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Special FY14 Federal Budget Issue

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Budget Analysis and Agency Summaries

Budget Overview

President Obama's FY14 budget request would offer increased funding for many programs of note to the technology-based economic development community. Manufacturing-related initiatives, in particular, have been prioritized by the administration, with increased funding for existing programs and the launch of several new manufacturing initiatives in several agencies. The budget also would provide increased funding for clean energy research and implementation, and a major reorganization of the federal government's science, technology, engineering and mathematics education programs.

Each year, SSTI's analysis of the president's budget request includes comparisons between the proposed level of funding for agencies, offices, programs and initiatives, and past funding levels. Due to the lack of a FY13 budget and adjustments due to sequestration, the budget requests published by federal agencies this year include comparisons to a variety of past funding levels. When reading this year's *Federal Budget Special Issue*, please refer to the note at the beginning of each agency section to clarify the reference level for comparisons. For comparisons in the Budget Overview, please refer to the agency sections to find the basis for comparisons.

Entrepreneurship, Regional Innovation and Capital Access

The FY14 budget request would provide \$320.9 million (24.6 percent increase) for the Department of Commerce Economic Development Administration (EDA), including \$282 million (28.2 percent increase) for its Economic Development Assistance Programs. The increase would help support two new regional economic development initiatives. The **Investing in Manufacturing Communities Fund**, a multi-agency effort to strengthen communities' ability to attract inbound investments, would receive \$113 million from the EDAP allocation (details in the Manufacturing section). The Regional Export Challenge, a competitive grant program to support regional export plans, would receive \$12 million. Though a budgetary figure is unavailable, EDAP would continue to support the **i6 Challenge**.

Under the president's FY14 budget request, the Small Business Administration would expand significantly its regional innovation efforts and entrepreneurship education programs, particularly for military veterans. The budget proposes \$5 million (no change) for SBA's **Regional Innovation Clusters** program, which supports 56 industry clusters around the country. Another \$5 million would fund a new **Growth Accelerators** program, which would provide matching grants to university and private sector accelerators.

SBA's Entrepreneurship Education **Emerging Leaders** program, which provides intensive training to small business owners, would receive \$40 million. The program initially was introduced in 2008, but the revamped version would become a public-private partnership, funded with SBA and private matching funds. SBA would expand its pilot programs to assist veterans in becoming entrepreneurs by providing \$7 million to the **Boots to Business** initiative. The initiative offers training and resources to veterans to help them start their own businesses. SBA would receive a total of \$120 million for its **Small Business Development Centers, Women's Business Centers** and **SCORE** program.

SBA ONE, a streamlined one-stop lending platform for SBA's loan programs, would attempt to simplify the lending process for lenders and borrowers. SBA would be able to provide \$25 billion in small business financing including \$17.5 billion in **7(a) loan guarantees** and \$7.5 billion in guarantees through the **504/Certified Development Company (CDC)** program. The authorization for the **7(a)** loan guarantee program, includes \$15.7 billion for term loans and \$1.8 billion in revolving lines of credit. The budget would increase the **Small Business Investment Company's (SBIC)** authority from \$3 billion to \$4 billion, including up to \$200 million for the **SBIC Innovation Fund** and \$200 million for the **SBIC Impact Fund**.

As first proposed in 2012, the president continues to seek reorganization authority to streamline federal business assistance. Though full details currently are not available, the White House budget document on *Creating a 21st Century Government* proposes the consolidation of business and trade promotion activities into a single federal department. The new department would incorporate the Department of Commerce's (DOC) core business and trade functions, the Small Business Administration (SBA), the Export-Import Bank, the Overseas Private Investment Corporation and the U.S. Trade and Development Agency. Specific programs and offices for other departments, including the Department of Agriculture business development programs, the Department of the Treasury Community Development Financial Institutions Fund program, the National Science Foundation (NSF) statistical agency and industry partnership programs and the Bureau of Labor Statistics, also would be relocated.

The Department of Treasury **New Market Tax Credit** program would be extended permanently under the FY14 request. The extension would allow up to \$5 billion in qualifying investments each year. Treasury's **Community Development Financial Institutions Fund Core Program**, would receive \$144.3 million to invest in institutions and people and communities without access to affordable financial products. A new program, the Pay for Success Fund, would receive a one-time \$300 million to provide credit enhancements and grants to support nonprofit institutions with the implementation of social impact bonds.

Manufacturing

U.S. manufacturing is emphasized as a key priority throughout the president's budget request. The proposed budget includes \$2.9 billion in advanced manufacturing R&D within several agencies, an 87 percent increase, according to an Office of Management and Budget release. This total includes \$365 million for the Department of Energy Office of Energy Efficiency and Renewable Energy's **Advanced Manufacturing Office**, a three-fold increase over FY12 enacted funding. This allocation would support one or more Manufacturing **Innovation Institutes** focused on clean energy and energy efficiency technologies. Another \$159.7 million (44.3 percent increase) would support advanced manufacturing research at the National Science Foundation.

The National Institute of Standards and Technology would receive \$1 billion in mandatory appropriations to support the **National Network for Manufacturing Innovation**. The initiative would expand the network of across the country, funding 15 new manufacturing innovation institutes. Later this year, the administration would launch three new manufacturing innovation institutes led by the Departments of Defense and Energy in partnership with the private sector. NIST also would launch the **Advanced Manufacturing Technology Consortia**, a \$21.4 million public-private partnership that would offer grants to identify long-term industrial research needs.

NIST's Hollings Manufacturing Extension Partnership (MEP) would receive \$153.1 million (13.4 percent increase), including an increase of \$25 million to launch **Manufacturing Technology Acceleration**Centers that could serve as a coordination point for regional manufacturing supply chains.

EDA would provide \$113 million through its Investing in Manufacturing Communities Fund to provide grants to approximately five communities across the country for manufacturing parks, research centers and academic centers. EDA, however, will not be acting alone. The **Investing in Manufacturing**Communities Partnership would coordinate federal assistance from several agencies to make long-term investments in regional partnerships between government, universities and private industry.

Science and Technology

The president's FY14 budget proposes \$142.8 billion (1.3 percent increase over FY12 enacted level) for federal research and development (R&D), according to a release from the Office of Science and Technology Policy (OSTP). This includes \$69.6 billion (9.2 percent increase) for non-defense R&D. These increases would be offset by reductions in defense R&D spending within the Departments of Defense and Energy, which would total \$73.2 billion (5.2 percent decrease). Total funding for basic and applied research across all agencies would be increased to \$68.1 billion (7.5 percent increase), while development funding would be reduced to \$71.5 billion (5 percent decrease).

Clean energy research programs would receive a boost under the proposed budget. The administration would continue its "All of the Above" strategy, expanding funding for many clean energy research areas. Department of Energy (DOE) clean energy R&D funding would be increased by 40 percent, while a number of new DOE programs would expand the federal government's focus on clean and renewable sources. A proposed **Energy Security Trust** would invest over the next ten years in alternative fuels transportation research with funds from federal oil and gas development. A new \$200 million **Race to the Top** program would support state energy efficiency and grid modernization efforts. The budget also would provide \$325.6 million for the **EV Everywhere Grand Challenge**, which would focus on breakthroughs in plug-in electric vehicle technology.

