

Other Selected Agencies

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HIGHLIGHTS

- The discretionary R&D budget of the **National Institute of Standards and Technology (NIST)** would increase by 24 percent to reach \$696 million. Additional mandatory proposals would push NIST R&D to \$1.6 billion.
- The **National Oceanic and Atmospheric Administration (NOAA)**'s FY 2014 budget request is \$5.4 billion, an 11 percent increase over FY 2012. NOAA focused its budget on “restoring balance” between oceanic and atmospheric missions; internal and external funding; and immediate needs and long-term goals.
- The FY 2014 **U.S. Geological Survey (USGS)** request is \$1.2 billion, a 9 percent increase over FY 2012. R&D would increase 13 percent to \$761 million in the request, which prioritizes programs that are unique to USGS, have national impacts, and provide monitoring, research, and tools to make science available to decisionmakers.
- Compared to FY 2012, the **Environmental Protection Agency's (EPA)** R&D would decrease 1.4 percent to \$560 million in the request, and the agency as a whole would see a 3.5 percent decline from FY

2012 enacted levels.

- The President's FY 2014 budget request for the **Department of Transportation (DOT)** includes a 2.1 percent increase in R&D and, among other things, would elevate the Research and Innovative Technology Administration to the Office of the Secretary.
- The Department of Veterans Affairs (VA)** requested \$1.2 billion in direct R&D appropriations for 2014, a flat budget that would fail to keep pace with inflation.

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY (NIST)

The National Institute of Standards and Technology (NIST) is a non-regulatory agency that operates under the Department of Commerce. NIST is at the heart of efforts to boost innovation in America's manufacturing base. The FY 2014 Budget request would increase NIST's budget by about 24 percent compared to FY 2012 enacted levels, to \$928.3 million. \$696.0 million would go to R&D, with an additional \$1 billion investment to launch the National Network of Manufacturing Innovation, bringing the total R&D investments for FY 2014 to approximately \$1.6 billion.

The National Network of Manufacturing Innovation would receive the most funding in 2014; \$1 billion would fund the development of regional innovation and manufacturing hubs that would aim to increase American manufacturing competitiveness and encourage investment in the United States. Up to 15 institutes would be comprised of experts from private industry, academia, and government who would facilitate the progression of new technologies from basic research to application. The program would be led by the interagency Advanced Manufacturing Program Office.

Scientific and Technical Research Services (STRS) houses all of NIST's research laboratories and performs all of the agency's basic research, and accounts for about 75 percent of NIST's discretionary budget. Most notably, the FY 2014 Budget requests \$693.7 million for STRS, a 22 percent increase from FY 2012. The President hopes to direct about \$90 million to advanced manufacturing, which refers to U.S. capabilities to develop new data infrastructure and new materials, design better manufacturing metrology, and integrate new smart technologies. Cybersecurity R&D and standards programs would receive \$45 million, which would support

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efforts to protect American cyber infrastructure and establish voluntary security standards. Other major priorities include NIST Centers of Excellence (\$20 million), communications (\$10 million), and Health Information Technology (\$3 million).

The Industrial Technology Service (ITS) supports two major projects: the Hollings Manufacturing Extension Partnership (MEP) and the Advanced Manufacturing Technology Consortia (AmTech). ITS would receive \$174.5 million in total, a 36 percent increase from FY 2012. MEP, comprised of 1,300 experts who work with local manufacturing communities, would account for \$153.1 million. AmTech provides grants to consortia that identify long-term needs of the industrial community and fund research to address these needs, and would receive \$21.4 million.

Finally, Construction of Research Facilities (CRF) would receive \$60.0 million, a 7 percent increase from FY 2012. This funding would help decrease the backlog of restoration projects and maintain and repair NIST facilities.

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Although it was still subject to sequestration, the National Oceanic and Atmospheric Administration (NOAA) fared better than most agencies in FY 2013. NOAA's appropriation bill provided the agency flexibility to address needs in its satellite programs when applying the cuts. In addition, NOAA received \$300 million in added funds from Hurricane Sandy relief legislation that helped ease the impact of the cuts on some programs.

NOAA's FY 2014 budget request is \$5.4 billion, an 11 percent increase over FY 2012. NOAA focused its budget on "restoring balance" between oceanic and atmospheric missions; internal and external funding; and immediate needs and long-term goals. One aspect of this rebalancing is the \$1 billion decrease in the life cycle funding for Joint Polar Satellite System, whose FY14 budget would decrease 10 percent to \$824 million. In addition, development of several sensors would be transferred to the National Aeronautics and Space Administration. Funding for the Geostationary Operational Environmental Satellite – R Series weather satellite would increase to \$954.8 million, a 55 percent increase over FY 2012.

