $33.6 million for FY 2003; and $33.5 million for FY 2004 for expansion and modernization of the monitoring system.

"(d) Authorizes in addition to sums authorized for USGS in Section 1 (Section 12(b)): $4.5 million for FY 2000 and $10.3 million for FY 2001 for operating the ANSRMS."

Sec. 5. Network for earthquake engineering simulation

Amends the 1977 Act by adding the following section:

"Sec. 14. Network for Earthquake Engineering Simulation.

"(a) Defines terms and authorize NSF to establish a Network for Earthquake Engineering Simulation that will upgrade, link, and integrate a complete system of test facilities in earthquake engineering.

"(b) Authorizes out of funds otherwise authorized to be appropriated to NSF $7.7 million for FY 2000 and authorize without reference to other authorizations $28.2 for FY 2001; $24.4 million for FY 2002; $4.5 million for FY 2003; and $17.0 million for 2004 for the Network for Earthquake Engineering Simulation."

Sec. 6. Scientific Earthquake Studies Advisory Committee

(a) Authorizes the Director of USGS to establish a Scientific Earthquake Studies Advisory Committee to provide USGS with scientific advice regarding its participation in the National Earthquake Hazards Reduction Program.

(b) Directs the USGS Director to establish procedures for the selection of up to ten qualified individuals not employed by the Federal Government, one of whom shall be designated Chairman, to serve on the Advisory Committee. Individuals shall be selected solely on established records of distinguished service, and the Director shall ensure that the Advisory Committee represent a cross-section of views and expertise. The Director also shall seek and give due consideration to recommendations from the National Academy of Science, professional societies, and other appropriate organizations.

(c) Establishes procedures for calling meetings of the Advisory Committee. The Advisory Committee shall meet at such times and places as may be designated by the Chairman in consultation with the Director.

(d) Explains the duties of the Advisory Committee.—It shall provide advice to the Director on matters relating to the USGS earthquake program—including USGS's roles, goals, and objectives, capabilities and research needs, and performance goals—and shall issue an annual report to the Director for submission to Congress on or before September 30 of each year. The report shall describe the Advisory Committee's activities and address policy issues or matters that affect the Geological Survey's participation in the Program.

Sec. 7. Budget coordination

Amends the 1977 Act by:

(1) Striking some language on budget responsibilities (which is moved to new Section 5(c)) and by moving some stray language in the law.

(2) Adding the following at the end of the Section 5:

"(c) Budget Coordination.—

"(1) Requires greater co-ordinance on the budget for the Program. Instructs FEMA, the lead agency, to provide guidance to each Program agency in preparing annual budget requests.

"(2) Requires FEMA, in conjunction with the other Program agencies, to prepare an annual budget to submit to OMB."

TABLE 1.—THE EARTHQUAKE HAZARDS REDUCTION AUTHORIZATION ACT OF 1999

[In millions of dollars]

Agency	FY 2000 request	FY 2000 authorization	FY 2001 authorization	FY 2002 authorization	FY 2003 authorization	FY 2004 authorization
FEMA	19.8	19.8	20.4	NA	NA	NA
USGS:						
General Activities [1]	45.996	46.1	47.5	NA	NA	NA
Real-Time Seismic Warning System	1.6	1.6	1.65	NA	NA	NA
Advanced National Seismic Monitoring System	0.0	38.0	44.0	33.7	33.6	33.5
Equipment	0.0	33.5	33.7	33.7	33.6	33.5
Operation	0.0	4.5	10.3	NA	NA	NA
Total, USGS	47.596	85.7	93.15	33.7	33.6	33.5
NSF:						
Engineering & Geosciences Research	29,9	29,9	30.8	NA	NA	NA
Network for Earthquake Engineering Simulation	7.7	7.7	28.2	24.4	4.5	17.0
Total, NSF	37.6	37.6	59.0	24.4	4.5	17.0
NIST	2.198	2.2	2.265	NA	NA	NA
Total, NEHRP	107.194	145.3	174.815	58.1	38.1	50.5

[1] Figure includes: (1) for FY 2000 authorization, $3.5 million for the Global Seismic Network, $100,000 for the Scientific Earthquake Studies Advisory Committee, and a minimum of $9.0 million for external research; and (2) for FY 2001 authorization, $3.6 million for the Global Seismic Network, $100,000 for the Scientific Earthquake Studies Advisory Committee, and a minimum of $9.5 million for external research.