Federal research agency highlights include:

- National Institutes of Health \$31.3 billion (1.5 percent increase)
- National Science Foundation \$7.6 billion (7.3 percent increase)
- DOE Office of Science \$5.2 billion (4.4 percent increase)
- NASA Science \$5 billion (1.1 percent decrease)
- Defense Advance Research Projects Agency \$2.9 billion (1.8 percent increase)
- DHS Science and Technology Directorate \$1.5 billion (126.9 percent increase)
- U.S. Geological Survey \$1.2 billion (8.6 percent increase)
- EPA Science and Technology \$783.9 million (1.9 percent decrease)
- NIST Intramural Laboratories \$754 million (21 percent increase)
- NASA Space Technology \$742.6 million (29.4 percent increase)
- USDA Agriculture and Food Research Initiative \$383 million (44 percent increase)
- Advanced Research Projects Agency-Energy \$379 million (37.8 percent increase)

Funding for multi-agency initiatives includes:

- Networking and Information Technology Research and Development Program \$4 billion (4.2 percent increase over FY12 enacted)
- U.S. Global Change Research Program \$2.7 billion (6 percent increase over FY12 enacted)
- National Nanotechnology Initiative \$1.7 billion (8.6 percent decrease over FY12 enacted)

To boost private sector investment in research, the budget also proposes to expand, simplify and make permanent the federal **Research and Experimentation tax credit**.

STEM Education and Workforce Training

Under the proposed budget, the federal government's programs to improve science, technology, engineering and mathematics (STEM) education would undergo a comprehensive reorganization. Nearly 90 programs across 11 agencies would be consolidated under the Department of Education (ED), the National Science Foundation (NSF) and the Smithsonian Institution. Almost \$180 million would be directed to these agencies from consolidated programs. ED would focus on programs to improve K-12 STEM instruction and the president's goal of generating 100,000 effective STEM teachers over the next decade. NSF would lead programs to enhance U.S. undergraduate STEM education and graduate fellowships.

ED's expanded STEM initiatives would include \$265 million for **STEM Innovation Networks**, a program that would offer competitive grants to local education agencies in partnership with institutions of higher education, nonprofits, other public agencies and businesses to prepare students for STEM careers. Of this amount, \$35 million would help launch a new **STEM Master Teacher Corps** pilot program, and \$80 million for competitive grants to recruit and train effective STEM teachers for high-need schools.

NSF would receive \$123.1 million for a new initiative that would consolidate the federal government's efforts to improve undergraduate STEM education. The **Catalyzing Advances in Undergraduate STEM Education (CAUSE)** program would support research and implementation of improved STEM instructional practices. NSF's **National Graduate Research Fellowship** program would receive \$325.1 million (64.3 percent increase) to expand the quality and availability of fellowships.

The Smithsonian Institution would receive \$25 million to expand its efforts to improve informal STEM education activities.

The budget would provide \$8 billion for the **Community College to Career Fund**, a successor to the **Trade Adjustment Assistance Community College and Career Training Grants** program. The fund, which would be jointly administered by the Departments of Education and Labor, would support state and community college partnerships with business to improve the skills of U.S. workers. The Department of Labor's **Workforce Innovation Fund** would receive \$150 million, a \$100 million increase, to innovation in state and regional efforts to train skilled workers.

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Department of Agriculture

FY13 CR funding is used for Department of Agriculture comparisons, unless otherwise noted. The president's FY14 budget request would provide \$145.8 billion in total funding for the Department of Agriculture (USDA), a 5.9 percent decrease from FY13. Of that amount, \$22.6 billion (0.1 percent decrease) would fund discretionary programs. The proposed budget would boost funding for the Agriculture and Food Research Initiative to increase fundamental and applied scientific research in agriculture and reorganize many of USDA's economic development initiatives under a single grant program targeting job creation in rural areas.

USDA agencies and offices are divided into seven agency groups. These groups include:

Agency Groupings	FY14 Request (\$ billion)	Percent Change from FY13 CR Funding (%)
Food, Nutrition and Consumer Services	109.3	(2.6)
Farm and Foreign Agricultural Services	20.6	(16.7)
Natural Resources and Environment	9.4	(7.8)
Research, Education and Economics	2.9	11
Marketing and Regulatory Programs	2.3	3.7
Rural Development	2.3	(8.7)
Food Safety	1	(0.2)
Other Activities	0.4	2.8

Research, Education and Economics

USDA's **Research**, **Education and Economics** agencies would receive a total of \$2.9 billion (11 percent increase) under the proposed FY14 budget. These agencies include:

- National Institute of Food and Agriculture (NIFA) \$1.3 billion (9.3 percent increase);
- Agricultural Research Service (ARS) \$1.3 billion (15.2 percent increase);
- National Agricultural Statistics Service (NASS) \$159 million (0.6 percent decrease); and,
- Economic Research Service (ERS) \$79 million (1.3 percent increase).

NIFA, which provides linkages between the federal government and state agricultural research, extension and higher education, would receive steady funding for most of its major research programs. Exceptions include **Higher Education Programs**, which would receive \$37 million (21.3 percent decrease), and **Pest Management/Crop Protection Activities**, which would receive \$29 million (9.4 percent decrease). NIFA programs that would receive no funding include: the **Water Quality** program (\$5 million in FY13), **Animal Health and Disease Research** grants (\$4 million In FY13) and **Agriculture in the Classroom** (\$1 million in FY13). **Other Research**, **Extension and Integrated Programs**, which includes a number of research programs, would receive \$18 million (51.4 percent decrease).

The FY14 request contains a major increase in funding for the <u>Agriculture and Food Research Initiative</u> (<u>AFRI</u>), NIFA's competitive grant program that supports research in food, agricultural, natural resource and human sciences. Similar increases have been requested by the administration for several years. Under the proposed budget, AFRI would receive \$383 million (44 percent increase) to target research in human nutrition and obesity, food safety, bioenergy, sustainable agriculture and climate change.

NIFA administers several research, extension and education programs that receive mandatory funding through the Farm Bill, and will be subject to reauthorization in FY14. Funding details for these programs, including the Organic Agriculture Research and Education Initiative, Beginning Farmer and Rancher Development Program, Specialty Crop Research Initiative and Biodiesel Fuel Education Program, are unavailable. The proposal, however, requests \$26 million for the Biomass Research and Development program, to be funded through USDA's Commodity Credit Corporation.

Similar to last year's proposal, the budget would maintain steady funding for most ARS programs, but shift focus from the **New Products/Product Quality/Value Added** and **Crop Protection** programs to **Food Safety** and **Human Nutrition**. The Food Safety program would receive \$119 million (11.2 percent increase) to improve detection technologies for crops at high risk of infestation and to help treat pathogens. The Human Nutrition program would receive \$95 million (10.5 percent increase) to strengthen nutrition monitoring programs and develop evidence-based data to inform U.S. food policy.

The \$159 million (0.6 percent decrease) in the FY14 request for NASS includes \$42 million (no change) to complete the 2012 <u>Census of Agriculture</u>. The census provides comprehensive data on the U.S. agricultural economy.

ERS, which provides economic information on agriculture, food, the environment and rural development, would receive \$79 million (1.3 percent increase). The agency plans to reduce funding for lower priority programs to devote \$2.5 million to improve federal agricultural policy effectiveness.