As part of the Administration's broader efforts to realign STEM education programs, several NOAA education programs would be eliminated or transferred to other agencies, including Teacher at Sea, National Sea Grant Education, Competitive Education Grants, Dr. Nancy Foster Scholarship Program, Ocean Exploration and Research Education, and Bay Watershed Education and Training (B-WET).

The FY 2014 request would increase NOAA's R&D by 27.7 percent to percent to \$733 million. The Office of Oceanic and Atmospheric Research (OAR) would receive \$472.4 million. Within OAR, increases are proposed for ocean acidification, ocean exploration and research, next generation weather observing platforms, and the National Sea Grant College Program.

DEPARTMENT OF THE INTERIOR (DOI)

The largest research agency in the DOI is the U.S. Geological Survey (USGS) and its FY 2014 request is \$1.2 billion, a 9 percent increase over FY 2012.

Funding for the USGS has stagnated in real dollars for more than a decade and declined approximately 5 percent below FY 2012 levels in FY 13 due to sequestration. As a result, USGS suspended all travel through the first quarter of 2013, and announced they will have reductions in grants, reduced R&D, and 350-375 stream gages that will not deliver information.

Approximately two thirds of the USGS budget is allocated for research. R&D would increase 13 percent over FY 2012 to \$761 million in the request, which prioritizes programs that are unique to USGS, have national impacts, and provide monitoring, research, and tools to make science available to decisionmakers.

Increases are seen for programs supporting DOI's New Energy Frontier initiative, particular the USGS focus on geothermal, wind, and hydraulic fracturing. Within a DOI initiative focused on Water Challenges, USGS increases would go to WaterSMART and to support a National Groundwater Monitoring Network.

In the mission areas, Climate and Land Use Change would receive \$156 million, a 10 percent increase over FY 2012. The largest increase is seen in the Climate Variability subaccount, which would increase \$13.6 million to \$71.7 million. Increases are included for climate research and development

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and biological carbon sequestration. The Land Use Change request is \$84.3 million, \$1 million over FY 2012. Within that account, Landsat would receive \$53.3 million. After the successful February 2013 launch of the Landsat Data Continuing Missions/Landsat 8 Ground System, USGS will work with the National Aeronautics and Space Administration to develop a successor mission and continue its role in managing the collection, archiving, and dissemination of Landsat data.

Energy, Minerals, and Environmental Health funding would increase 12 percent to \$107.4 million, with increases slated for rare earth elements and critical minerals research. Similar to FY 2013, the request would cut \$5 million from mineral information, resources, research and assessment.

The Natural Hazards budget would increase \$11.4 million to \$142.6 million. The budget request contains increases for improving rapid response to disasters, research on East Coast earthquakes, and coastal storm response capability.

Water Resources funding would increase 6 percent to \$222.9 million, with stream gages receiving large increases and cuts proposed for Water Resources Research Act programs.

Core Science Systems would increase \$22.9 million to \$137.2 million, with increases slated for national cooperative geologic mapping and data preservation programs.

Ecosystems would receive \$180 million, a 14 percent increase. Increases are slated for research on white-nose syndrome in bats, coral reef health, invasive brown tree snakes, and other emerging invasive species.

ENVIRONMENTAL PROTECTION AGENCY (EPA)

Compared to FY 2012, the Environmental Protection Agency's (EPA) R&D would decrease 1.4 percent to \$560 million in the FY2014 request, and the agency as a whole would see a 3.5 percent decline from FY 2012 enacted levels to \$8.2 billion.

Although R&D exists across the agency, the majority of R&D funds are located in the Science and Technology account, which would also decrease 1.4 percent to \$784 million. Within the Science and Technology account, Sustainable Communities would see the largest decline. Air,

Climate and Energy; Chemical Safety; Homeland Security; and the Safe and Sustainable Water accounts would see modest increases in their R&D.

The Administration's request would eliminate Science to Achieve Results (STAR) and Greater Research Opportunities (GRO) fellowships from the EPA request as part of broader Administration efforts to revamp STEM education programs.

EPA's request includes \$8 million to assess potential impacts of hydraulic fracturing on air quality, water quality, and ecosystems, a study jointly conducted with USGS and Department of Energy. The EPA also will release a report on the impacts of hydraulic fracturing on drinking water in late 2014, contributing to a subject that is seeing much debate in Congress and the states.

