



The President's FY 2013 Budget Request for Biological Sciences Research and Education

**A Report from the AIBS Public Policy Office
February 24, 2012**

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Summary

President Obama released a \$3.8 trillion budget plan for fiscal year (FY) 2013 on 13 February 2012. According to the White House, the budget proposal would cut deficits by \$4 trillion over the next decade and would avoid the \$1.2 trillion in automatic spending cuts mandated by the Budget Control Act signed into law in August 2011. The deficit reduction would be achieved by increased revenues, including higher taxes on families earning more than \$250,000, and spending cuts.

Science is once again a priority in the President's budget request. Despite a freeze on discretionary spending at the 2011 level for the second year in a row, the Administration proposed \$140.8 billion for federal research and development (R&D), an increase of \$2.0 billion. Non-defense R&D would increase by five percent above the FY 2012 level.

Nearly all science agencies would see increased funding in FY 2013. Notably, the National Science Foundation would receive a 4.8 percent increase. Other science programs slated for an increase include the Department of Energy Office of Science, Department of Agriculture research, and various Department of the Interior bureaus. Although the overall budgets for the Environmental Protection Agency and National Aeronautics and Space Administration would be cut, the agencies' research programs would receive slight budget increases.

Science, technology, engineering, and math (STEM) education programs would collectively receive \$3.0 billion, a 2.6 percent increase.

The multi-agency U.S. Global Change Research Program would receive \$2.6 billion (+5.6 percent).

Agency Budget Summaries

Department of Energy Office of Science

- *2013 Department of Energy Budget Request: \$27.2 billion (+\$855.5 million*)*
- *2013 Office of Science Request: \$5.0 billion (+\$118.4 million)*
- *2013 Biological and Environmental Research Request: \$625.3 million (+\$15.8 million)*

The Department of Energy Office of Science is slated to receive a 2.4 percent increase. Funding for Biological and Environmental Research would increase at a similar rate (+2.6 percent), with proposed funding of \$625.3 million.

The Biological and Environmental Research program supports research to explore the frontiers of genome-enabled biology; discover the physical, chemical, and biological drivers of climate change; and seek the molecular determinants of environmental sustainability and stewardship.

Several biological research areas are targeted for increases in FY 2013. Terrestrial ecosystem science would receive the largest increase (+\$11.7 million, +29.0 percent); these funds would continue an experiment begun in 2012 on the relationship between climate change and Arctic permafrost ecosystems, as well as start new research on climate change in tropical ecosystems. Additional funding would also support climate modeling (+\$4.3 million, +15.0 percent). Genomics science would receive \$4.2 million in new funding for the development of synthetic biology tools and biodesign technologies for living systems relevant to bioenergy production, carbon cycling, and environmental change.

Although many programmatic areas would be flat funded, a few programs would receive budget cuts. For example, the radiological sciences program would be cut by \$6.8 million (-19.4 percent).

Although the average research grant size would not change, the Biological and Environmental Research program expects to award 10 more grants than in FY 2012.

The President's budget request would terminate the Science Graduate Fellowship Program. The fellowship was started in 2009 to support graduate students pursuing fundamental research relevant to the Office of Science. The program received \$5.0 million last year.

*Note: All increases/decreases are relative to the FY 2012 enacted budget.

Environmental Protection Agency (EPA)

- *2013 EPA Budget Request: \$8.3 billion (-\$104.9 million)*
- *2013 Science and Technology Request: \$807.3 million (+\$13.5 million)*

Overall spending at EPA would decline by 1.2 percent under the proposed budget. Funding for science and technology programs, however, would increase by 1.7 percent.

Within the Office of Research and Development, funding for ecosystem research would decline to \$60.2 million (-1.0 percent). Research on air, climate, and energy would benefit from a 7.1 percent increase, as would research on sustainable water resources (+6.8 percent).

Increased funding would be available for climate change research (+\$3.3 million) and biofuels (+\$1.8 million). A new Center for Innovative Estuarine Approaches will develop innovative scientific and technical solutions to inform policies, environmental management structures, and business approaches to ensure the sustainability of coastal watersheds and estuaries (+\$2.0 million).