Rural Development

<u>Rural Development (RD)</u> includes most of USDA's office and programs targeting rural economic growth. Under the proposed budget, RD would receive \$2.3 billion (8.7 percent decrease) in discretionary funding. RD's three divisions include:

- Rural Housing Service (RHS) \$1.6 billion (1.3 percent increase);
- Rural Utilities Service (RUS) \$382 million (35.4 percent decrease); and,
- Rural Business-Cooperative Service (RBS) \$152 million (24.8 percent decrease).

RHS would be allocated \$1.6 billion (1.3 percent increase) under the president's FY14 budget request. Excluding the FY13 reductions due to the sequester and rescissions, however, funding would remain steady (1.3 percent increase).

RUS, which administers USDA's electric, telecommunications, distance learning and telemedicine, broadband and water programs, would receive \$382 million (35.4 percent decrease). Most of the reduction in funding would come from decreased support for Water and Waste Disposal Grants, which would receive \$304 million (30.1 percent decrease). No funding would be provided for Water and Waste Disposal Loans and Loan Guarantees (\$71 million in FY13). High Energy Cost Grants (\$10 million in FY13) would also be eliminated. Most RUS TBED-related programs, however, would benefit in the proposed budget. Distance Learning and Telemedicine Grants would receive \$25 million (19 percent increase). Broadband Loans would be allocated \$8 million (33.3 percent increase), and Broadband Grants would maintain steady funding with \$10 million. USDA plans to promote the development of rural renewable energy through RUS' Electric Program direct loans, which would be authorized to make \$4 billion in loans (43.1 percent decrease). Though this is a reduction in total loans, \$3 billion would be reserved for the generation, transmission and distribution of renewable energy.

RBS offers numerous programs related to entrepreneurship, technology development and energy. The FY14 request would launch a new RBS program offering **Rural Business and Cooperative Grants**, which would receive \$55 million in its first year. This new economic development grant program would target small private businesses and cooperatives in rural areas. Grantees would receive award funding to implement job creation and growth strategies in rural areas.

The president's FY14 proposal would provide no funds to several RBS programs in order to consolidate these functions under the Rural Business and Cooperative Grants program. These programs include Rural Business Enterprise Grants (\$24 million in FY13), Rural Business Opportunity Grants (\$2 million in FY13), Rural Cooperative Development Grants (\$9 million in FY13), Rural Microenterprise Investment (no change), the Office of Advocacy and Outreach Grants to Assist Minority Producers and the RHS Rural Community Development Initiative. No funding would be provided for Delta Regional Authority Grants. Rural Economic Development Direct Loans and Grants would receive no funding, but would be allowed to offer \$33 million in loans and \$10 million in grants (no change for either).

A number of RBS programs are supported through mandatory Farm Bill funding. No figures are available for these programs, which include <u>Biorefinery Assistance Guaranteed Loans</u> and <u>Rural Microenterprise</u> <u>Assistance Loans and Grants</u>. <u>Rural Energy for America Loans and Grants</u> also receive mandatory funds, though their support would be provided through USDA's <u>Commodity Credit Corporation</u>. Together the Rural Energy for America programs would receive \$70 million in mandatory and discretionary funding, which would support \$26 million in grants and \$159.2 million in loan guarantees.

RBS discretionary programs include:

- Business and Industry Guaranteed Loans \$52 million (13 percent increase) to leverage \$741 million (4.5 percent decrease) in protection against loan losses so that lenders are willing to extend credit to establish, expand or modernize rural businesses. In FY14, USDA intends to focus on improving capital markets in rural areas, local and regional food systems, bio-based businesses and renewable energy development;
- <u>Intermediary Relending Program</u> \$4 million (33.3 percent decrease) to support \$19 million in direct loans to entities that relend to rural businesses;
- <u>Value-added Agricultural Product Market Development</u> \$15 million (7.1 percent increase) to assist rural business development, including farm renewable energy producers; and,
- Appropriate Technology Transfers to Rural Areas \$2 million (no change) to support the National Sustainable Agriculture Information Service.

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Department of Commerce

FY12 actual funding is used for Commerce comparisons, unless otherwise noted. The president's FY14 budget request for the Department of Commerce (DOC) totals \$8.6 billion (10 percent increase) for discretionary spending. The request also includes \$3 billion in mandatory funding, of which \$1 billion would be used to create a network of 15 manufacturing institutes. The request includes \$133 million in discretionary funds for an Investing in Manufacturing Communities Fund to provide financial assistance for five manufacturing communities. The FY14 DOC proposal also increases funding for key basic research agencies and regional economic development initiatives.

The FY14 budget provides full spending authority for \$3.1 billion the <u>U.S. Patent and Trademark Office</u> expects to receive in patent fees based on the new fee structure that went into effect on March 19, 2013.

Discretionary funding for DOC TBED-related component offices (including salaries and expenses) includes:

DOC Component	FY14 Request (\$ millions)	Percent Change from FY12 actual
National Oceanic & Atmospheric Administration	5,447.7	11.1
Operations, Research and Facilities	3,277.8	8.4
Procurement, Acquisition and Construction	2,117.6	16.5
Other	52.3	(22.1)
Bureau of the Census	982.5	10.7
National Institute of Standards & Technology	934	22.9
Scientific and Technical Research and Services	699.5	21.4
Industrial Technology Services	174.5	35.9
Construction of Research Facilities	60	8.4
International Trade Administration	519.8	14.1
Economic Development Administration	320.9	(29.9)
Economic Development Assistance Programs	282	28.2
Bureau of Industry and Security	112.1	11
Economic and Statistical Analysis	104	8.4
Departmental Management (including Renovation & Modernization)	74.4	13.7
National Telecommunications & Information Administration	52.1	14.4
Minority Business Development Agency	29.3	(3.5)

National Institute of Standards and Technology (NIST)

The FY14 NIST budget request totals \$934 million (22.9 percent increase) in discretionary spending with \$754 million of this total amount dedicated to NIST laboratories. The proposal includes an additional \$1 billion request in mandatory appropriations to create a National Network for Manufacturing Innovation (NNMI). This network would launch 15 manufacturing institutes across the nation that focus on bringing together companies, institutions of higher education, and government to help new manufacturing technologies and processes move from basic research to implementation.

To expand its efforts critical to advanced manufacturing, the president is requesting \$140.8 million to support emerging materials and technologies and enable the integration and use of smart manufacturing technologies. The DOC request also includes \$20 million to establish four competitively selected **Centers of Excellence** in measurement science areas defined by NIST.

NIST also would receive \$100 million as part of the Middle Class Tax Relief and Job Creation of 2012 for a **Wireless Innovation (WIN) Fund** to conduct research and develop new standards, technologies and applications to advance public safety communications.

The total \$174.5 million (35.9 percent increase) that would be allocated to the Industrial Technology Services appropriation in the FY14 request for NIST dedicates funding to the following two programs:

- Hollings Manufacturing Extension Partnership (MEP) \$153.1 million (13.4 percent increase from 2013 CR annualized funding) would be dedicated to the MEP program. Much of this increase would be used to establish Manufacturing Technology Acceleration Centers through the MEP program that would improve supply chains in technology-intensive manufacturing sectors.
- Advanced Manufacturing Technology Consortia (AMTech) \$21.4 million would be provided
 to create a new public-private partnership that would offer grants to leverage existing consortia or
 establish new industry-led consortia to identify long-term industrial research needs. The program
 expands on the Nanoelectronics Research Initiative (NRI) partnership model.