TABLE 2.—THE EARTHQUAKE HAZARDS REDUCTION AUTHORIZATION ACT OF 1999: FY 1999 ENACTED, FY 2000 REQUEST, AND FY 2000 AND FY 2001 AUTHORIZATIONS

[In thousands of dollars]

Agency	FY 1999 enacted	FY 2000 request	FY 2000 authorization	FY 2001 authorization	FY 2000 authorization change (+ or —)				FY 2001 authorization change (+ or —)	
					FY 1999 enacted	Percent	FY 2000 request	Percent	FY 2000 authorization	Percent
FEMA	18,900	19,800	19,800	20,400	900	4.8	0	0.0	600	3.0
USGS	52,391	47,596	85,700	93,150	33,309	63.6	41,585	94.3	7,450	8.7
NSF	29,900	37,600	37,600	59,000	7,700	25.8	0	0.0	21,400	56.9
NIST	2,060	2,198	2,200	2,265	140	6.8	2	0.1	65	3.0
Total	103,251	107,194	145,300	174,815	42,049	40.7	38,106	35.5	29,515	20.3

Chairman SENSENBRENNER. I ask that the members proceed with amendments in their order on the roster.

The Chair recognizes the gentleman from Oregon, who has the first amendment.

Mr. WU. Thank you, Mr. Chairman. I have an amendment at the desk.

Chairman SENSENBRENNER. The clerk will report the amendment.

The CLERK. "Amendment to H.R. 1184"——

Mr. WU. I ask unanimous consent that the amendment be considered as read.

Chairman SENSENBRENNER. Without objection.

[The information follows:]

AMENDMENT ROSTER—H.R. 1184, EARTHQUAKE HAZARDS REDUCTION AUTHORIZATION ACT OF 1999

No.	Sponsor	Description
1.	Mr. Wu	Funding amendment
2.	M4. Wu	Out-year funding amendment
3.	Ms. Woolsey	Amendment to insert a new section titled ''Report on At-Risk Populations''
4.	Mr. Larson	Amendment to insert a new section titled ''Public Access to Earthquake Information''
5.	Mr. Larson	Amendment to amend the definition of ''Lifeline''

AMENDMENT TO H.R. 1184 OFFERED BY MR. WU

Page 6, line 16, strike "$33,700,000" and insert "35,100,000".

Page 6, line 17, strike "$33,600,000" and insert "$35,000,000".

AMENDMENT TO H.R. 1184 OFFERED BY MR. WU

Page 7, line 1, strike "and".

Page 7, line 2, strike the period, close quotation marks, and period at the end and insert a semicolon.

Page 7, after line 2, insert the following new subparagraphs:

"(C) $15,900,000 for fiscal year 2002;

"(D) $22,600,000 for fiscal year 2003; and

"(E) $28,900,000 for fiscal year 2004.".

AMENDMENT TO H.R. 1184 OFFERED BY MS. WOOLSEY

Page 11, after line 5, insert the following new section:

SEC. 8. REPORT ON AT-RISK POPULATIONS.

Not later than one year after the date of the enactment of this Act, and after a period for public comment, the Director of the Federal Emergency Management Agency shall transmit to the Congress a report describing the elements of the Program that specifically address the needs of at-risk populations, including the elderly, persons with disabilities, non-English-speaking families, single-parent households, and the poor. Such report shall also identify additional actions that could be taken to address those needs, and make recommendations for any additional legislative authority required to take such actions.

