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 2013 (FY13) Department of Commerce Appropriations Process

<table>
<thead>
<tr>
<th>Account</th>
<th>FY12 Estimate ($million)</th>
<th>FY13 President's Request ($million)</th>
<th>House Action ($million)</th>
<th>Senate Action ($million)</th>
<th>Conference Committee Action ($million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOAA (total)</td>
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*While the request did not include a line item for the Climate Service, OAR would receive $212.7 million for Climate Research

### President’s Request for FY 2013

The President’s fiscal year (FY) 2013 budget request for the Department of Commerce would provide the National Oceanic and Atmospheric Administration (NOAA) with $5.06 billion (+ $153.9 million) and the National Institute of Standards and Technology (NIST) with $859.75 million.

In a briefing for stakeholders on February 16, NOAA Administrator Jane Lubchenco outlined the development of the budget proposal and announced that it prioritizes weather satellites at the expense of other areas. She pointed out that 2011 “rewrote the books” for severe weather and that last year’s weather disasters were a “sobering reminder of our vulnerability to severe weather and climate.” For this reason and because of their “critical role” to the U.S. economy, NOAA’s weather satellites would receive increases in the President’s budget request. “Clearly in this budget, the highest priority has really been a laserlike focus on stabilizing our weather satellite program,” Lubchenco said. “That, coupled with the significant fiscal constraints this year, we were simply unable to accommodate many of the programs that you see slated for reduction or termination,” she continued.
The National Ocean Service (NOS) would receive $458.5 million in the President’s FY 2013 budget request, a $19.4 million reduction of the estimated FY 2012 amount. This includes a zeroed out Procurement, Acquisition and Construction (PAC) budget and a 2 percent reduction in the Operations, Research, and Facilities (ORF) account. Navigation Services, within NOS, would receive $149.6 million (+ $1.6 million) including $49.3 million for Mapping and Charting Base, $6.96 million for Hydrographic Research and Technology Development, $2.3 million for Shoreline Mapping, $26.8 million for Geodesy Base, and $29.1 million for Tide and Current Data Base. NOS would be provided $166.1 million for Ocean Resources Conservation and Assessment (+ $2.8 million) and $142.8 million for Ocean and Coastal Management (- $5.4 million).

Oceanic and Atmospheric Research (OAR) would receive $413.8 million for FY 2013 (+ $26.9 million). For the FY 2012 budget request, NOAA proposed the creation of a National Climate Service though it was not funded by Congress. The activities of the proposed Climate Service would be funded in FY 2013 through OAR at $212.7 million. Of this amount, Laboratories and Cooperative Institutes would receive $53.4 million, Climate Data and Information would receive $14.0 million, and Climate Competitive Research, Sustained Observations and Regional Information would receive $145.3 million. Weather and Air Chemistry Research in OAR would receive $69.5 million and Ocean, Coastal, and Great Lakes Research would receive $108.8 million. Integrated Ocean Acidification Research within the latter account would receive $6.4 million. NOAA would receive $10.4 million for PAC activities within OAR for research supercomputing.

The National Weather Service (NWS) would receive a 3 percent reduction (- $26.05 million) with a total request of $972.2 million. Within the request, the $18.9 million would go to strengthening the U.S. Tsunami Warning Network. In order to upgrade several existing systems, NWS would receive $94.3 million for PAC activities.

The National Environmental Satellite, Data, and Information Service (NESDIS) would receive the largest increase (+ $155.2 million, 8 percent) of NOAA’s programs due to the Administration’s priorities. Both the ORF and PAC accounts would receive increases over the FY 2012 estimates. Referring to the Joint Polar Satellite System (JPSS) and the Geostationary Operational Environmental Satellite R-Series (GOES-R), Lubchenco said, “JPSS and GOES-R are two of NOAA’s highest priorities.” JPSS would receive $916 million (-$8 million versus FY2012 estimate), GOES-R would receive $802 million (+$187 million), Jason-3, the ocean altimetry satellite, would receive $30 million (+$10 million), DSCOVR, a space weather satellite, would receive $23 million (-$7 million) and the Environmental Satellite Observing Systems would receive $123 million (+$12 million).

NOAA Education Program would receive $11.3 million (-$20.2 million), a 64 percent reduction which Lubchenco described as “very frankly disappointing.”