The proposed Scientific and Technical Research and Services (STRS) appropriations of \$699.5 million (21.4 percent increase) would target areas such as advanced manufacturing, cybersecurity, healthcare IT, disaster resilience, forensics, advanced communications and NIST Centers of Excellence in measurement science and new technology areas. Funding totaling \$300,000 for NIST's **Summer Institute for Middle School Science Teachers** would be allocated to implement a Department of Education initiative to improve K-12 STEM Education.

Economic Development Administration (EDA)

The EDA is requesting \$282 million (28.2 percent increase) for its **Economic Development Assistance Programs (EDAP)** out of the administration's total request of \$320.9 million (24.6 percent increase, omitting disaster recovery assistance) to maintain its focus on manufacturing, infrastructure and exports.

Of the total amount allocated for EDAPs, the FY14 budget request proposes that \$125 million be dedicated to the following new regional economic development initiatives:

- Investing in Manufacturing Communities Fund \$113 million would go to a new multiagency partnership focused on strengthening communities' ability to attract inbound investments; and,
- **Regional Export Challenge** \$12 million would be dedicated to this competitive grant program to support regions that develop and implement sustainable export action plans.

The president's DOC request includes greater support for inter-agency programs to offset a major reduction in funding for Public Works projects. One such program is the inter-agency competition, the i6 Challenge, administered through the Economic Adjustment Assistance Program. Funding for EDAP includes:

EDAP Category	FY14 Request (\$ millions)	Percent Change from 2013 CR Annualized
Investing in Manufacturing Communities Fund	113	New
Economic Adjustment Assistance	76	25.4
Public Works	70.5	(52.7)
Partnership Planning	27	(8.2)
Regional Export Challenge	12	New
Technical Assistance	12	(0.9)
Trade Adjustment Assistance	10	(37.1)
Research and Evaluation	1.5	(4.0)

National Oceanic & Atmospheric Administration (NOAA)

The total FY14 request for the NOAA is \$5.4 billion (11.1 percent increase) in discretionary funds. This would include \$3.3 billion (8.4 percent increase) for Operations, Research and Facilities and \$2.1 billion (16.5 percent increase) for Procurement, Acquisition and Construction. These two accounts provide funding for the following major NOAA programs (comparisons based on 2013 CR annualized funding):

- <u>National Weather Service (NWS)</u> \$932.8 million (0.9 percent increase) to provide weather, water and climate forecasts;
- <u>National Marine Fisheries Service (NMFS)</u> \$846.5 million (3.2 percent increase) for the management and conservation of marine resources;
- <u>National Ocean Service (NOS)</u> \$496.5 million (6.5 percent increase) to deliver scientific, technical and resource management resources to coastal communities;
- Oceanic and Atmospheric Research (OAR) \$462.1 million (21.4 percent increase) for research and development to improve NOAA climate, weather, coastal and ocean services; and,
- <u>National Environmental Satellite</u>, <u>Data and Information Service</u> (<u>NESDIS</u>) \$207.6 million (14.2 percent increase) for the procurement, launch and operation of the country's civil operational environmental satellites.

National Telecommunications and Information Administration (NTIA)

The total FY14 budget request for NTIA totals \$52.1 million (14.4 percent increase), including \$1.3 million to support the president's new **National Wireless Initiative** aimed at identifying 500 MHz of spectrum for commercial wireless broadband and \$7.5 million for a new spectrum monitoring pilot to determine how government agencies and commercial providers can share broadband spectrum in the same geographical areas. The proposal also requests \$6.4 million (18.2 percent increase from 2013 CR annualized funding) for its **Domestic and International Policies** program to implement an **Internet Innovation** initiative that would lead U.S. policymakers and regulators, governments around the world and industry in the formation of Internet policies and best practices.

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Department of Defense

FY12 enacted funding is used for Department of Defense comparisons, unless otherwise noted. The FY14 budget request for the Department of Defense (DOD) would provide \$526.6 billion (6.8 percent increase from FY13 enacted with sequester) in discretionary base funding. The proposal would provide \$176.2 billion for operations and training of soldiers. The continued reduction in the budget request reflects the long-term goal of achieving \$487 billion in savings over the next decade to comply with the spending caps in the Budget Control Act of 2011. The FY14 proposal uses a placeholder of \$88.5 billion, equal to the amount in the FY13 budget, for Overseas Contingency Operations (OCO) due to the uncertainty of the pace of the drawdown in Afghanistan. The president will submit a budget amendment on the OCO in late April or early May.

The budget request includes \$4.7 billion (20.5 percent increase from FY13 enacted) for cyberspace operations to combat cyber penetration and increased funding for the Comprehensive National
CNCI-5). The initiative would include an R&D component and would operate in conjunction with the Department of Homeland Security and other agencies. Other initiatives include \$8 billion for the DOD Space Investment Programs, \$936 million to the Space Based Infrared System, and \$150 million for the Energy Conservation Investment Program.

DOD Research, Development, Test, and Evaluation (RDT&E) would receive a total of \$67.5 billion (7.5 percent decrease) in FY14. This includes \$11.9 billion (2.5 percent decrease) in the overall Science and Technology Program, composed of Basic Research, Applied Research, and Advanced Technology Development. DOD Basic Research alone would receive \$2.2 billion (5.3 percent increase), Applied Research \$4.6 billion (2.2 percent decrease) and Advanced Technology Development \$5.2 billion (2.4 percent decrease).

FY14 budget request for DOD RDT&E by military branch (in millions of dollars, change from FY12

enacted funding)

	Army	Navy	Air Force	Defense-Wide
Basic Research	436.7	615.3	524.8	588.1
	(6.8%)	(4.2%)	(6.3%)	(13.7%)
Applied Research	885.9	834.5	1,127.9	1,778.6
	(-4.7%)	(2.7%)	(-8.7%)	(1.5%)
Advanced Technology	882.1	583.1	617.5	3,109
Development	(-17.4%)	(-13.5%)	(-6.8%)	(6.7%)
Advanced Component Development and Prototypes	636.4	4,641.4	876.9	5,902.5
	(24%)	(6.4%)	(-41.3%)	(-18.1%)
System Development and Demonstration	2,857	5,028.5	5,078.7	734.6
	(-8.9%)	(-15.9%)	(37%)	(+5.8%)
Management Support	1,159.6	886.1	1,179.8	913
	(-13.6%)	(-24.1%)	(-30.5%)	(-29.8%)
Operational System Development	1,131.3	3,385.8	16,297.5	4,641.2
	(-13.5%)	(-18.1%)	(-6%)	(-12.1%)
Total	7,989.1	15,974.8	25,702.9	17,667.1
	(-8.2%)	(-9.9%)	(-3.5%)	(-10.4%)

Funding levels for select DOD research agencies in the FY14 budget include:

- <u>Defense Advanced Research Projects Agency (DARPA)</u> \$2.9 billion (1.8 percent increase);
- Chemical and Biological Defense Programs \$1.2 billion (5.4 percent increase);
- <u>Defense Threat Reduction Agency</u> \$508.1 million (4.6 percent decrease);
- Defense Information Systems Agency \$241.1 million (17.2 percent decrease); and,
- <u>Defense Logistics Agency</u> \$249.5 million (5.8 percent increase).