AMENDMENT TO H.R. 1184 OFFERED BY MR. LARSON

Page 11, after line 5, insert the following new section:

SEC. 8. PUBLIC ACCESS TO EARTHQUAKE INFORMATION.

Section 5(b)(2)(A)(ii) of the Earthquake Hazards Reduction Act of 1966 (42 U.S.C. 7704(b)(2)(A)(ii) is amended by inserting ", and development of means of increasing

public access to available locality-specific information that may assist the public in preparing for or responding to earthquakes" after "and the general public".

AMENDMENT TO H.R. 1184 OFFERED BY MR. LARSON

Page 11, after line 5, insert the following new section:

SEC. 8. LIFELINES.

Section 4(6) of the Earthquake Hazards Reduction Act of 1977 (42 U.S.C. 7703(6)) is amended by inserting "and infrastructure" after "communication facilities".

Chairman SENSENBRENNER. The gentleman is recognized for five minutes.

Mr. WU. Thank you very much, Mr. Chairman. First, let me indicate my strong support for H.R. 1184. I particularly applaud the Chairman's farsightedness in authorizing $168 million over the next five years for expansion and modernization of the seismic monitoring infrastructure of the United States.

Unfortunately, Oregon is at great risk from major earthquakes. I am looking forward to the benefits that will flow from such a modernization effort, both in Oregon and nationwide. It is not just my colleagues in California who suffer from this problem of earthquakes. In fact, I might like to add at this point that I think as—I would like to thank my colleagues from California because the first I did upon arriving in Oregon was take a geology class. One of the things I found, if you look at a map of Oregon, you see a rectangle. The part of the rectangle, there is a little part of it that goes up. There is a bump in the upper left hand corner of the State of Oregon. That is a bend in the Columbia River. That is the First Congressional District occupies that bend and that bump. That bend in the Columbia River was actually created by California ramming Oregon from the south over the last 20 million years. [Laughter.]

I would like to thank my colleagues from California for their efforts in creating my Congressional district. [Laughter.]

But like so many other things that start in California, there are unintended side effects. [Laughter.]

One of them is that periodically every say 300 to 400 years, the recent research shows that we may have up to magnitude 9.5 or magnitude 10 earthquakes, very, very significant earthquakes. So I will be introducing two amendments to the bill, both of which relate to the proposed Advanced National Seismic Research and Monitoring System. The first amendment, which is now before us, would add an additional $2.8 million over two years to the seismic network to procure two portable seismograph networks. Seismologists routinely deploy temporary portable networks to monitor after shocks or to better understand the impact of an earthquake in a particular region. The two networks supported by my amendment would be a natural supplement to the permanent monitoring networks.

The Chairman has been conscientious in authorizing the elements of a seismic monitoring system. That will be contained in a plan that will be forwarded to us shortly by the Administration. I believe these portable networks will also be part of that plan. These portable networks are very necessary to a comprehensive ca-

pability for post-earthquake monitoring and assessment of damage. I would hate to see any delay in developing them. I urge adoption.

Chairman SENSENBRENNER. Will the gentleman yield?

Mr. WU. Yes, Mr. Chairman.

Chairman SENSENBRENNER. I am pleased to accept this amendment. I want to commend the gentleman from Oregon for spotting the fact that the U.S. Geological Survey sent us the wrong numbers when they asked us to draft this bill. The numbers sent by the USGS omitted this very vital piece of equipment which is necessary to make the new earthquake monitoring system work the way it is planned. So I think that he has spotted an omission. I think that it is a good amendment, and I am pleased to support it.

Mr. WU. Thank you, Mr. Chairman.

Chairman SENSENBRENNER. The gentleman yields back the balance of his time. Is there further discussion on the amendment by the gentleman from Oregon, Mr. Wu?

Mr. SMITH of Michigan. Mr. Chairman?

