

## Department of Commerce Appropriations: FY 2012

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The primary interest for the geoscience community in the Department of Commerce appropriations is the National Oceanic and Atmospheric Administration (NOAA) and National Institute of Standards and Technology (NIST).

Fiscal Year (FY) 2012 Department of Commerce Appropriations Process

<u>Account</u>	<u>Enacted FY11 (\$million)</u>	<u>FY12 President's Request (\$million)</u>	<u>House Action (\$million)</u>	<u>Senate Action (\$million)</u>	<u>Conference Committee Action # (\$million)</u>
<b>NOAA (total)</b>	4,588	5,497.7	4,533	5,092	4,975
National Weather Service	990.4	988	1,003	977	998
National Ocean Service	612.9	559.6	385	491	478
National Environmental Satellite, Data, & Information Service	1,396.4	2,015.4	1,765	1,823^	1,886**
Oceanic & Atmospheric Research	444.5	212*	289	363	387
National Climate Service	353.3	346.2	0	182	0
Education Programs	55	38.7	26.9	31.5	31.5
<b>NIST (total)</b>	750.1	1,101.1	700.8	680	751
National Earthquake Hazards Reduction Program (NEHRP)	4		TBD		

\*Transfer of \$226 million to the new Climate Service. ^The Senate subcommittee provides \$921 million for JPSS.

\*\*Includes \$924 million for JPSS #Has not been voted upon by either chamber as of November 15, 2011.

### President's Request for FY 2012

Dr. Jane Lubchenco summarized the President's budget request for fiscal year (FY) 2012 for the National Oceanic and Atmospheric Administration. Some budget highlights from a one-page NOAA document include the following:

"Coasts: The FY 2012 budget proposal includes an \$8.0M increase to create a National Working Waterfronts grant program to assist fishing dependent coastal communities. In the wake of the Deepwater Horizon incident, a further \$2.9M is provided for oil spill research and response, and \$5.0M for mapping surface current measurements important for national defense, oil spill response, search and rescue, and marine transportation. Also, a \$20.0M increase will go towards a competitive grant program to support development and implementation of priority actions identified in plans of regional ocean partnerships. Additional funds of \$6.8M will support the development of an agency-wide capability to conduct comprehensive Coastal and Marine Spatial Planning (CMSP) to ensure balanced use of our oceans and coasts."

"Research: In FY 2012, NOAA will support the development of wind renewable energy by using its expertise in weather and

atmospheric research to improve wind resource characterizations and forecasts. An increase of \$6.1M for ocean acidification (OA) will enhance our understanding of the impacts on our marine environments."

"Climate: NOAA's FY 2012 request supports steps needed to improve our climate services, including establishing a Climate Service line office within the Agency on par with the National Weather Service and other line offices. NOAA needs to better understand and characterize the Nation's vulnerability to climate change. Building on the past two decades of experience, NOAA proposes a \$4.7M increase for monitoring atmospheric carbon sources and determining the distribution of fossil fuel emissions across the United States, and \$3.0M to support regional climate services."

"Weather: Concern for public safety drives NOAA to continue to improve the timeliness and accuracy of warnings for all weather and water-related hazards. The FY 2012 budget request seeks an additional \$11.0M for NOAA's operational high performance computing to improve weather modeling. Also, an investment of \$26.9M will fund Next Generation Air Transportation (NextGen) development activities, allowing for better integration of weather information into air traffic decision-making solutions."

"Satellites: One of the greatest challenges facing NOAA today is ensuring continuity of satellite operations to provide unbroken coverage of weather forecasts and climate measurements into the future. In FY 2012, NOAA will continue development of the Joint Polar Satellite System (JPSS) with an increase of \$687.8M, and other satellite missions including DSCOVR (+\$47.3M), COSMIC-2 (+\$11.3M), Jason-3 (+\$33.0M), and the restoration of climate sensors (+\$30.4M). In addition, funding for GOES-R preserves the 2015 launch date and begins the acquisition of two additional satellites which will improve our ability to detect and predict severe weather events."