DOD programs with a decreased funding request include:

- Cruiser Modernization Program \$11 million (98.1 percent decrease from FY12);
- Joint Air-to-Ground Missile Program \$21 million (91.1 percent decrease from FY12);
- Joint High Speed Vessel \$3 million (99.2 percent decrease from FY12); and,
- Sea-Based X-Band Radar \$45 million (74.6 percent decrease from FY12).

DOD programs recommended for termination include:

- C-130 Avionics Modernization (\$208 million in FY12);
- C-27 Joint Cargo Aircraft (\$480 million in FY12);
- Global Hawk Unmanned Aerial Vehicle (\$324 million in FY12);
- High Mobility Multipurpose Vehicle Modernized Expanded Capacity Vehicle Recapitalization (\$4 million in FY12);
- Light Attack and Armed Reconnaissance Aircraft (\$115 million in FY12);
- Precision Tracking and Space System (\$81 million in FY12);
- Standard Missile-3 Block IIB (\$13 million in FY12); and,
- T-AGOS Ocean Surveillance Ship (\$10 million in FY12).

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Department of Education

FY13 CR funding is used for Department of Education comparisons, unless otherwise noted. The FY14 budget request for the Department of Education (ED) totals \$71.2 billion (4.1 percent increase) in total discretionary funding. This figure includes \$48.4 billion (6.2 percent increase) for discretionary programs and \$22.8 billion (no change) in discretionary Pell Grant funding.

With the FY14 budget request, the administration is proposing a major reorganization and consolidation of 90 STEM education programs across 11 agencies. The effort would redirect almost \$180 million from the consolidated programs to expanded initiatives within ED, the National Science Foundation (NSF) and the Smithsonian Institution. ED would be responsible for leading federal initiatives to improve K-12 STEM instruction.

The president's budget proposes the following initiatives to expand ED's role in K-12 STEM education:

- STEM Innovation Networks \$150 million, which would provide competitive grants to local education agencies in partnership with institutions of higher education, nonprofits, other public agencies and the private sector to develop comprehensive plans to provide STEM teaching and learning opportunities;
- Effective Teaching and Learning: STEM \$149.7 million, which would replace the Mathematics and Science Partnerships and make awards to state education agencies to implement a plan for STEM instruction and support;
- STEM Teacher Pathways \$80 million, which would help produce 100,000 new STEM teachers over the next decade by providing competitive grants to recruit and train highly effective STEM educators;
- STEM Master Teacher Corps \$35 million, which would identify and recognize accomplished STEM teachers in the country and create a pilot national network of teachers to help transform STEM education;
- <u>Fund for the Improvement of Education</u> \$30 million from the fund's FY14 proposed request of \$46.3 million (13.5 percent increase) to expand the <u>Improving Mathematics Achievement and</u> <u>Transition to College from High School (IMATCH)</u> program, a joint program administered by ED and NSF; and,
- STEM Virtual Learning Network \$5 million to create a primarily online community of STEM teachers to share best practices.

Select TBED-related ED programs include:

- Investing in Innovation (i3) program \$215 million (43.9 percent increase) to support grants under the existing i3 program that scales up effective practices. The i3 request also would support up to \$65 million for <u>Advanced Research Projects Agency-Education (ARPA-ED)</u> to pursue education technology and learning systems;
- <u>Fund for the Improvement of Postsecondary Education</u> \$260 million, including \$247.2 million for the creation of the **First in the World Awards**, which would provide venture capital to encourage innovative approaches to improving college completion, research support for identifying successful strategies, and resourcing for scaling up these successful strategies; and
- Community College to Career Fund \$4 billion in mandatory funds beginning in FY15 as part of an \$8 billion joint project with the Department of Labor to support community college training programs to prepare individuals for jobs in high-growth and high-demand sectors.

The FY14 budget requests \$671.1 million (13 percent increase) for Institute of Education Sciences (IES) activities. This includes \$202.3 million (6.6 percent increase) for research, development, and dissemination on effective educational practices. It also would allow for \$53.5 million in research and development grants.

Between discretionary and mandatory funding, the <u>Pell Grants</u> FY14 budget request totals \$29.9 billion (15.3 percent decrease). It is expected that this amount would provide funding to 9.4 million students (2.2 percent increase). The maximum Pell Grant award would be raised to \$5,785, a \$140 increase coming from mandatory funds. The budget request also would fully fund the program through the 2015-16 academic year.

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Department of Energy

FY12 estimated funding is used for DOE comparisons, unless otherwise noted. The administration's FY14 budget request in discretionary funding for the Department of Energy (DOE) is \$28.4 billion (8 percent increase over FY12), of which \$11.7 billion would go towards national security, while significant increases would be made for funding clean energy R&D, energy efficiency and grid modernization, advanced manufacturing, and investment in basic research to boost U.S. competitiveness. DOE's investment in clean energy technology investment would see an over 40 percent increase over FY12, and begin a ten-year investment of \$2 billion from federal oil and gas development through a proposed Energy Security Trust aimed at providing a stream of mandatory funding for R&D related to alternative fuels transportation.

A new Race to the Top for Energy Efficiency and Grid Modernization program would support state efforts to cut energy waste, support energy efficiency and modernize the grid. The president's budget would provide \$200 million in one-time funding for the awards, which would be made in the form of merit-based technical assistance grants. Awards would be made in five categories: energy efficiency, demand response, distributed generation, customer access to data, resiliency and cyber security, and visibility in grid operations. Eligible applicants include state governments, tribes, local governments with public power authorities and cooperatives.

DOE Office of Science (SC), the largest federal sponsor of basic research in the physical sciences, would receive \$5.2 billion (4.4 percent increase) to support new energy technology development. The proposed budget would eliminate funding for DOE's Small Business Innovation Research (SBIR) program (\$175.5 million in FY12) and reduce funding for both Science Laboratories Infrastructure (\$97.8 million, 12.5 percent decrease) and Workforce Development for Teachers and Students. However, support for all of SC research programs would increase. SC research programs include:

- <u>Basic Energy Sciences</u> \$1.9 billion (13.2 percent increase) to promote basic scientific research related to energy technology development, including \$69 million to fully fund a number of <u>Energy</u> <u>Frontier Research Centers</u>, all of which would be recompeted in FY14;
- <u>High Energy Physics</u> \$776.5 million (0.8 percent increase) to promote fundamental research of the universe;
- <u>Biological and Environmental Research</u> \$625.3 million (5.6 percent increase) to support DOE energy and environmental missions, including the study of climate dynamics;
- Nuclear Physics \$569.9 million (6.6 percent increase) to support nuclear research;
- Advanced Scientific Computing Research \$465.6 million (8.7 percent increase) to assist with the development of clean web technology; and,
- <u>Fusion Energy Sciences</u> —\$458.3 million (16.6 percent increase) to promote the research and development of nuclear fusion technology.

The proposed SC budget also would fully fund two <u>Energy Innovation Hubs</u> and three DOE <u>BioEnergy</u> <u>Research Centers</u>.