EPA would also expand work with the Department of Energy and United States Geological Survey to understand the potential impacts of hydraulic fracturing on air, ecosystems, and water quality. Additionally, new funding is proposed for molecular design of chemicals that are safer for humans and the environment (+\$4.1 million).

Several large-scale ecological restoration projects would continue in FY 2013. The cleanup of the Great Lakes would be maintained at \$300.0 million (+\$0.5 million). Restoration of the Chesapeake Bay would receive \$15.3 million in increased funding (+26.7 percent).

The FY 2013 President's budget eliminates a number of programs totaling \$50 million, including beach protection grants (-\$9.9 million) and environmental education (-\$9.7 million).

National Aeronautics and Space Administration (NASA)

- *2013 NASA Budget Request: \$17.7 billion (-\$58.6 million)*
- *2013 Earth Science Request: \$1.8 billion (+\$24.3 million)*

The FY 2013 budget for NASA includes \$4.9 billion for science, a 3.2 percent decrease. Conversely, funding for Earth science would increase by 1.4 percent.

NASA's Earth Science program supports several satellites that observe and track global-scale changes in climate, weather, natural hazards, and the biosphere.

The increased funding for the program would be directed to the Earth System Science Pathfinder. "The Venture Class Missions consists of a series of new science-driven, competitively selected, low cost missions that will provide opportunity for investment in innovative Earth science to enhance our capability to better understand the current state of the Earth system and to enable continual improvement in the prediction of future changes," according to NASA budget documents. The project would receive \$106.2 million in FY 2013 (+98.1 percent).

The proposed increase for the Venture Class Missions is paid for with spending reductions in almost every other aspect of the Earth Science mission. Investments in Earth science research would decline by \$6.5 million, which would result in slightly fewer grants. Despite the proposed reductions, the Earth Science program would continue its work to understand the impacts of climate change on the ecology and biogeochemistry of Arctic seas; acquisition of satellites to measure global precipitation, land use and land change, soil moisture, and sources of carbon dioxide; and preservation and distribution of observational data.

The \$100.0 million designated for education at NASA is 26.5 percent less than in FY 2012. NASA plans to decrease the number of new education grant awards and to seek "operational efficiencies." About two-thirds of the proposed reductions would come from a program that prepares students for NASA-related careers. The other reductions are targeted from STEM education programs.

National Institutes of Health (NIH)

- *2013 Budget Request: \$30.7 billion (no change)*

The President's budget proposes to flat fund NIH. About half of the budget would go towards extramural research grants (\$16.5 billion, -\$25.8 million), with an additional \$3.4 billion (+\$20.9 million) for intramural research at NIH. Intramural support includes a federal pay raise of 0.5 percent.

The budget proposal prioritizes support for basic research, including genomics and proteomics, and stem cell research; new investigators; technologies to accelerate scientific discovery, such as large-scale sequencing technologies and The Cancer Genome Atlas; and the newly established National Center for Advancing Translational Sciences. The center, which was created in FY 2012, aims to help move basic research findings into new diagnostics and therapeutics.

Funding for Research Project Grants (RPGs) would decline by 0.2 percent. Despite this proposed reduction, the number of new competing RPGs would increase by about 670 over FY 2012; this is an increase of nearly 8 percent. At the proposed funding level, 19 percent of proposals would be funded, an increase from the current funding rate of 18 percent.

According to NIH's budget documents: "In order to maximize resources in FY 2013 for investigator-initiated grants, and to continue to focus on resources for young, first-time researchers, NIH proposes to reduce non-competing RPGs by one percent from the FY 2012 level, and to negotiate the budgets of competing RPGs to avoid growth in the average award size." The average cost of new competing RPGs (excluding HIV/AIDS Clinical Trial Networks) would decrease by one percent.

Other proposed changes to research grants include additional scrutiny for any proposal submitted by a principal investigator with existing grants totaling \$1.5 million or more. Additionally, NIH will no longer build in inflationary increases to the out-years of competing and non-competing awards.