House Action
The House of Representatives passed the Commerce, Justice, Science, and Related Agencies Appropriations Act, 2013 (H.R. 5326) on May 10, 2012 on a vote of 247-163. The House bill provides the National Oceanic and Atmospheric Administration (NOAA) with $4.96 billion and the National Institute of Standards and Technology (NIST) with $830.2 million. Relevant language from the House Report (112-463) follows:

National Oceanic and Atmospheric Administration

Administrative overhead.—The Committee directs NOAA to conduct a review of its programs with the goal of reducing and consolidating administrative overhead. For example, the Committee understands that during fiscal year 2011, NOAA administrative costs for the Coastal Zone Management (CZM) program were funded in at least three different lines on the NOAA funding table. NOAA shall submit a report no later than 120 days after enactment of this Act displaying administrative or other charges assessed by NOAA in fiscal years 2011 and 2012 to each of the lines on the NOAA “Control Table,” to include the amount assessed and the purpose.
Data sources.—The Committee directs GAO to examine NOAA’s various ocean and coastal data collection systems, including but not limited to: Integrated Ocean Observing System (IOOS), Physical Oceanographic Real-Time System (PORTS), National Water Level Observation Network (NWLO), Coastal-Marine Automated Network (C–MAN), Argo, Deep-ocean Assessment and Reporting of Tsunamis (DART), drifting buoys, the Toga Tao array, and gliders. This report, to be submitted no later than 180 days after enactment of this Act, shall include the location of these sensors; the yearly cost to maintain these systems; the NOAA line office that is responsible for the system; how these systems are used by the various NOAA line offices, other Federal government agencies and the private sector; and a review of the data that these systems provide, how this data is used and a determination as to whether or not the data they collect is duplicative of, different from or complements other data available to NOAA.

Facilities Maintenance.—The Committee is concerned that NOAA does not maintain a standard for assessing facilities maintenance funding requirements. The Committee expects NOAA to provide more transparency and clarity in the ongoing maintenance needs of its labs and other facilities and therefore directs NOAA to include in its fiscal year 2014 Congressional budget submission separate facilities maintenance funding requests for each of the line offices.

Coastal and marine spatial planning.—The Committee notes that coastal and marine spatial planning was funded as a separate line item in the National Ocean Service in fiscal year 2011. No funding was provided in fiscal year 2012 and none was requested in fiscal year 2013. Consequently, this bill includes no funds for coastal and marine spatial planning activities under any NOAA program, project or activity in this Act.

National Ocean Service (NOS)

Marine debris.—The Committee does not approve of the transfer of these activities to the National Marine Fisheries Service and includes $3,000,000 for marine debris activities within NOS.

Lessons learned from the Deepwater Horizon oil spill.—The Committee encourages NOAA to develop specific biosensor methodologies and validate specific model organisms to use as biological sentinels to detect the impacts of environmental disasters. In addition, the Committee encourages NOAA to draw on lessons learned from its response to the Deepwater Horizon oil spill and engage with its academic partners to develop a response plan in the event of an oil spill in the Caribbean. NOAA shall provide a report to the Committee no later than 120 days after enactment of this Act outlining a response plan.

Competitive Research.—The Committee recommends $11,000,000 for Competitive Research within NOS, which is $1,968,000 higher than fiscal year 2012 and the same as the request. All $11,000,000 shall be used for competitive research and not for NOAA administrative activities or expenses. The Committee directs NOAA to assess the placement of this program within the NOS and whether this program is more appropriately funded in the Office of Oceanic and Atmospheric Research. NOAA shall report to the Committee on this assessment no later than 90 days after enactment of this Act.

Ocean and Atmospheric Research (OAR)

Balancing the research portfolio.—The Committee notes that the overall request for Climate Research activities exceeds that for Weather and Air Chemistry Research and Ocean, Coastal, and Great Lakes Research combined. Therefore, the Committee recommends a more balanced funding allocation across NOAA’s research programs, including additional funding for Weather and Air Chemistry and Ocean, Coastal, and Great Lakes Research programs. This reallocation provides for the ongoing operation at no less than current operating levels of NOAA’s research labs funded within OAR. The Committee encourages NOAA and its Science Advisory Board to review NOAA’s overall research portfolio to ensure that it is appropriately allocated to support NOAA’s core operational mission requirements.

Weather and Air Chemistry Research.—The Committee directs NOAA to provide a report no later than 120 days after enactment of this Act regarding the use of unmanned aerial systems in hurricane research. The recommendation includes requested funding for Multi-function Phased-Array Radar research and development for improved forecast accuracy. The Committee supports NOAA’s ongoing deployment of dual polarization capability which is critical for improving the ability of weather forecasters to better distinguish precipitation types. The Committee encourages NOAA to continue its internal and external research and development activities in this area, and to submit a report no later than February 5, 2013, on these efforts. In addition, the Committee directs NOAA to collaborate with the National Science Foundation and academic and private sector partners to study tornadoes and other severe weather events, including, but not limited to, variables in humidity and topography and how these factors can impact the formation, intensity, and storm path of tornadoes. NOAA shall report to the Committee, within 90 days of enactment, on plans for this research.
Ocean Exploration and Research.—The Committee supports ocean exploration and research and educational programs and provides $23,000,000 for these activities, which is $545,000 below fiscal year 2012 and $3,335,000 above the request. The Committee encourages NOAA to utilize its two exploration ships, the Oceanos Explorer and the E/V Nautilus, on research and exploration missions in the U.S. Exclusive Economic Zone.