Chairman SENSENBRENNER. The gentleman from Michigan, Mr. Smith.

Mr. SMITH of Michigan. I would just also like to comment on what appeared to be somewhat of a scolding for USGS. Since we just heard of this mistake from USGS in the last few days, I would just publicly hope that since we had the first hearing on this bill back in February, that maybe it would be good to be more timely, but I appreciate Mr. Wu's correction of this mistake. Thank you.

Chairman SENSENBRENNER. The gentleman yields back the balance of his time. Is there further discussion on the amendment?

[No response.]

If not, the question is on the adoption of the amendment proposed by the gentleman from Oregon, Mr. Wu.

All those in favor will signify by saying aye.

Opposed, no.

The ayes appear to have it. The ayes have it, and the amendment is agreed to.

The second amendment is also by Mr. Wu. The Chair recognizes the gentleman from Oregon.

Mr. WU. Thank you, Mr. Chairman. Again, I salute you for including authorization.

Chairman SENSENBRENNER. Will the gentleman from Oregon offer his amendment, and have the clerk report it. Then I will recognize you.

Mr. WU. Thank you very much. Mr. Chairman, I have an amendment at the desk.

Chairman SENSENBRENNER. The clerk will report the amendment.

Mr. WU. I ask unanimous consent that the amendment be considered as read.

Chairman SENSENBRENNER. Without objection, so ordered.

The gentleman is recognized for five minutes.

Mr. WU. Thank you, Mr. Chairman. Again, I salute you for including authorization for an Advanced Seismic Monitoring System in this bill. I think that this initiative deserves this level of funding. I would go one step further to say that it deserves additional

funds for operations for the same five-year period for which modernization and expansion have been authorized.

The underlying bill supports operations for two years, Fiscal Year 2000 and Fiscal Year 2001. The amendment before us would extend the operational funds for the Advanced Seismic Monitoring System by three additional years. Specifically, this amendment would authorize an additional $67.4 million to cover increased operational costs for the research and monitoring system for Fiscal Years 2002, 2003, and 2004.

However, I recognize that this would mean extending by three years the base program authorization for USGS as well, which may be a problem for you in this Committee. Therefore, I will ask that my amendment be withdrawn. In so doing, however, I would ask that you include report language stating the Committee's intention to authorize system operations in future legislation.

Chairman SENSENBRENNER. Will the gentleman yield?

Mr. WU. Yes, Mr. Chairman.

Chairman SENSENBRENNER. First of all, let me say I believe that the gentleman's amendment is very well intentioned. The problem that I have is not with seeing this system through to completion. I do support that. But the USGS has not been all that firm in its numbers, as we found out with the necessity for the previous amendment that you offered. As you know, I am very strong on oversight. This Committee has established a very good record on oversight. I would like to make sure before we go ask our colleagues to approve the rest of the money for this system, that the USGS is able to have some firm numbers which they don't have now.

So I believe the report language that is suggested by the gentleman from Oregon is very constructive and very meritorious, and I appreciate his offer to withdraw his amendment, I know that we will be revisiting this in the future, and I fully anticipate that when we do this bill two years from now, we will have some much better numbers, and we can have an authorization of this program through its completion.

Mr. WU. Thank you, Mr. Chairman. I would yield back the balance of my time.

Chairman SENSENBRENNER. Without objection, the amendment is withdrawn.

The third amendment on the list is by the gentlewoman from California, Ms. Woolsey.

Ms. WOOLSEY. Thank you, Mr. Chairman. I have an amendment at the desk.

Chairman SENSENBRENNER. The clerk will report the amendment.

The CLERK. "Amendment to H.R. 1184 offered by Ms. Woolsey"——

Chairman SENSENBRENNER. Without objection, the amendment is considered as read and open for amendment at any point.

The Chair recognizes the gentlewoman from California for five minutes.

Ms. WOOLSEY. Thank you, Mr. Chairman. I ask unanimous consent to consider the bill as read.