The Office of Electricity Delivery and Energy Reliability (OE) would receive \$169 million (24.1 percent increase from FY12 levels) to assist with efforts to modernize the electricity grid, enhance energy infrastructure security, and facilitate recovery from disruptions in the national energy supply. The proposed FY14 budget would introduce a new **Electricity Systems Hub** program, which would receive \$20 million to address fundamental science, technology, economic and policy issues that affect the country's ability to achieve a modernized power grid. Highlights from other OE program areas include:

- Cybersecurity for Energy Delivery Systems \$38 million (31 percent increase), which would increase funding for efforts to enhance situational awareness and strengthen operational capabilities;
- Clean Energy Transmission and Reliability \$32 million (29.7 percent increase), which would support a new subprogram for Energy Systems Predictive Capability;
- Infrastructure Security and Energy Restoration \$16 million (167.5 percent increase), which would support a new Operational Energy and Resilience initiative;
- <u>Energy Storage</u> \$15 million (22.4 percent decrease) to accelerate the development of affordable grid-scale energy storage;
- <u>Smart Grid</u> —\$14 million (37.9 percent decrease), which would target the modernization of the electric grid through microgrid development and the development of Smart Grid standards and protocols for increased interoperability; and,
- <u>National Electricity Delivery</u> \$6 million (14 percent decrease), previously called the **Permitting**,
 <u>Siting and Analysis program</u>.

The Office of Energy Efficiency and Renewable Energys (EERE) would receive \$2.8 billion in funding (55.9 percent increase) to support its operational focus on research, development, demonstration, and deployment (RDD&D). EERE's budget would continue support for several RD&D initiatives that cut across its research programs. The proposed budget would provide \$325.6 million for the EV Everywhere Grand Challenge, a DOE-wide initiative focused on breakthroughs in plug-in electric vehicle technology. EERE's Grid Integration Initiative would receive \$80 million to address grid integration barriers and opportunities. EERE Incubators for high-impact "off-roadmap" technologies, including the Sunshot Incubator Program, would receive \$110 million.

EERE's <u>Advanced Manufacturing</u> program (formerly Industrial Technologies) would have its budget almost doubled to support the <u>Clean Energy Manufacturing Initiative</u>, a new initiative that would establish regional public-private partnerships with government, business, and universities to develop energy efficient advanced manufacturing technologies and cost effective clean tech products. The Clean Energy Manufacturing Initiative would be funded with an initial investment of \$365 million and be funded partially through the cancellation of the Industrial Technologies R&D program. The boost in FY14 funding for EERE Advanced Manufacturing activities would increase support for the <u>Advance Manufacturing Office</u>, which would deploy three or more new <u>Clean Energy Manufacturing Innovation Institutes</u>. These institutes bring together universities, companies and the federal government to solve industry-relevant problems, consistent with the president's <u>National Network for Manufacturing Innovation</u>.

Funding for EERE research programs includes:

	FY14 Request (\$	Percent Change from
EERE Research Programs	millions)	FY12 Estimate
Sustainable Transportation	957	55
<u>Vehicle Technologies</u>	575	79.1
Bioenergy Technologies (formerly Biomass and		
Biorefinery Systems (RD&D)	330.8	44.6
Hydrogen and Fuel Cell Technologies	100	(1.3)
Energy Efficiency	949	95.6
Advanced Manufacturing (formerly Industrial		
Technologies)	365	223.9
Building Technologies	300	39.7
Weatherization and Intergovernmental Activities	248	93.8
Federal Energy Management Program	36	20.4
Renewable Electricity	615.5	30.5
Solar Energy	356.5	25.2
Wind Energy	144	56.8
Geothermal Technologies	60	62.3
Water Power	55	(5.3)

The president's budget request would allocate \$379 million (37.8 percent increase) for the <u>Advanced Research Projects Agency – Energy (ARPA-E)</u>, which supports high-impact energy research with real-world applications. Of this funding, \$197 million would support ARPA-E research on **Transportations Systems**, \$148 million would support **Stationary Power Systems** research, while the remaining funds would cover program direction.

The Office of Nuclear Energy (NE) would receive \$735 million (13.9 percent decrease) in operational funds, with highlights including the cancellation of the Integrated University Program, \$165.1 million (8.8 percent decrease) for the Fuel Cycle R&D program, and \$72.5 million (34.5 percent decrease) for the Reactor Concepts RD&D program.

While DOE investment in nuclear technology is being marginally reduced across offices, the Defense Nuclear Nonproliferation R&D program, housed within the <u>Defense Nuclear Nonproliferation Office</u> (NNSA). NNSA would receive \$389 million (41 percent increase) in funding and aims to improve the detection, identification, and characterization of foreign nuclear weapons development programs.

The Office of Fossil Energy (FE) would receive \$388 million (15 percent increase), including \$429.3 million for R&D (18.1 percent decrease), and continue to house conventional energy R&D programs focused on carbon capture research. Funding highlights include:

- \$266 million (25 percent increase) in R&D funding for developing cost-effective carbon capture, storage, and advanced power systems;
- \$25 million for a one-time prize for the first natural gas combined-cycle power plant to integrate large-scale carbon capture and storage; and,
- \$12 million to fund a multi-agency research initiative to advance technology and methods to develop U.S. natural gas resources.

The DOE Loan Program Office would receive \$48 million to support continuing activities, which include a \$170 million in credit subsidies and \$34 billion in loan authority in renewable energy and efficiency investments, \$6 million (no change) in funding for the Advanced Technology Vehicles Manufacturing Loan Program, and continued operation of the Innovative Technology Loan Guarantee Program, which still has over \$10 billion in conditional commitments that have not been closed to date, including loan guarantees for the country's first new commercial power plant to be built in the past 30 years.

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Department of Health and Human Services

FY12 actual funding levels are used for HHS comparisons, unless otherwise noted The administration's FY14 budget request for the Department of Health and Human Services (HHS) is \$80.1 billion in discretionary spending, reflecting a 3.2 percent increase from FY13 annualized funding levels with the continuing resolution (CR). Although it does not call for reductions in discretionary spending, the budget's legislative proposals would save an estimated \$361.1 billion over ten years. Discretionary spending accounts for only 8.3 percent of the total proposed HHS budget. Mandatory spending for programs like Medicare, Medicaid and the Children's Health Insurance Program accounts for the balance. Total FY14 budget authority for HHS would be \$974.6 billion (7.2 percent increase over FY13 annualized).

The president's budget includes funding for several new initiatives starting in FY14 including:

- \$415 million for the <u>Biomedical Advanced Research Development Authority (BARDA)</u> to improve existing and develop new next-generation medical countermeasures to mitigate the medical consequences of potential chemical, biological, radiological and nuclear threats;
- \$250 million as the first installment of a multi-year commitment that would support **Project BioShield**, an initiative to facilitate the procurement of medical countermeasures for the Strategic National Stockpile:
- \$100 million for an initiative targeted to expanding research, education, and outreach on Alzheimer's disease;
- \$40 million that would modernize <u>Center for Disease Control (CDC)</u> surveillance technology and methods to better detect and track infectious disease; and,
- \$30 million in new funding that would allow the CDC to track gun violence and to research strategies to prevent it.

The president's budget also calls for proposed funding increases in strategic areas of importance including:

- \$1.5 billion, an increase of \$312 million over FY12 final enacted levels, to support the <u>Food and Drug Administration (FDA)</u> and CDC activities that would develop and strengthen an integrated and prevention-based food safety system.
- \$2.6 billion, an increase of \$456 million over FY12 final enacted levels, for FDA that would ensure
 the safety, effectiveness, and timely availability of medical products including prescription drugs,
 generic drugs, biologics and devices.