National Weather Service (NWS)

Strengthen U.S. tsunami warning network.—The recommendation includes $23,466,000 for NOAA’s tsunami program, which is the same as fiscal year 2012 and $4,554,000 above the request. The Committee does not approve of NOAA’s proposal to terminate partner funding for education and awareness programs of the National Tsunami Hazard Mitigation Program or NOAA’s proposal to reduce funding for maintenance of the DART buoy network. The Committee expects NOAA to repair any DART stations that are not currently operational and report to the Committee no later than 30 days after enactment of this Act regarding the status of the entire DART network. The Committee also expects NOAA to engage the National Academy of Sciences to review the need for, and assess the utility of, establishing a third tsunami warning center in the Caribbean, collocated at one of NOAA’s existing facilities. The Committee recommends $99,139,000 for NWS systems acquisitions and construction, which is $8,029,000 above fiscal year 2012 and $1,700,000 above the request, to maintain NOAA’s Profiler Network. This amount includes the full amount requested, $12,400,000, for the Ground Readiness Project to enable the NWS to update its information technology infrastructure to ensure that the Weather Forecast Offices can receive the data from the Suomi National Polar-orbiting Partnership (NPP) satellite, Joint Polar Satellite System (JPSS), and Geostationary Operational Environmental Satellites (GOES). NOAA shall provide a report to the Committee no later than 30 days after enactment of this Act with a spending plan for these funds as well as the status of deploying the upgrades to each of the Weather Forecast Offices.

National Environmental Satellite, Data, and Information Service (NESDIS)

National Environmental Satellite, Data and Information Service (NESDIS).—The recommendation includes $1,822,821,000 for NESDIS acquisition and construction. This amount is $126,176,000 above fiscal year 2012 and $27,488,000 below the request. NOAA shall notify the Committee prior to obligating any of its reserve funds for either the GOES–R or JPSS programs. Geostationary Operational Environmental Satellite–R (GOES–R) Series.—The Committee recommends $796,000,000 for GOES–R, which is $180,378,000 above fiscal year 2012 and $6,000,000 below the request.

Joint Polar Satellite System.—The Committee recommends $916,364,000 for the JPSS program, which is $7,650,000 below fiscal year 2012 level and the same as the request. Funding provided will continue development of the JPSS instruments, ground systems and spacecraft, including funding to continue development of the OMPS-Nadir instrument as requested. The Committee understands that failure to complete OMPS-Nadir could lead to a need to redesign the JPSS–1 spacecraft and redo thermal and mechanical analyses for certain other instruments which would have an impact on schedule and cost. The Committee notes that no alternatives exist to fill the anticipated gap in weather data between the end of the expected operational capabilities of the Suomi NPP, estimated to be in 2016, and the time when JPSS–1 becomes fully operational in 2018. Therefore, NOAA shall report to the Committee within 30 days after enactment of this Act, and on a monthly basis thereafter, on program progress and adherence to the JPSS budget and schedule.

Quarterly satellite briefings.—The Committee directs NOAA to continue providing quarterly satellite briefings to the Committee regarding NOAA major system acquisition programs. NOAA shall provide quarterly obligations reports for each of the satellite programs beginning with funds expended during fiscal year 2012.

National Institute of Standards and Technology (NIST)

The Committee recommendation includes $621,173,000 for NIST’s scientific and technical core programs, which is $54,173,000 above fiscal year 2012 and $26,827,000 below the request. The recommendation provides funding above the current year for metrology infrastructure and standards to support biomanufacturing, standards to support nanomanufacturing, the Materials Genome Initiative, measurement science and standards to support smart manufacturing, the NIST Manufacturing Fellowship Program, secure and interoperable communications, and disaster resilience and natural hazards risk reduction. The Committee recommends $149,000,000 for Industrial Technology Services, which is $20,557,000 above fiscal year 2012 and the same as the request. This amount includes $128,000,000 for the Manufacturing Extension Partnership (MEP) program, which is $443,000 below fiscal year 2012 and the same as the request. The Committee recommends $149,000,000 for Industrial Technology Services, which is $20,557,000 above fiscal year 2012 and the same as the request. This amount includes $128,000,000 for the Manufacturing Extension Partnership (MEP) program, which
is $443,000 below fiscal year 2012 and the same as the request.


Senate Action

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

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

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.

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.

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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.