"Mission Critical: The FY 2012 budget continues to provide the core infrastructure services that are essential to NOAA's mission. An additional \$11.6M is requested for priority repairs to two vessels in deteriorating condition that collect data to support scientific programs. The FY 2012 budget also includes \$9.1M in increases for IT improvements and security."

#### House Action

Below are excerpts from the House Committee Report 112-169 regarding funding for specific programs at the National Oceanic and Atmospheric Administration (NOAA) in H.R. 2596. The full House has not considered this measure yet.

#### NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

The Committee recommends a total of \$4,533,052,000 in discretionary funds for the National Oceanic and Atmospheric Administration (NOAA), which is \$54,981,000 below fiscal year 2011 and \$952,682,000 below the request. The recommendation does not include funding as proposed to establish a Climate Service within NOAA. The recommendation instead funds NOAA programs in accordance with the current organizational structure. It is the Committee's intention that no funds shall be used to create a Climate Service at NOAA.

#### OPERATIONS, RESEARCH, AND FACILITIES

##### (INCLUDING TRANSFER OF FUNDS)

The Committee recommendation includes a total program level of \$2,848,130,000 under this account for the coastal, fisheries, marine, weather, satellite and other programs of NOAA. This total funding level includes \$2,775,930,000 in direct appropriations, a transfer of \$66,200,000 from balances in the 'Promote and Develop Fishery Products and Research Pertaining to American Fisheries' account and \$6,000,000 derived from recoveries of prior year obligations. The direct appropriation of \$2,775,930,000 is \$403,581,000 below fiscal year 2011 and \$601,677,000 below the request.

The following narrative descriptions and tables identify the specific activities and funding levels included in this Act. Each of the following tables for NOAA accounts and line offices include 'Administrative Efficiency Initiative' lines which include amounts proposed for reduction in the fiscal year 2012 budget.

*National Ocean Service.*--The recommendation provides \$385,510,000 for National Ocean Service (NOS) operations, research and facilities.

*Navigation Services.*--The Committee provides \$148,289,000 for navigation services. Of this amount, \$91,617,000 is provided for mapping and charting activities, which is the same as the fiscal year 2011 level for these important life and safety programs.

*Response and Restoration.*--The Committee is aware that thus far NOAA has received \$18,500,000 from BP for ongoing activities related to the Deepwater Horizon oil spill in the Gulf of Mexico. In addition, NOAA, as part of the settlement reached with BP, is going to receive \$100,000,000 for work related to the Deepwater Horizon oil spill. These funds are for restoration, planning, implementation, and monitoring. NOAA is scheduled to receive an additional \$150,000,000 for state-led projects to be selected by NOAA from proposals submitted by the States related to this oil spill. The Committee is also aware that the Department of the Interior is expected to receive \$150,000,000 and that the State Natural Resources Trustees involved in the BP settlement (Florida, Alabama, Mississippi, Louisiana, and Texas) are also slated to receive \$100,000,000 each from BP. NOAA is directed to provide a report to the Committee by December 1, 2011, describing its activities related to the disaster and a spending plan for the \$250,000,000 it expects to receive from BP to implement restoration projects in the Gulf.

*Gulf of Mexico Disaster Response Center.*--The Committee directs NOAA to provide it a report by September 1, 2011, on the status of the Gulf of Mexico Disaster Response Center and efforts to make it operational.

*Oceanic and Atmospheric Research.*--The Committee recommends \$288,667,000 for Oceanic and Atmospheric Research (OAR) operations, research, and facilities.

*Competitive Climate Research Program.*--The Committee recommends \$106,044,000 for OAR's competitive climate research program. The Committee includes funding for these activities in OAR and not in the Climate Service as requested. The Committee notes the importance of extramural research to support NOAA's core scientific mission.

*Exploration and Education Activities.*--The Committee supports ocean exploration and related educational programs and urges NOAA to continue working with private sector partners and the educational community to ensure that critical programs are continued to the degree possible given funding constraints.