Chairman SENSENBRENNER. Already done.

Ms. WOOLSEY. Oh, that's right. I wasn't listening. I'm sorry.

First of all, I want to indicate my strong support for H.R. 1148. You do know that my district is directly north of San Francisco, across the Golden Gate Bridge. I have the San Andreas fault running through the western portion of my district. We have earthquakes.

My amendment, however, goes in a little bit different direction than talking totally about earthquakes. I would like to talk about FEMA and directing FEMA to report on the elements of the National Earthquake Hazard Reduction Programs that address the needs of at-risk populations: the elderly, the disabled, the non-English speaking, and single parent households, those that often times are overlooked in times of great need.

Since its inception in 1977 and particularly in the last decade, NEHRP has done a superb job in reaching out to State and local officials and improving building codes, and in general, assessing the level of seismic risk across the country. But there are other risk feature dealing with the social, cultural, and economic situation of individuals and individual groups that I suggest we consider in this bill.

I am aware of NSF supporting social science research, but the extent of the research efforts and the findings of the research in relationship to at-risk population must be addressed, I believe, more clearly. Not only will this report provide valuable information on what has been done to date, it will bring into focus what we must do in the future to reach those populations that incur more damage in a disaster due to age, due to economic status or physical limitation.

This is an issue that I believe the Science Committee and the Congress as a whole must have interest in. Therefore, I ask for your support of this amendment.

Chairman SENSENBRENNER. Will the gentlewoman yield?

Ms. WOOLSEY. Yes, Mr. Chairman.

Chairman SENSENBRENNER. I am prepared to accept this amendment with a caveat. That is, is that FEMA is not within the jurisdiction of the Science Committee. The adoption of this amendment may provoke a sequential referral of this legislation to the committee that does have jurisdiction over FEMA.

I do think that your proposal, again, has merit. I think that the more information that is passed around relative to these problems to at-risk population and others, we will be able to mitigate the damage that earthquakes cause when they do hit. So again, I am prepared to accept the amendment. But just remember, if the bill goes off to another committee and we have to get our crow-bars out to pry it out of there, I told you so.

Ms. WOOLSEY. All right. I promise to follow it and go to that committee with my same pleas.

Chairman SENSENBRENNER. The gentlewoman yields back the balance of her time. Is there further discussion on the amendment by the gentlewoman from California?

[No response.]

Hearing none, all those in favor will signify by saying aye.

Opposed, no.

The ayes appear to have it. The ayes have it, and the amendment is agreed to.

The next amendment is by the gentleman from Connecticut.

Mr. LARSON. Thank you, Mr. Chairman. I have an amendment at the desk.

Chairman SENSENBRENNER. The clerk will report the amendment.

The CLERK. "Amendment to H.R. 1184 offered by Mr. Larson."——

Chairman SENSENBRENNER. Without objection, the amendment is considered as read, and open for amendment at any point.

The gentleman from Connecticut is recognized for 5 minutes.

Mr. LARSON. Thank you very much, Mr. Chairman. I request permission to summarize and proceed.

I want to start by also indicating my strong support for H.R. 1184, and also indicate that based on listening to my colleague David Wu, that I know of nothing that California has done to the State of Connecticut. [Laughter.]

But do also offer this amendment in the spirit of the gentlewoman from California, recognizing that this also relates to the dissemination of data. It calls for FEMA to develop a means of increasing public access to locality-specific information, that they may assist in preparing for and responding to earthquakes. The bill should reflect our current capabilities. We now have the ability to generate detailed seismic maps in specific geographical regions. The maps are now used for determining sites for increased monitoring, seismic zoning, emergency response planning, and placement of lifelines. But additionally, they can be used by the general public to help them prepare and respond to earthquakes.