Training program funding would be slightly reduced, resulting in a 1.8 percent reduction in the number of trainees supported. Stipend rates, however, would increase by 2.0 percent.

National Oceanic and Atmospheric Administration (NOAA)

- *2013 Budget Request: \$5.1 billion (+\$153.9 million)*

Under the President's budget, NOAA's proposed 3.1 percent increase in FY 2013 would largely be applied to the escalating costs of the agency's acquisition of weather and climate satellites. Funding for the Office of Oceanic and Atmospheric Research would also increase by 7.6 percent. The budget for NOAA's environmental and fisheries programs would decrease by roughly two percent; this would be the third straight year of cuts for these programs.

The budget is notable in that it does not address two major changes previously proposed by the Obama Administration. First, there is no mention of the creation of a National Climate Service, which NOAA advocated for in its FY 2012 budget. The proposed reorganization would have shifted management of three data centers, two labs, and several programs into the new National Climate Service. The FY 2013 budget is also silent regarding the President's January 2012 proposal to move NOAA into the Department of the Interior.

Some new funding is proposed for the development of marine sensors to detect changes in the oceans, coastal waters, and Great Lakes (+\$6.6 million), competitively awarded research on harmful algal blooms, hypoxia, and coastal ecosystems (+\$2.0 million), and development of integrated ecosystem assessments (+\$5.0 million). In the area of climate change, \$28.2 million in new funding is proposed to support modeling of sea level rise and Arctic climate change, national and regional climate assessments, and other activities.

The agency budget would achieve program efficiencies of \$83.5 million in FY 2013. Additionally, several programs and activities are slated for termination or consolidation. Two fisheries research facilities would be closed—one in New Jersey and one in California, and aspects of the work at the Great Lakes Environmental Research Laboratory would be ceased. NOAA's education program would be cut by \$13.8 million (-55.1 percent). Other education activities would be eliminated, such as graduate research fellowships at the National Estuarine Research Reserve System, and the Bay-Watershed Education and Training Regional Program. Other terminations include the National Undersea Research Program (-\$4.0 million), national competitions for solutions to aquatic invasive species (-\$1.0 million), and marine mammal rescue assistance grants (-\$3.8 million). Habitat conservation and restoration programs would be consolidated, resulting in \$11.3 million in savings.

NOAA would invest \$651 million in R&D in FY 2013, a 12.0 percent increase. Most of NOAA's R&D funding is spent internally, but about 27 percent would be directed extramurally, a slight increase from FY 2012.

National Science Foundation (NSF)

- *2013 NSF Budget Request: \$7.4 billion (+\$340.0 million)*
- *2013 Research and Related Activities Request: \$6.0 billion (+\$294.3 million)*
- *2013 Major Research Equipment and Facilities Construction Request: \$196.2 million (-\$0.9 million)*
- *2013 Education and Human Resources Request: \$875.6 million (+\$46.6 million)*
- *2013 Biological Sciences Directorate Request: \$733.9 million (+\$21.5 million)*

The President's budget request for NSF would provide a 4.8 percent increase over the FY 2012 appropriation.

Research and education initiatives are prioritized over other programmatic areas. The Research and Related Activities account, which includes funding for the various disciplinary directorates, would receive an increase of 5.2 percent. This would fund an additional 500 competitive awards during the fiscal year, although the agency's funding rate is expected to remain at 22 percent. Education and Human Resources, which funds education research and various fellowships, would grow by 5.6 percent. Conversely, Major Research Equipment and Facilities Construction would stay nearly flat (-0.4 percent). The budget for administrative efforts would remain at the FY 2012 funding level.

The budget request includes increases for several Presidential priorities, including clean energy, manufacturing, and education. Toward these goals, the President proposed \$355.4 million (+\$14 million) for research related to clean energy technology, \$148.9 million (+\$39 million) for basic research that could develop new manufacturing technologies, and \$30 million for a new joint program with the Department of Education to improve math education.