*Tornado and Severe Storm Research.*--The recommendation includes \$10,037,000, the full amount requested, for tornado and severe storm research and phased array radar. The Committee encourages NOAA to increase tornado research and warning infrastructure for tornadic storms which support rapid response of state-of-the-art science, analysis of data, and additional graduate research training.

*Iron fertilization.*--The Committee included a reporting requirement in the statement accompanying Public Law 111-117 directing NOAA to provide a report on the potential of ocean fertilization for climate change mitigation. The Committee directs NOAA to continue efforts in this area to address key scientific questions regarding the potential impacts of iron fertilization on the oceans; this effort should be coordinated with other Federal agencies, academia, and the private sector, as appropriate. The Committee directs NOAA to submit a report to the Committee within 90 days of enactment of this legislation that outlines findings in this area.

*National Weather Service.*--The Committee recommends \$908,018,000 for National Weather Service (NWS) operations, research and facilities, which is \$36,436,000 above the enacted level and \$11,230,000 above the request. Within NOAA, the Committee recommendation prioritizes funding for these core life and safety programs.

*Tsunami funding.*--The recommendation includes \$41,554,000 for tsunami warnings, forecasts, and research, which is \$1,055,000 above the fiscal year 2011 level and the same as the budget request. This amount includes \$23,541,000 for the NWS Strengthen U.S. Tsunami Warning Program; \$4,113,000 in the NWS, Local Warnings and Forecasts line (TWCs/ITIC); \$900,000 in OAR's Pacific Marine Environmental Laboratory base funding for tsunami research and development activities; and \$13,000,000 remaining from the funds provided in section 3010, National Alert and Tsunami Warning Program of Public Law 109-171, the Deficit Reduction Act.

*Tsunami preparedness.*--Following the earthquake and devastating tsunami that struck Japan earlier this year, the Committee urged NOAA to hold a tsunami preparedness summit for communities on the East Coast, the Gulf of Mexico, and the Caribbean. This conference, held in June 2011, included Federal, State, and local stakeholders and was designed to ensure that communities in these regions have access to tsunami-related information, lessons learned, and best practices. The Committee urges NOAA to continue its efforts to work with coastal communities in these areas to improve awareness of tsunami outreach and education activities, detection and warning services, and response and mitigation programs. The Committee expects NOAA to hold a subsequent conference for West Coast coastal communities. An important part of NOAA's tsunami programs is its Deep Ocean Assessment and Reporting of Tsunamis (DART) network. This network consists of 39 buoys, deployed in the north, northeast, and western portions of the Pacific Ocean, the Atlantic Ocean, and the Gulf of Mexico, that measure wave height. The Committee expects NOAA to repair any DART stations that are not currently operational and report to the Committee no later than 30 days following enactment of this Act regarding the status of the entire DART network.

*Caribbean tsunami education and awareness.*--According to NOAA and the GAO, both Puerto Rico and the U.S. Virgin Islands face significant tsunami threats. The Committee is aware that the U.S. Geological Survey operates a seismic network surrounding Puerto Rico. Once an earthquake of a tsunami-generating magnitude is detected, NOAA's Tsunami Warning Center in Alaska issues a tsunami warning. NOAA shall provide a report to the Committee regarding the current capabilities to predict tsunamis and

expand the TsunamiReady TM program in the Caribbean by September 7, 2011. In addition, the Committee expects NOAA's Caribbean outreach coordinator to work with partners in Puerto Rico and the U.S. Virgin islands to expand their participation in NOAA's TsunamiReady TM program, which is a voluntary partnership between NOAA, State, and local emergency management agencies. The goal of TsunamiReady TM is to create tsunami resilience in communities by better integrating tsunami hazard preparedness into coastal community culture and providing coastal jurisdictions with a level of 'minimal readiness' for the tsunami hazard. There are currently 12 recognized TsunamiReady TM communities in Puerto Rico. The Committee directs NOAA to include a section in the current tsunami capabilities report on plans to expand the number of TsunamiReady TM communities in Puerto Rico and the U.S. Virgin Islands.