While the total HHS discretionary spending increased from FY12 actual levels, there were several revisions in priorities within the HHS budget including:

HHS Agency	FY14 Request (\$	Percent Change (From FY13 annualized with CR)
National Institute of Health (NIH)	31,173	0.9
Health Resources and Services Administration (HRSA)	6,022	(3.5)
Centers for Disease Control and Prevention (CDC)	5,293	(8.1)
Substance Abuse and Mental Health Administration (SAMHA)	3,348	(0.6)
Food and Drug Administration (FDA)	2,558	1.5
Agency for Healthcare Research and Quality (AHRQ)		
(program level)	434	0.5

National Institute of Health (NIH)

In FY14, NIH estimates the FY14 budget request of \$31.3 billion (1.5 percent increase over FY12 actual funding) to support a total of 36,610 research project grants, including 7,915 new and competing awards (13.8 percent over FY12 actual). Approximately \$735.1 million would be made available to support U.S. small business via the award of an anticipated 1,775 new SBIR/STTR awards. Approximately 11.2 percent of the budget would support intramural programs consisting of basic and clinical research activities. The majority of NIH available research funding would support the extramural research community including universities, medical schools, hospitals and other research facilities. The total request for the 24 institutes of NIH and the Office of the Director breaks down as follows:

Institute	FY14 Request (\$ millions)	Percent Change (From FY12 Actual)
National Cancer Institute (NCI)	5,126	1.2
National Institute of Allergy and Infectious Diseases (NIAID)	4,578.8	2.2
National Heart, Lung and Blood Institute (NHILBI)	3,098.5	0.8
National Institute of General Medicine Studies (NIGMS)	2,401	(1)
National Institute of Diabetes and Digestive and Kidney	2, 101	(',
Diseases (NIDDK)	1,961.8	0.9
National Institute of Neurological Disorders and Stroke	1,00110	
(NINDS)	1,642.6	1.2
National Institute of Mental Health (NIMH)	1,465.8	(0.8)
Office of the Director (NIH)	1,473.4	1.1
National Institute of Child Health and Human Development	,	
(NICHD)	1,339.4	1.5
National Institute of Aging (NIA)	1,193.4	6.5
National Institute of Drug Abuse (NIDA)	1,071.6	1.9
National Eye Institute (NEI)	699.1	(0.3)
National Institute of Environmental Health and Sciences		
(NIEHS) (see note)	691.3	1
National Center for Advancing Translational Sciences		
(NCATS)	665.7	15.9
National Institute for Arthritis and Musculoskeletal and Skin		
<u>Diseases (NIAMS)</u>	541	1.2
National Human Genome Research Institute (NHGRI)	517.3	1
National Institute of Alcohol Abuse and Alcoholism (NIAAA)	463.8	1.1
National Institute of Deafness and Other Communication		
Disorders (NIDCD)	422.9	1.8
National Institute of Dental and Craniofacial Research		
(NIDCR)	411.5	0.4
National Library of Medicine (NLM)	382.3	4.8
National Institute of Biomedical Imaging and	000.0	0.0
Bioengineering (NIBIB)	338.9	0.3
National Institute of Minority Health and Health Disparities	202.2	2.7
(NIMHD)	283.3 146.2	2.7 1.2
National Institute of Nursing Research (MINR)	146.2	1.2
National Center for Complementary and Alternative Medicine (NCCAM)	129	4
John E. Fogerty International Center (FIC)	72.9	4.9
Note: An additional \$79.4 million is requested for the National		

Note: An additional \$79.4 million is requested for the National Institute of Environmental Health Sciences as part of the Department of the Interior appropriations request.

Within NCATS, the president's budget proposes \$50 million (405.6 percent increase from FY12 actual) for the <u>Cures Acceleration Network</u> (CAN). The additional \$40.1 million in funding would allow CAN to expand its funding of initiatives that address scientific and technical challenges that impede translational research, including support for the tissue chips for drug screening initiative, the discovering new therapeutic uses for existing molecules program, and others.

In FY14, NIH proposes to support Brain Research through Application of Innovative Neurotechnologies (BRAIN) Initiative. The proposed initiative would provide funding for the creation of new tools capable of examining the activity of the millions of nerve cells, networks and pathways in the brain in real time.

The FY14 budget proposes a major reorganization of government-wide STEM programs in order to improve STEM education outcomes and generate many more STEM teachers and graduates. Nine of NIH's STEM education programs, including <u>Science Education Partnership Awards</u>, will be included in this reorganization and consolidation.

Centers for Disease Control and Prevention (CDC)

The CDC would receive \$6.6 billion at the program level (4 percent decrease from FY12 enacted) and the <u>Agency for Toxic Substance and Disease Registry (ATSDR)</u> would receive \$76.2 million in funding, same as enacted FY12. Programs with new or increased investment (from FY12 enacted) in the FY14 budget request include:

- Advanced Molecular Detection and Response to Infectious Disease Outbreaks \$40 million (new program) for a crosscutting initiative;
- Food Safety \$49.2 million (81.5 percent increase);
- Global Polio Eradication Initiative (GPEI) \$131 million (14.2 percent increase);
- <u>Domestic HIV/AIDS Prevention and Research</u> \$836.1 million (6.4 percent increase), including \$10 million to improve timeliness of HIV surveillance;
- National Healthcare Safety Network (NHSN) \$31.6 million (112.7 percent increase); and,
- **Gun Violence Prevention Research** \$10 million (new program) to prevent gun violence by supporting research into the causes and prevention of gun violence.

Existing CDC programs facing decreases and elimination (from FY12 enacted) include:

- Community Transformation Grants (CTG) decrease of \$89.7 million;
- Preventive Health and Health Services Block Grant elimination of the program; and,
- Education and Research Centers elimination of the program.

The National Institute for Occupational Safety and Health (NIOSH) – the primary federal agency responsible for conducting research, making recommendations and translating knowledge for the prevention of work-related illnesses and injury – would receive \$271.9 million (7.1 percent decrease from FY12 enacted). In addition, Environmental Health activities within CDC would be \$155.1 million (10.8 percent increased from FY12 enacted). The proposed budget also includes a total of \$42 million (17 percent increase from FY12 enacted) to help ensure a prepared, diverse and sustainable public health workforce through experiential fellowships and training programs.

Substance Abuse and Mental Health Services Administration (SAMHA)

SAMHA would receive \$3.3 billion (less than 0.1 percent increase) to support multiple substance abuse and mental health activities including competitive grants to identify and test innovation prevention and treatment interventions of these diseases.

Food and Drug Administration (FDA)

The administration's \$2.6 billion (1.5 percent increase over FY12) proposal for the FDA would include investments to accelerate implementation of the Food Safety Modernization Act (FSMA), modernize regulatory science and to strengthen FDA's global oversight capacity and enhance trade with China. It also includes public health activities to decrease initiation of tobacco use/encourage cessation and work to advance medical counter measures. Within the FDA budget proposal, the National Center for Toxicological Research, which supports multidisciplinary research toward the development of new technologies in seven areas, would receive \$59.5 million (0.9 percent decrease from FY12 actual).