Interdisciplinary programs would also grow in FY 2013. The Science, Engineering, and Education for Sustainability initiative would be funded at \$202.5 million, \$45.5 million more than last year. In 2013, the initiative would include five interdisciplinary programs that will take an integrated approach to addressing clean energy and sustainability; included are emphases on coasts and the Arctic. Additionally, a new interdisciplinary research program launched in 2012, Integrated NSF Support Promoting Interdisciplinary Research and Education (INSPIRE), would triple in size to \$63.0 million.

For research infrastructure, the FY 2013 budget requests funding from the Major Research Equipment and Facilities Construction account to continue building the National Ecological Observatory Network (NEON) and the Ocean Observatories Initiative (OOI). NEON would receive \$91.0 million (+\$30.7 million) for continued construction; NEON will break ground on three sites in the summer of 2012. Once completed, NEON will collect data across the United States on the impacts of climate change, land use change, and invasive species on natural resources and biodiversity. The Administration also proposed \$65.0 million (-\$37.8 million) for the fourth year of construction of OOI, which will consist of an integrated network of deep-sea buoys, regional cabled nodes on the seafloor, and coastal observatories that will provide continuous, interactive access to the ocean.

NSF initiatives in science, technology, engineering, and math (STEM) education would receive new funding. Expeditions in Education is a new program that would establish a partnership between the Directorate for Education and Human Resources and the research directorates to integrate and leverage STEM education research. The program would receive \$49.0 million in FY 2013. NSF's Transforming Undergraduate Education in STEM program would increase by 55.8 percent to \$61.5 million. The Research Experiences for Undergraduates program would be boosted by 3.7 percent.

NSF would expand its support for graduate students and early career scientists. The Faculty Early Career Development program (CAREER) would support approximately 40 additional young faculty members, for a total of 440 new awards in FY 2013. The Graduate Research Fellowship program would maintain the doubling of new awards achieved in FY 2010; the fellowship's stipend would also increase by \$1,500.

Several programs are recommended for cuts and consolidations totaling \$67.0 million. Four programs within the Mathematical and Physical Sciences Directorate are identified for elimination (-\$10.0 million), as well as four computer science and engineering programs (-\$17.0 million). Two public outreach programs that focus on communicating science, Communicating Science Broadly (-\$2.0 million) and Connecting Researchers with Public Audiences (-\$4.0 million), will also be eliminated. Climate change education would be cut by about a third to \$6.3 million.

NSF's Biological Sciences Directorate (BIO)

The budget for BIO would increase by 3.0 percent to \$733.9 million. The number of research grants awarded, average award size, and average award duration are expected to be comparable to FY 2012 levels. The funding rate across the directorate would remain at 15 percent. BIO provides about 62 percent of federal funding for non-medical, basic research, including environmental biology, at academic institutions in the life sciences.

Within the request for BIO, funding would be allocated among five divisions accordingly:

- Molecular and Cellular Biosciences: \$132.7 million (+\$6.9 million, +5.5 percent)
- Integrative Organismal Systems: \$220.5 million (+\$8.2 million, +3.9 percent)
- Environmental Biology: \$143.7 million (+\$1.2 million, +0.8 percent)
- Biological Infrastructure: \$129.7 million (+\$3.5 million, +2.8 percent)
- Emerging Frontiers: \$107.3 million (+\$1.7 million, +1.6 percent)

Several NSF-wide initiatives would receive new funding within BIO. In addition to \$7.5 million in additional funding for the Science, Engineering and Education for Sustainability initiative, BIO would receive \$4.6 in additional funding for the Research at the Interface of the Biological, Mathematical, and Physical Sciences (BioMaPS) program. BIO's support of clean energy technology would be increased by \$6.0 million. As part of INSPIRE, BIO would receive an additional \$2.0 million to co-fund high-risk/high-reward, cross-disciplinary grants.

NSF is also embracing the concept of “grand challenges” in the biological sciences, themes highlighted in a 2010 report from the National Research Council. The 2013 budget request calls for \$20.0 million in new funding across all BIO divisions for research relevant to the following grand challenges: synthesizing life-like systems; understanding the brain; predicting organisms’ characteristics from their DNA; interactions of the Earth, its climate, and its biosphere; and understanding biological diversity.