DEPARTMENT OF TRANSPORTATION (DOT)

In 2012, President Obama signed the Moving Ahead for Progress in the 21st Century Act (MAP-21; P.L. 112-141), the first long-term highway authorization act since 2005. The Obama Administration's FY 2014 proposed budget for the Department of Transportation (DOT) supports the program structures and performance-based investment strategies defined in that bill, and includes a five-year \$40 billion reauthorization program for the U.S. rail system. The budget also includes \$50 billion for immediate transportation investments in critical infrastructure, in an effort to stimulate job growth and improve roads, bridges, and public transit systems. Priorities for DOT R&D include improving safety for commuters, enhancing national railways, maximizing efficiency, and modernizing America's transportation infrastructure.

The budget requests \$77 billion for the DOT in FY 2014, a 6.4 percent increase from FY 2012 enacted funding levels. \$939 million of those funds would go to R&D programs, a 2.1 percent increase from FY 2012. Of this total, \$677 million would be for applied research, \$224 million would be for development, and the remaining \$39 million would be spent on maintenance of R&D facilities and capital equipment.

The Federal Highway Administration (FHWA) would receive the largest share of the DOT's R&D funding, approximately 40 percent or \$380 million. This amount is a 6.5 percent decrease from FY 2012.

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The FHWA budget provides increases for state research planning (\$186 million), surface transportation research (\$178 million) and development of intelligent transportation systems (\$100 million). Proposed research projects address access to public transportation, as well as safety for drivers, bicyclists, pedestrians, and public transit commuters. Specifically, DOT highlights the importance of reducing the number and severity of crashes on American roadways, and developing tools for performing more accurate safety assessments of infrastructure and collecting data. There are also plans to study the relationship between surface transportation and the environment, to help the agency develop strategies for mitigating and adapting to climate change, and improving sustainability.

The Federal Aviation Administration (FAA) would receive \$341 million for R&D, a 7.1 percent decrease from FY 2012. \$166 million would go toward research, engineering, and development, while the remaining funds will be used to maintain research facilities and equipment. Special projects include NextGen—the FAA’s flagship R&D program geared towards modernizing the nation’s air traffic control system and improving aircraft emissions and performance—which would also receive an additional \$1 billion for immediate investments, as well as research pertaining to fire, propulsion/fuel systems, advanced materials, weather, and unmanned aircraft.

Finally, the Federal Railroad Administration (FRA) and the National Highway Traffic and Safety Administration (NHTSA) would both receive substantial boosts. The FRA R&D programs focus on railroad safety improvement, while NHTSA R&D programs focus largely on highway safety, crash data collection, new car assessments, and alternative fuels. The President’s budget also outlines a \$40 million reauthorization for the FRA that would fund efforts to enhance safety and modernize the rail system, and increase the system’s capacity to meet a growing demand for rail services. The reauthorization would also promote R&D and workforce development to ensure that America’s railway remains globally competitive.

DEPARTMENT OF VETERANS AFFAIRS (VA)

As the number of American veterans reaches 22 million, the Department of Veterans Affairs (VA) has an important role to play in advancing veterans’ health and well-being through investments in research. The VA’s direct

appropriations request for medical and prosthetics research in FY 2014 is \$585.7 million, a 0.8 percent increase over the FY 2012 level of \$581.0 million. With an additional \$1.3 billion in research support services and grants from other federal and private sources, the combined request for FY 2014 VA research and development programs would reach \$1.88 billion, a 0.6 percent increase over the FY 2012 level of \$1.87 billion.

VA research is organized into four main divisions: biomedical laboratory, clinical science, health services, and rehabilitation. These areas cover a spectrum of topics ranging from lung, kidney, and autoimmune disorders, to mental health, to bioterrorism. Ongoing research priorities for the VA include pain, sensory loss, spinal cord injury, women's health, prosthetics, Gulf War illness, aging and chronic disease, post deployment health and mental health (including traumatic brain injury and post-traumatic stress disorder), rehabilitation, employment, and genomics. The VA's Million Veteran Program recently enrolled its 150,000th volunteer veteran in this large-scale, national study seeking to understand how genes and military exposures ultimately affect health.

In addition to these ongoing priority areas, the VA's FY 2014 budget request also notes that research projects will focus on supporting development of "New Models of Care," reducing suicide, and evaluating the effectiveness of complementary and alternative medicines.

Because the VA research program is solely intramural, research facilities also fall within the VA budget. The scientific community has argued for decades that VA construction and maintenance appropriations have failed to provide the resources needed by VA to replace, maintain, and/or upgrade aging research facilities. The Administration's FY 2014 budget request states that at least 5 percent of the Medical Facilities Non-Recurring Maintenance and Minor Construction allocation would be dedicated to funding projects at research facilities.