*Climate Service.*--The recommendation does not include the establishment of a climate service as proposed in the budget request. Instead, the recommendation funds NOAA programs in accordance with the current NOAA organizational structure.

*National Environmental Satellite, Data and Information Service.*--The Committee recommends \$171,636,000 for National Environmental Satellite, Data and Information Service (NESDIS) operations, research and facilities.

*Data Centers and Information Services.*--The Committee recommends \$58,919,000 for these activities, including not less than the current level for each activity currently funded under archive, access and assessment programs.

*Information technology.*--The recommendation includes \$11,059,000 for information technology services. This amount is provided to enhance the security of NOAA's critical enterprise information technology systems. NOAA, in consultation with the Secretary of Commerce and the IG, is directed to submit a report to the Committee by January 23, 2012, regarding the status of NOAA's information technology systems.

*NOAA education program.*--The Committee recommends \$26,884,000 for NOAA's Competitive Educational Grants and Programs, which is \$1,934,000 above fiscal year 2011. The Committee encourages NOAA, within available funds, to expand science, technology, engineering, and mathematics programs for middle school youth as appropriate.

#### PROCUREMENT, ACQUISITION AND CONSTRUCTION

The Committee recommendation includes a total program level of \$1,709,772,000 in direct obligations under this heading, of which \$1,702,772,000 is appropriated from the general fund and \$7,000,000 is derived from recoveries of prior year obligations. The direct appropriation is \$370,090,000 above fiscal year 2011 and \$350,005,000 below the request. The following narrative descriptions and tables identify the specific activities and funding levels included in this Act:

*National Weather Service (NWS).*--The Committee recommends \$94,917,000 for NWS systems acquisitions and construction, which is \$1,982,000 below fiscal year 2011 and \$3,727,000 above the request.

*Weather and Climate Supercomputing.*--The recommendation includes \$40,169,000 for Weather and Climate Supercomputing, which is \$11,058,000 above fiscal year 2011 and the same as the request. This funding will support ongoing Hurricane Forecast Improvement Project modeling and continue regular improvements to numerical prediction modeling.

*National Environmental Satellite, Data and Information Service.*--The recommendation includes \$1,592,777,000 for National Environmental Satellite, Data and Information Service (NESDIS) acquisition and construction. This amount is \$334,355,000 above fiscal year 2011 and \$304,759,000 below the request.

*Geostationary Operational Environmental Satellite-R Series.*--The Committee recommends \$567,390,000 for Geostationary Operational Environmental Satellite-R (GOES-R), which is \$94,983,000 below fiscal year 2011 and \$50,000,000 below the request.

*Joint Polar Satellite System.*--The Committee recommends \$901,346,000 for the Joint Polar Satellite System (JPSS) program, which is \$429,446,000 above the fiscal year 2011 level and \$168,654,000 below the request. NOAA shall comply with language in section 105 of the accompanying bill updating a reporting requirement on cost and schedule of satellite programs, including a breach reporting requirement.

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The House of Representatives considers funding for NSF, NASA, NOAA and NIST in the subcommittee for Commerce, Justice and Science Subcommittee of the House Appropriations Committee.

#### Senate Action

The Senate Appropriations Committee passed the Commerce, Justice and Science fiscal year 2012 appropriations bill (S. 1572) on September 15, 2011. Below are excerpts from the press release of subcommittee Chairman Barbara Mikulski (D-MD). The full Senate passed S. 1572 as part of a "minibus" on November 1, 2011.