The Committee is supporting a 40-percent increase in the NEHRP and also 93 of which is for modernization and expansion of our earthquake infrastructure. This effort will undoubtedly enhance our current ability to generate hazard maps which show the severity of the expected shaking of ground and response to earthquakes. These maps of course can be a great help to an increasingly sophisticated public, but only if people are aware of the resource. This amendment would ensure that FEMA would aggressively make this information available to all Americans. I understand the chairman's previous admonition with respect to FEMA and its jurisdiction. I urge adoption of the amendment.

Chairman SENSENBRENNER. Will the gentleman yield?

Mr. LARSON. Yes.

Chairman SENSENBRENNER. First of all, I am prepared to accept the amendment. It's a good one. This one does not trigger a sequential referral because the Earthquake Hazards Reduction Act is in the jurisdiction of this Committee. So you don't have the same problem as the gentlewoman from Connecticut.

Is there further discussion on the Larson amendment?

Mr. WELDON of Pennsylvania. Mr. Chairman?

Chairman SENSENBRENNER. The gentleman from Pennsylvania.

Mr. WELDON of Pennsylvania. Mr. Chairman, thank you. I will be brief.

Chairman SENSENBRENNER. You are recognized for 5 minutes.

Mr. WELDON of Pennsylvania. I do support the bill, and I do support the effort to include this amendment, as well as the other amendments. I just want to raise a point that I think has been alluded to. That is, that this bill is very laudable. I applaud the Committee Chairman and Ranking Member for their leadership in this area. But it reminds me that in the markup of our defense authorization bill in the R&D account lines, we have at least $58 million for very similar initiatives that are primarily—and much of this work, by the way, is being done is California.

Our specific purpose from a security standpoint is not just earthquakes, but seismic events like the illegal testing of nuclear weapons underground, such as we saw in the past couple of years reportedly at Novaya Zemlya in Russia.

I just want to make sure that we are coordinating the activities of the various agencies because as you look at the funding level here, which probably is not totally adequate, maybe it is. But I look at the Defense budget, and we are spending, to my best recollection off the top of my head, at least $58 million of additional research money which is designed to provide cutting-edge technology for quickly detecting seismic activities around the world. We ought to have some way of making sure that there is coordination between what DOD is doing, such as you are referring with the FEMA jurisdictional issue here, and the work that is being done by the science agencies.

Mr. WELDON of Florida. Would the gentleman yield for a question?

Mr. WELDON of Pennsylvania. I would be happy to yield.

Mr. WELDON of Florida. I was under the impression that for national security reasons, a lot of the information that is gathered by DOD is not shared with the scientific community. I don't know if the Chairman can comment on that, but the understanding that I had is that some of the information gathered by DOD is not shared.

Mr. WELDON of Pennsylvania. The gentleman's point is well taken. I am only referring to the public unclassified amount of money that we spend on systems that are available. In fact, when I was out in California, I visited the research facility where we are funding. There is another category of black budget program work that is underway that is also in this area. What I want to make sure of is that since the Science Committee has a legitimate leadership role on the issue of preparing for and dealing with earthquakes, that we ought to make sure that DOD is in fact supporting and coordinating that effort with research work that they are doing, with a very sizable amount of money in the same technology area to make sure there is coordination.

My fear is that, and maybe staff can comment on this, my fear is that there is not coordination, and that in fact, we are spending money in DOD and in the science agencies, that not in fact is being fully understood.

Chairman SENSENBRENNER. Would the gentleman yield?

Mr. WELDON of Pennsylvania. I would be happy to yield.

Chairman SENSENBRENNER. I would hope that the staff would be able to make inquiry to see what type of coordination there is rel-

ative to the sharing and coordination of the unclassified part of the DOD work.

Mr. WELDON of Pennsylvania. That's fine. Thank you. I thank the gentleman.

Chairman SENSENBRENNER. The gentleman yields back the balance of his time.

Mr. BROWN. Mr. Chairman?

Chairman SENSENBRENNER. Further discussion on the Larson amendment number 1?

Mr. BROWN. Mr. Chairman?