The Long-Term Ecological Research sites would receive \$28.0 million (+2.1 percent).

Digitization of scientific information associated with biological specimens held in U.S. research collections would continue to be supported at \$10.0 million a year. Collections in Support of Biological Research would not be funded in FY 2013 (-\$4.0 million). Instead, the program would change from an annual to biennial competition. The Assembling the Tree of Life program, which aims to resolve evolutionary relationships for the major lineages of organisms, would be moved towards a biennial competition that combines two years of funding into each set of awards.

Other NSF Directorates

The Geosciences (GEO) account would grow to \$906.4 million, an increase of \$21.2 million from the FY 2012 funding level. At \$259.6 million, the Social, Behavioral, and Economic Sciences Directorate (SBE) would grow by \$5.3 million.

Smithsonian Institution (SI)

- *2013 Budget Request: \$856.8 million (+\$46.6 million)*

Federal support for the Smithsonian Institution would increase by 5.8 percent. The federal government provides roughly 65 percent of the Institution's total funding.

The budget includes an increase of \$1.5 million to digitize collections and make them accessible online. Preservation of collections would see an increase of \$1.4 million, which would be used for a collections space survey, to improve storage conditions, and to address recommendations made by the Smithsonian Inspector General.

No new funding is proposed to address SI's "four grand challenges": 1) unlocking the mysteries of the universe, 2) understanding and sustaining a biodiverse planet, 3) valuing world cultures, and 4) understanding the American experience. "Although no specific Grand Challenge increases are requested for FY 2013, the Institution will continue advancing the Strategic Plan with the increases appropriated in FYs 2011 and 2012," states the Institution in their budget request.

Several Smithsonian facilities used for research and curation of scientific collections would be renovated under the proposed FY 2013 budget. The National Museum of Natural History would receive \$8.8 million for repairs. The Smithsonian Environmental Research Center laboratory would receive \$15.1 million to complete renovation of a laboratory building and access road. Four million dollars would be used to construct a collections storage facility. The Smithsonian Tropical Research Institute would receive \$7.0 million to convert an uninhabitable building into a research and laboratory facility.

United States Department of Agriculture (USDA)

- *2013 Department of Agriculture Budget Request: \$24.1 billion (+\$335.0 million)*
- *2013 Research, Education, and Economics Request: \$2.6 billion (+\$68.0 million)*

The proposed budget for research, education, and economics is 2.7 percent more than the FY 2012 level. Although discretionary research programs fared comparatively well, several mandatory research programs authorized in the 2008 Farm Bill were not funded; USDA did not include these programs in the FY 2013 budget since these programs expire in FY 2012.

The National Institute of Food and Agriculture (NIFA), formerly the Cooperative State Research, Education, and Extension Service, partners with extramural academic institutions to conduct research, education, and extension activities. NIFA would receive \$1.2 billion in funding (+3.1 percent).

Within NIFA, the Agriculture and Food Research Initiative (AFRI) would receive \$325 million for competitive extramural research grants. At this level, AFRI would receive a 22.9 percent budget increase, a record high funding level if enacted. The new resources would be directed to biofuel production and associated land-use changes (+\$30 million), climate change adaptation for agricultural production systems (+\$3.7 million), international food security (+\$7.2 million), food safety (\$2.2 million), and nutrition and obesity prevention (+\$7.2 million). The NIFA Fellows program, which supports graduate student research, would receive \$5.2 million in additional funding. The AFRI Foundational Research programs, which support fundamental and applied research in priority areas, would be increased by \$3.2 million.

The Agricultural Research Service (ARS) conducts intramural research in the areas of natural and biological science. It would receive \$1.1 billion in FY 2013, \$7.9 million less than FY 2012. Several programmatic areas would receive new funding in FY 2013. The largest proposed increase would address environmental challenges facing agricultural production. The budget includes an increase of \$25 million to conduct research that will help account for value of ecosystem services. ARS will organize a “sustainable, continent-wide infrastructure to assess the condition and trends of the Nation’s agroecosystems,” according to USDA’s budget documents. ARS will also partner with NOAA to establish a Regional Integrated Science and Assessments program in the Midwest, and will enhance ongoing international agricultural modeling. A \$3 million funding increase is also proposed for repair of ARS laboratories. Six research facilities would be closed; 12 were closed under the FY 2012 enacted budget.