*The U.S. Senate Appropriations Subcommittee on Commerce, Justice, science, and related agencies today approved fiscal year (FY) 2012 funding legislation that totals \$52.701 billion in discretionary budget authority, a reduction of \$626 million below the fiscal year 2011 enacted level. The bill also includes \$135 million in disaster assistance.*

*“In a spending bill that has less to spend, we naturally focus on the cuts and the things we can’t do,” said CJS Subcommittee Chairwoman Mikulski. “But I’d like to focus on what we can do. The bill invests more than \$12 billion in scientific research and high impact research and technology development, to create new products and new jobs for the future.*

*National Oceanic and Atmospheric Administration (NOAA) – Provides \$5 billion for NOAA, which is \$434 million above the FY2011 enacted level. This provides NOAA \$920 million for the Joint Polar Satellite System, \$438 million more than FY 2011.*

*Due to this increase, NOAA’s other programs will face administrative and overhead reductions.*

*National Institute of Standards and Technology (NIST) – NIST is funded at \$680 million, which is \$70 million below the FY2011 enacted level. The bill does not include funding for new grants under NIST’s competitive construction program and eliminates funding for the Technology Innovation Program and the Baldrige Performance Excellence Program.*

*The Senate Commerce, Justice, Science Subcommittee Report 112-78 contains specific comments about the following NOAA geoscience-related projects:*

*Joint Polar Satellite System [JPSS].—The Committee provides \$920,794,000 for JPSS, which is \$436,530,000 above the 2011 spend plan level. The Committee remains concerned about the lack of long-term budgeting for JPSS as well as decisional delays caused by uncertainty over the transition of the legacy program, including the migration of legacy contracts to the JPSS program and on- going intellectual property disputes. The Committee has repeatedly requested updated and detailed budget plans for the life-cycle of the program. NOAA is reminded that section 112 of division B of Public Law 110–161 applies to JPSS, which continues as section 105 of this act.*

*The original cost to complete JPSS, excluding climate sensors, was originally projected to surpass \$11,900,000,000 through fiscal year 2024. The Committee does not believe the current fiscal climate can achieve this funding level, nor will the Committee continue to allow a single satellite program to jeopardize the base funding for every other agency in this bill, including the erosion of NOAA’s non-satellite operations. Therefore, the Committee directs NOAA to modify the scope and cost of the JPSS program in the following manner while preserving the mission’s primary objective of providing data for predicting and forecasting weather.*

*First, the Committee expects NOAA to reduce the program’s total life cycle cost, with the exception of climate sensors, to \$9,423,000,000 through 2024. This means from 2012 through 2024, NOAA will have a remaining budget of \$6,060,000,000, of which \$920,794,000 is provided in 2012. Should JPSS operate beyond 2024 based on extended satellite performance, the Committee will certainly entertain an extension with associated funding.*

*Second, NOAA is directed to provide the Committees with an up- dated budget plan for JPSS no later than 60 days after enactment of this act that keeps life cycle costs within this framework. In addition, the agency shall propose a firm cap on the costs of each payload sensor, spacecraft, and the ground segments. The original projected cost of a launch vehicle shall remain the same as originally budgeted for in February 2010. Funding for program management, execution and operations shall also be delineated, including a sufficient budget for contingency and reserve funding to handle anticipated problems in the development of JPSS–1 and JPSS–2.*

*Third, NOAA shall provide a report, within 60 days of enactment of this act, quantifying the value of JPSS data to other Federal agencies. NOAA shall establish a compensation policy that requires the agency to be fully reimbursed by appropriate Federal agencies or scientific institutions for the use of JPSS data, information and products. The Committee takes note of various agencies and institutions that have commented on the importance of JPSS and weather forecasting to their own operations and how full funding for the program is needed regardless of current fiscal constraints. The Committee also notes that none of these entities have offered any financial support for such an important program. Indeed, JPSS is as much of a national asset as it is a NOAA asset, and NOAA’s baseline weather information shall be available to all. However, NOAA shall be reimbursed for any special products, services, data transfers, or any activities conducted in collaboration with any other Federal agency or non-Federal entity per section 112 of this title.*

*Fourth, NOAA is prohibited from using appropriations to fund the development of any JPSS-related weather or climate instrument to fly on any satellite outside of the JPSS program without the express consent of the Committee.*