Chairman SENSENBRENNER. The gentleman from California.

Mr. BROWN. Mr. Chairman, I am——

Chairman SENSENBRENNER. Is recognized for five minutes.

Mr. BROWN. I am in full support of the Larson amendment. Let me point out some aspects of the amendment which I think perhaps haven't been adequately elaborated on. This amendment not only calls for the dissemination of earthquake data, which is very important and we can do that, but it also calls for the development of means of increasing public access to locality-specific real time and other locality-specific information that may assist them.

The point I am trying to make is in trying to evaluate the consequences of an earthquake, you have to know both the severity and location of the earthquake, which is available from our seismic network. But you also need to know certain geological information, which may or may not be readily available, but is becoming increasingly available, and also soil conditions.

We all know that the impact of an earthquake is accentuated if you have liquefaction occurring, and that certain soils are prime to liquefaction. I happen to live in a beautiful city which has an ample supply of water located about two feet below the surface. Any time there is an earthquake, that is likely to cause a considerable amplification of the effects of the earthquake itself.

We have a major problem now in trying to get rid of that underground water, which I hope that we can ship to some desert that needs it very badly. But the real trick here, and one that we are very capable of resolving, is combining information from different fields and calculating risk factors based upon that combination of different kinds of knowledge.

This amendment speaks to that problem. I think it is very important that we consider it fully.

Chairman SENSENBRENNER. The gentleman yields back the balance of his time. Further discussion on Larson amendment number 1?

[No response.]

Hearing none, all those in favor signify by saying aye.

Opposed, no.

The ayes appear to have it. The ayes have it, and the amendment is agreed to.

The last amendment on the roster is also by the gentleman from Connecticut, who is recognized to offer it.

Mr. LARSON. Thank you, Mr. Chairman. I have an amendment at the desk.

Chairman SENSENBRENNER. The clerk will report the amendment.

The CLERK. "Amendment to H.R. 1184"——

Chairman SENSENBRENNER. Without objection, the amendment is considered as read, and open for amendment at any point.

Chairman SENSENBRENNER. The gentleman from Connecticut is recognized for five minutes.

Mr. LARSON. Thank you, Mr. Chairman. The second amendment, which is now before us, would change the definition of lifelines in the Earthquake Act to make it clear that in today's society, the Internet is a critical lifeline. This may not have been true in 1977, as Mr. Brown pointed out earlier, when the law was first enacted, but it is certainly true today. The original law cites communications facilities as a lifeline, but not communications infrastructure. Today there are fiber optic links dedicated solely to the transfer of information over the Internet because data traffic is now currently increasing at about 10 times the rate of phone traffic. This makes this change necessary.

We also are concerned with the routers and servers managing and storing this traffic. Disaster recovery plans must account for restoring high speed links and for backup data bases. This increasingly critical data infrastructure should be recognized in the bill language. Therefore, I call for the changes of definition of lifelines to refer to communication facilities and infrastructure, just as the bill currently refers to transportation facilities and infrastructure. I urge its adoption.

Chairman SENSENBRENNER. Will the gentleman yield?

Mr. LARSON. Yes. Mr. Chairman.

Chairman SENSENBRENNER. I am pleased to accept the gentleman's amendment.

Mr. LARSON. Thank you.

Chairman SENSENBRENNER. The gentleman yields back the balance of his time.

Is there further discussion on the Larson amendment number 2?

[No response.]

Hearing none, all those in favor signify by saying aye.

Opposed, no.

The ayes appear to have it. The ayes have it, and the amendment is agreed to.

Are there further amendments to the bill?

Mr. SMITH of Michigan. Mr. Chairman, I have report language at the desk.

Chairman SENSENBRENNER. Amendments first. Further amendment to the bill?

[No response.]

If there are no further amendments, the gentleman from Michigan, Mr. Smith, is recognized for report language.

Mr. SMITH of Michigan. I have report language at the desk.