The National Agricultural Library would be flat funded at \$21 million. One and half million dollars would be reallocated for the development of scientific databases on carbon sequestration and greenhouse gas emissions, tillage and management studies, and conservation program benefits.

The increases within ARS would be offset by the elimination of \$20 million in lower priority extramural projects. Additionally, ARS proposes program reallocations totaling \$50.4 million to address the nation’s most critical research needs. One example of a

proposed reallocation is \$600,000 within crop production research to expand activities to identify, acquire, and secure unprotected plant genetic resources. Additionally, \$7.6 million would be reallocated for research on management tools for soil-borne plant pathogens and parasites, and \$3 million would be reprogrammed for research on invasive pests.

USDA Forest Service

- *2013 Forest Service Budget Request: \$4.9 billion (+\$15.5 million)*
- *2013 Forest and Rangeland Research Request: \$292.8 million (-\$2.5 million)*

Funding for Forest Service research would be cut by 0.8 percent, despite a small increase overall for the agency.

Forest Service research provides scientific information and new technologies to support sustainable management of the nation's forests and rangelands. These products and services increase the basic biological and physical knowledge of the composition, structure, and function of forest, rangeland, and aquatic ecosystems. The agency is currently focused on seven research priorities: forest disturbances, forest inventory and analysis, watershed management and restoration, bioenergy and biobased products, urban natural resources stewardship, nanotechnology, and localized needs research.

Nearly all research programs are targeted for reductions. The largest cut would be taken from invasive species R&D (-\$2.5 million, -6.9 percent). The Forest Service plans to reduce research on the most thoroughly studied pests and pathogens, as well as research on preventing and mitigating invasive species, in order to maintain research on the highest priority invasive species.

Other proposed reductions include wildlife and fish R&D (-5.1 percent) and water, air, and soil R&D (-3.1 percent). According to the Forest Service's budget: "The request will reduce studies on traditional game and fish species with a refocusing of funds for long term monitoring protocols and models for wildlife and aquatic habitat to assess risk from environmental change."

Notably, inventorying and monitoring R&D would receive \$3.5 million in additional funding (+4.7 percent). The Resource Management and Use research program would be flat funded. In 2013, the program would focus on research on bioenergy and climate change adaptation.

United States Fish and Wildlife Service (FWS)

- *2013 Budget Request: \$1.5 billion (+\$72.0 million)*

A proposed 4.9 percent overall increase for the Fish and Wildlife Service would be offset by the cancellation of \$200.0 million in prior year unobligated balances.

A major initiative is President Obama's America's Great Outdoors initiative. The goal of the program is to reconnect Americans to the natural environment. Many bureaus within the Department of the Interior have responsibility for implementing the initiative, including the FWS. In FY 2013, FWS would spend an additional \$52.3 million (+95.8 percent) on land acquisitions in support of the initiative.

FWS would also help to advance another Interior-wide program. The Landscape Conservation Cooperatives are partnerships between the Department of the Interior and federal, state, and local entities aimed at sharing landscape-level strategies for managing environmental stressors, such as drought, coastal erosion, and invasive species. The FY 2013 budget would support 14 operational cooperatives.

A new initiative would implement endangered species recovery plan actions in the National Wildlife Refuge System and the National Fish Hatchery System. The budget would provide \$5.4 million for the project. Overall funding to administer the Endangered Species Act would increase to \$179.7 million (+2.1 percent).

Increased funding for science is targeted to development and implementation of "scientifically rigorous protocols for national pesticide consultations with EPA" (+\$1.0 million), and early detection and surveillance of Asian carp (+\$2.0 million).