*Fifth, the Committee directs NOAA to ensure the launch date of JPSS–1 does not slip beyond the fall of 2016 to minimize the potential gap in civil weather forecasting. To mitigate any such gap, NOAA is directed to explore cost-effective and logistically reasonable options for acquiring weather data from our international space partners or from industry.*

*Sixth, NOAA is directed to keep weather forecasting as the prime objective of the JPSS mission, and to minimize risk. To this end, any associated climate sensors that become the critical path for JPSS will be cancelled. Given the fiscal environment and JPSS’s low tolerance for risk, NOAA shall explore the feasibility of using smaller platforms to accommodate climate sensors in order to accomplish NOAA’s climate goals.*

*NOAA Satellite Reporting.—Beginning with fiscal year 2013 and for every fiscal year thereafter, the Committee directs NOAA to*

*provide multi-year budget projections for all active satellite systems within the agency's request that cover the full life-cycle costs, including previous appropriations, broken out by year. For each satellite, NOAA shall clearly state the intended launch date listed to the closest quarter. At a minimum, NOAA is further directed to provide the Committee with quarterly programmatic and procurement status reports of all satellites actively flying and under development unless any reprogramming, system failure or other extraordinary circumstance warrants an immediate update.*

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The Senate considers funding for NSF, NASA, NOAA and NIST in the Commerce, Justice and Science Subcommittee of the Senate Appropriations Committee.

#### Conference Committee Action

On November 15, the House Committee on Rules released the conference report agreed to by the House and the Senate for the "minibus" which includes the Agriculture, Rural Development, Food and Drug Administration and Related Agencies Appropriations Act, 2012; the Commerce, Justice, Science, and Related Agencies Appropriations Act, 2012; and the Transportation, Housing and Urban Development, and Related Agencies Appropriations Act, 2012 (H.R. 2112). The conference report for Commerce, Justice, Science, and Related Agencies includes appropriations for the National Oceanic and Atmospheric Administration (NOAA), the National Institute for Standards and Technology, and the National Science Foundation.

The conference does not establish a NOAA Climate Service as proposed by the Senate report. Below is more geoscience-related language relating to NOAA's appropriations:

*National Ocean Service. - The conference agreement includes \$465,662,000 for National Ocean Service operations, research, and facilities. The conferees adopt by reference Senate report language regarding Integrated Ocean and Coastal Mapping but clarify that NOAA must ensure that proprietary and/or commercially-important fisheries data is kept confidential or is used only in aggregate datasets.*

*Response and Restoration. - The conferees adopt by reference House report language regarding the funds NOAA expects to receive from BP in response to the Deepwater Horizon oil spill in the Gulf of Mexico and direct NOAA to submit a spending plan to the Committees on Appropriations within 90 days of enactment of this Act. The conferees adopt by reference House report language regarding the Gulf of Mexico Disaster Response Center and direct NOAA to provide a report to the Committees on Appropriations within 60 days of enactment of this Act.*

*Joint Polar Satellite System (JPSS). - The conferees adopt by reference all House and Senate report language regarding JPSS with the exception of Senate report language regarding a lifecycle cost cap. Instead, the conferees direct NOAA to provide outyear funding estimates for this program prior to submission of the fiscal year 2013 budget request. The conferees note that new bill language is included in NOAA's Operations, Research, and Facilities account which limits the amount of funds that NOAA may obligate pending submission of a revised spend plan for JPSS and NOAA's other satellite programs. Further, the conferees direct NOAA to outline a framework for developing a compensation policy that would enable NOAA to be reimbursed as appropriate for the use of specialized data products derived from NOAA satellite imagery and data.*

*National Weather Service (NWS). - The conference agreement includes \$903,098,000 for NWS operations, research, and facilities. Within NOAA, the conference agreement prioritizes funding for these core life and safety programs.*