Chairman SENSENBRENNER. The clerk will report the proposed report language.

The CLERK. "Report language submitted by Mr. Nick Smith. To address this issue"——

Mr. SMITH of Michigan. Mr. Chairman, I move that the report language be considered read.

Chairman SENSENBRENNER. Without objection.

[The information follows:]

REPORT LANGUAGE OFFERED BY THE HONORABLE NICK SMITH

The Committee expects FEMA to reinvigorate its coordination activities among NEHRP agencies. Additionally, FEMA, as the lead agency shall identify a list of Federal agencies that contain earthquake-related programs that contribute towards the goals of the NEHRP. An associate agency would be defined as a Federal agency other than a NEHRP agency that administers program(s) that either perform earthquake-related research or develop standards, codes or other material related to reducing earthquake losses. FEMA will convene a series of meetings of senior level officials (Assistant Secretary or equivalent level), establish points of contact, and determine avenues of mutual cooperation with respective associate agencies. If agreeable to the parties, the NEHRP "core" will be expanded to include broader participation by associate agencies. These agencies will participate at a minimum at the Interagency Coordination Committee level as set forth in the statute.

Chairman. SENSENBRENNER. The gentleman is recognized for five minutes.

Mr. SMITH of Michigan. This report language stems from some of the agencies reporting a lack of coordination and cooperation. We worked with Mr. James Lee Whit, the Director of FEMA, in developing this language that calls for more coordination between local, State, and Federal agencies that have earthquake programs. In general, it better identifies the gaps where Federal Government should be taking up a larger role, and it provides a level of legitimacy to the respective earthquake related work of their agency.

Taking the earthquake bill up in our Committee, one area that is not addressed in this report language, and by the way, this report language has been concurred with by the minority, other areas that we'll be exploring over the next two years is why insurance companies aren't willing to reduce the cost of their insurance to those builders, home owners, commercial, that have complied with the new engineering standards that will better protect those facilities, those buildings, from damages from earthquakes. So we are looking for more cooperation also from the insurance industry, and we'll be pursuing that over the next couple years. The report language, Mr. Chairman, I think should not be objectionable, cleared by FEMA and the minority staff as well as the majority.

Chairman SENSENBRENNER. The gentleman yields back the balance of his time.

Is there further discussion on the gentleman from Michigan's proposed report language?

[No response.]

Hearing none, all those in favor will signify by saying aye.

Opposed, no.

The ayes appear to have it. The ayes have it, and the report language is agreed to.

Further proposals for report language?

[No response.]

Hearing none, the question is on the bill. Those in favor will signify by saying aye.

Opposed, no.

The ayes appear to have it. The ayes have it. The bill is agreed to.

To make the motion to report the bill, the Chair recognizes the gentleman from California, Mr. Brown.

Mr. BROWN. I am doing this in lieu of—because of the absence of the Ranking Subcommittee Member. Mr. Chairman, I move that the Committee report the bill H.R. 1184 as amended. Furthermore,

I move to instruct the staff to prepare the legislative report, make technical and conforming amendments, and that the Chairman take all necessary steps to bring the bill before the House for consideration.

Chairman SENSENBRENNER. The question is on reporting the bill favorably. The Chair notes the presence of a reporting quorum. Those in favor will signify by saying aye.

Those opposed, no.

The ayes appear to have it. The ayes have it. The bill is reported favorably.

All members will have two subsequent calendar days in which to submit supplemental, minority, or additional views on this measure. Furthermore, without objection, pursuant to the clause 1 of rule 22 of the rules of the House of Representatives, the Committee authorizes the Chairman to offer such motions as may be necessary in the House to go to conference with the Senate on the bill. Without objection, so ordered.

Furthermore, without objection, the Chair requests unanimous consent that H.R. 1184 and H.R. 209 be reported as a single amendment in the nature of a substitute, reflecting the amendments that have been agreed to heretofore. Hearing none, so ordered.

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