Renewable energy is another FWS priority. Assessments of the impacts of renewable energy projects on endangered species would be boosted by \$1.5 million. Conservation of migratory birds in areas with wind energy development would be increased by \$750,000. The budget also contains a \$1.0 million increase for enforcement of wildlife protection laws in areas with energy development.

Funding for the National Wildlife Refuge System would increase by \$9.1 million, to a total of \$494.8 million. Included is an increase of \$3.0 million for refuge inventory and monitoring.

Conservation grant programs administered by FWS would also receive new funding. Included are an additional \$12.3 million for the Cooperative Endangered Species Fund and \$3.9 million for North American Wetlands Conservation Act grants. State and Tribal Wildlife grants would be funded at the FY 2012 level. The Multinational Species Conservation Fund would gain \$514,000 (+5.4 percent). The Neotropical Migratory Bird Conservation Fund would be flat funded.

United States Geological Survey (USGS)

- *2013 USGS Budget Request: \$1.1 billion (+\$34.5 million)*
- *2013 USGS Ecosystems Activity Request: \$177.9 million (+\$16.6 million)*

The budget for the USGS would increase by 3.2 percent in FY 2013. According to USGS budget documents: “The budget prioritizes programs that are unique to USGS, have national impact, and reduces or redirects funding to support these activities.” The requested funding provides \$73.2 million in targeted increases for ecosystems, climate variability, natural hazards, core science systems, and other programs. These increases would be partially offset by program reductions to several water programs, mineral resources, agency administration, and facilities.

The Ecosystems activity within USGS would receive an increase of \$16.6 million (+10.3 percent). The new funding would be spread across all six programmatic areas: Status and Trends (+\$0.2 million); Fisheries (+\$4.5 million); Wildlife (+\$1.2 million); Terrestrial, Freshwater and Marine Environments (+\$5.8 million); Invasive Species (+\$4.6 million); and the Cooperative Research Units (+\$0.2 million). Included in the proposed funding are additional funds for ecosystem restoration science in the Chesapeake Bay and California Bay-Delta, research to control and manage invasive species such as Asian carp and Burmese pythons, and further studies on white-nose syndrome in bats.

The proposed budget for the USGS includes an increase of \$8.8 million above the FY 2012 enacted level for climate variability science. The budget request fully funds the eight operational Climate Science Centers. The centers provide scientific information, tools, and techniques that natural resource managers can use to monitor and adapt to environmental changes. Also included in an increase of \$6.6 million for science in support of activities at other Interior bureaus.

A new initiative on Science for Coastal and Ocean Stewardship would receive an increase of \$6.8 million to “support priority objectives of the National Ocean Policy in the areas of marine and coastal science, resource and vulnerability assessments, ecosystem-based management, adaptation to climate change, and providing science-based tools to inform policy and management.”

The Water Resources activity would be funded at \$209.8 million (-\$4.8 million). The request includes \$13.0 million in additional funding for water availability and use assessment, but reduces spending on the Cooperative Water program by \$4.7 million, and cuts \$6.5 million from the Water Resources Research Act program.

Additional funding is proposed for science to support Interior’s New Energy Frontier initiative, and \$13.0 million in increased funding is included to address priority science issues related to hydraulic fracturing. A \$1.0 million increase is proposed for research related to wind energy development.

What's Next?

The President's budget request is only a proposal; it does not have binding authority. Congress uses the President's budget request as a starting point for their budget negotiations. Congress makes adjustments to the President's budget, particularly if different political parties control Congress and White House, as is currently the case in the House of Representatives. Congress has already begun their consideration of the FY 2013 budget, although it will be many months before any final decisions are made.

More Resources

AIBS will continue to report on significant developments in federal science funding, including Congressional appropriations, through the *AIBS Public Policy Report*. To subscribe, please visit www.aibs.org/public-policy-reports.

Other budget resources are available on the AIBS website, including information on the federal budget process and factsheets on funding for the biological sciences. Please visit www.aibs.org/public-policy/budget_source.html for more information.

For questions related to this publication, please contact the AIBS Public Policy Office at publicpolicy@aibs.org.

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