*NWS Operations. - NOAA shall enter into a contract with an independent organization with experience in assessing Federal agencies for the purposes of evaluating efficiencies that can be made to NWS operations. This review shall include consultations with emergency managers and other user groups as well as NWS employees. Any recommended efficiencies should not result in any degradation of service to the communities served by local forecast offices and River Forecast Centers, nor should such recommendations place the safety of the public at greater risk. This review shall not be undertaken until the National Academy of Sciences completes its review of the NWS modernization, which will include recommendations on the NWS workforce and composition and how NWS can improve current partnerships with Federal and non-Federal partners and incorporate new technologies for improved services. The findings and recommendations of the National Academy of Sciences review should inform this new independent assessment.*

*Flood forecasts. - The conference agreement does not adopt Senate language directing NOAA to enter into formal agreements with river commissions but does provide increased funding for flood forecasts and encourages NOAA to collaborate with river commissions to continue efforts to ensure that critical data is coordinated and used to provide accurate and timely flood forecasts.*

#### Appropriations Hearings

- March 11, 2011: House Committee on Science, Space, and Technology Hearing on the Fiscal Year 2012 Budget Requests for the National Science Foundation and the National Institute of Standards and Technology

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**House Committee on Science, Space, and Technology Hearing on the Fiscal Year 2012 Budget Requests for the National Science Foundation and the National Institute of Standards and Technology**

March 11, 2011

*Witnesses*

Panel 1

**Dr. Subra Suresh**

Director, National Science Foundation

**Dr. Ray Bowen**

Chairman, National Science Board

Panel 2

**Dr. Patrick Gallagher**

Under Secretary of Commerce for Standards and Technology, and Director, National Institute of Standards and Technology

*Committee Members Present*

Ralph Hall, Chairman (R-TX)

Eddie Bernice Johnson, Ranking Member (D-TX)

Dana Rohrabacher (R-CA)

Zoe Lofgren (D-CA)

Roscoe Bartlett (R-MD)

Marcia Fudge (D-OH)

Sandy Adams (R-FL)

Donna Edwards (D-MD)

Mo Brooks (R-AL)

Hansen Clarke (D-MI)

Dan Benishek (R-MI)

Daniel Lipinski (D-IL)

Randy Hultgren (R-IL)

John Sarbanes (D-MD)

Benjamin Quayle (R-AZ)

The House Committee on Science, Space, and Technology held a hearing on March 11, 2011 to discuss the fiscal year (FY) 2012 budget requests for the National Science Foundation (NSF) and the National Institute of Standards and Technology (NIST). The morning of the hearing, an 8.9 magnitude earthquake occurred off the coast of Japan that caused tsunamis around the world, placing some topics of discussion in an immediately relevant, though tragic, context.

Chairman Ralph Hall (R-TX) opened the hearing by acknowledging both agencies for their “vital contributions to our nation’s competitiveness,” and he listed several achievements that have come from NSF investments, including *Google* and MRIs, and thanked NIST for “making things run smoothly.” However, Hall said, considering the nation’s financial condition, the budget requests and increases are not realistic. Hall expressed concern that the Obama Administration has placed a greater emphasis on applied research at the agencies, whose core missions are to fund basic, fundamental research.

Ranking Member Eddie Bernice Johnson (D-TX) applauded the agencies for presenting budgets that invest in science and innovation to help stimulate economic growth. She compared the requests to the Full Year Continuing Appropriations Act of 2011 (H.R. 1) that the House passed in February, which includes cuts to both agencies. In fact, Representative Johnson said she was “dumbfounded” that some were considering cutting investments that help reduce the national debt and create well-paying jobs. Dr. Patrick Gallagher, director of NIST, outlined the priorities of the NIST FY 2012 budget request. He described the initiatives included in the request that aim to bolster manufacturing, infrastructure and education in the U.S. Dr. Gallagher mentioned the importance of disaster mitigation in which NIST is engaged, specifically its responsibility of the National Earthquake Hazard Reduction Program (NEHRP). He acknowledged that the events in Japan serve as an unfortunate reminder of hazard reduction significance.

Representative David Wu (D-OR) expressed the importance of NIST research to develop more earthquake resistant buildings and structures to help communities become more resilient. He explained that the Cascadia subduction zone off the coast of Oregon has the potential for a magnitude 9.0 earthquake. Gallagher responded that the timeliness of the topic was tragic, and went on to describe the federal agencies that are critical to disaster reduction and response. He explained how the U.S. Geological Survey

(USGS) is responsible for obtaining and producing seismic data and for mapping the areas in danger; the Federal Emergency Management Agency (FEMA) deals with response and recovery following a disaster; NSF invests in research for long-range engineering issues related to disasters; and NIST supports development of infrastructure and buildings that are resilient against earthquakes. This involves using research conducted by other agencies to develop model building codes that can then serve as an example and be adopted in local community codes. He stated that the NEHRP advisory committee is at NIST and told the committee that more research needs to be done on hazards mitigation.

Dr. Subra Suresh, director of NSF, highlighted some of the priorities included in the \$7.8 billion FY 2012 budget request. NSF plans to invest heavily in cyberinfrastructure, the Advanced Manufacturing Initiative, nanotechnology initiatives and three new science, technology, engineering and mathematics (STEM) education programs.

Dr. Ray Bowen, chairman of the National Science Board, added his support for the NSF budget request. He noted that investment in science, technology, infrastructure and the workforce are critical to America's continual economic growth, and that Congress must not lose sight of "long term investment during near term challenges."

Several questions related to STEM education programs. Ranking Member Johnson asked for an update on efforts to increase women and minority participation in STEM fields. Dr. Suresh said that though the number of women in higher education and those entering the workforce has increased in recent years, there is room for improvement for retaining them for the long term. Representative Hansen Clarke (D-MI) expressed concern over the proposed cuts to K-12 STEM education programs, in particular the termination of the Graduate STEM Fellows in K-12 Education (GK-12) program. Dr. Suresh assured him that NSF remains "very, very strongly committed" to K-12 education. Other STEM education programs will incorporate the best aspects of GK-12 in an attempt to streamline priorities, he said, and the elimination and reduced funding of the program in no way reflect a reduced commitment to improving STEM education. Noting that 12 federal agencies have roles in STEM education, Representative Dan Benishek (R-MI) asked whether it is necessary to have more than one agency working on the issue. Dr. Suresh stressed that NSF has the unique upstream role of researching, developing and testing models of the best teacher practices that other agencies then implement. He reminded Representative Benishek that NSF is the only federal agency that is involved in every science and engineering field.

There was varied response to the budget request. Representative Mo Brooks (R-AL) said it is "irresponsible for the White House to propose these increases" considering the country's financial situation and asked Dr. Suresh what fields of research have the highest priority. Dr. Suresh noted that the FY 2012 budget outlines NSF's priorities. He told him that NSF-funded research historically creates near and long term job opportunities and that innovation, the "engine of the economy," is more important in an unstable economy than a thriving one. Representative Zoe Lofgren (D-CA) agreed that "when times are tough it's time to double down on science investments."

Talk turned to discussion of the Full Year Continuing Appropriations Act of 2011 (H.R. 1). Representative Lofgren told Dr. Suresh that research universities in California have warned her that the cuts included in the act would result in far fewer grants in science and technology fields, therefore "killing the future prosperity." Dr. Bowen added that if the funding decreases, "there will be impacts" for long term fundamental research. He mentioned that young students and scientists beginning their careers in STEM areas would have fewer opportunities.

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*Sources: Department of Commerce, NOAA web site and budget office, NIST web site, NEHRP Coalition documents, Hearing testimony, GAO and Thomas.*

Please send any comments or requests for information to the AGI Government Affairs Program at [govt@agiweb.org](mailto:govt@agiweb.org).

Prepared by Linda Rowan, AGI Government Affairs Staff.

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