Agency for Healthcare Research and Quality (AHRQ)

The FY14 total program level request for AHRQ is \$433.7 million, an increase of \$28.6 million (7.1 percent from the FY12 actual level). AHRQ provides extramural research support in the form of grants, cooperative agreements and research contracts to improve the quality, safety, efficiency and effectiveness of healthcare. The primary research areas of funding for AHRQ include:

- Patient-Centered Health Research \$100 million (146.3 percent increase from FY12 actual);
- Research Innovations (Formerly Crosscutting Activities) \$88.9 million (17.9 percent decrease) that would support measurement and data collection activities, including the Healthcare Cost and Utilization Project (HCUP);
- General Patient Safety Research \$62.6 million (4.5 percent decrease);
- **Health Information Technology Research** \$25.6 million (same as FY12 actual), including \$3.3 million in new research grants for foundational health IT research and \$6 million that would support contract activities related to synthesizing and disseminating evidence on meaningful use of health IT and developing the tools and resources;
- Prevention/Care Management Research \$20.7 million (25.8 percent decrease); and,
- **Value Research** \$3.3 million (12.8 percent decrease), a comprehensive program to provide support for the research and development of healthcare measures, data, tools and evidence.

The Office of the National Coordinator for Health Information Technology (ONC) would receive \$78 million (27.9 percent increase) to accelerate the adoption of health IT and promote electronic health records. The increase would allow ONC to address technical barriers and share knowledge about electronic health records systems.

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Department of Homeland Security

FY12 revised enacted funding is used for Department of Homeland Security comparisons, unless otherwise noted.

The administration's <u>FY14 budget request</u> for the <u>Department of Homeland Security (DHS)</u> is \$39 billion (1.5 percent decrease) in net discretionary funding, excluding disaster relief funding. The proposed budget includes \$44 million for expansion of the <u>Comprehensive National Cybersecurity Initiative Five</u>, a multi-agency effort to foster cybersecurity information sharing across government agencies.

In the president's budget, funding for the DHS <u>Science and Technology Directorate (ST&T)</u> would receive \$1.5 billion (126.9 percent increase). ST&T works with state and local partners on research, development, testing, and evaluation (RDT&E) and provides technology solutions to improve mission effectiveness. Much of the proposed increase for FY14 would fund a one-time payment of \$714 million for the construction of a <u>National Bio and Agro-Defense Facility (NBAF)</u> in Manhattan, KS. Upon completion the facility would be the country's first Biosafety Level 4 biocontainment facility, and would be used to study foreign animal and emerging zoonotic diseases that could potentially affect the national food supply.

ST&T is organized into four program, project and activities (PPAs) areas. Proposed funding for these PPAs includes:

- <u>Laboratory Facilities</u> \$857.8 million (372.6 percent increase) for the Office of National Laboratories to provide administrative and operational support to national laboratories that assist with DHS mission operations;
- Research, Development, and Innovation \$467 million (75.7 percent increase) to develop new technology solutions for state and local DHS partners;
- Acquisitions and Operations Support \$41.7 million (23 percent decrease) to ensure the
 development of new technologies for DHS partners to improve mission effectiveness; and,
- <u>University Programs</u> \$31 million (15.2 percent decrease) to support homeland security-related research and education at U.S. colleges and universities, including Centers of Excellence.

The <u>Domestic Nuclear Detection Office (DNDO)</u> would receive \$291.3 million (0.5 percent increase) to assist with international and domestic nuclear terrorism prevention. DNDO works with local and state partners to develop and implement new technologies that support nuclear detection and forensics. DNDO would allocate \$35.3 million for its <u>Transformational and Applied Research and Development</u> operation, which includes funding for the development of cost-effective equipment, search technologies for urban environments, and transportation scanning equipment for DHS partners.

Also included in the president's budget is \$20 million (28.6 percent decrease) for the <u>U.S. Coast Guard</u> Research, Development, Test and Evaluation program.

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Department of Housing and Urban Development

FY13 CR levels are used for Department of Housing and Urban Development comparisons, unless otherwise noted.

The president's FY14 budget request for the Department of Housing and Urban Development (HUD) is \$47.6 billion in discretionary funding, a 10 percent decrease from FY12 actual. Highlights include \$200 million for a new competitive set-aside program to provide funds to areas hit hardest by the foreclosure crisis and \$75 million for a multi-agency partnership to create incentives for communities to develop and implement housing and transportation plans.

The <u>Community Development Fund</u>, which includes the <u>Community Development Block Program</u> (<u>CDBG</u>), **Sustainable Communities Initiative**, **Capacity Building Program**, and **Indian Community Development Program**, would receive \$3.1 billion in FY14, a 5.6 percent decrease.

For the CDBG formula grant program, the budget includes \$2.8 billion (5.1 percent decrease from FY12 actual) to assist state and local governments address community and economic development activities, such as public infrastructure improvements, housing rehabilitation and construction, and job creation and retention. This includes \$200 million in new competitive funding for an initiative that builds on the Neighborhood Stabilization program, which helps to stabilize communities that have suffered from foreclosures and abandonment. Competitive grants would be allocated to states, cities and state housing financing agencies for a number of eligible uses, such as purchasing and rehabilitating abandoned and foreclosed properties.

The budget requests \$75 million for **Integrated Planning and Investment** grants (formerly known as <u>Sustainable Communities</u> grants) as part of the <u>Partnership for Sustainable Communities</u> initiative, a multi-agency effort between HUD, the Department of Transportation and the Environmental Protection Agency. These grants aim to create incentives for communities to develop and implement comprehensive housing and transportation plans. FY14 funding would support up to 30 regional and neighborhood planning implementation grants to enable communities to align public and private investments in housing, transportation and infrastructure.

Funding for the <u>Indian Community Development</u> program is increased to \$70 million (14.3 percent increase) under the president's budget. This program provides grants for developing viable Indian and Alaska Native communities, including housing and economic opportunities.

The Office of Policy Development and Research (PD&R) Research and Technology program would receive \$50 million in FY14 (8 percent increase). This request includes funding to restore and enhance various national housing surveys and for research dissemination activities. The office contracts with industry, nonprofit research organizations, educational institutions, and philanthropic entities to undertake programs of research, studies, testing and demonstrations related to HUD's mission.

To support ongoing improvements of program effectiveness and efficiency, the FY14 budget proposes transfers up to a maximum of 0.5 percent per program, or \$15 million, whichever is less, and approximately \$80 million total for the **Transformation Initiative** (TI). First enacted in 2010, this ongoing effort provides funding for high-quality research and evaluation of HUD's programs. The TI also enables HUD to design and execute a series of major research demonstrations that rigorously test new program innovations. In 2014, HUD will strengthen its focus on using TI to deliver comprehensive capacity building to help distressed communities position themselves for revitalization and economic growth.

No new appropriation is requested for the <u>Empowerment Zone (EZ)</u> or <u>Renewal Community (RC)</u> programs in the FY14 budget. Rather, a rescission of approximately \$25,000 in carryover is proposed. The tax incentives for RCs expired on December 31, 2009, while EZ incentives have been extended to December 31, 2013.

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Department of the Interior

FY13 CR funding is used for Department of Interior comparisons, unless otherwise noted. The FY14 <u>budget request</u> for the <u>Department of Interior (DOI)</u> would provide \$11.7 billion (5.6 percent decrease) in discretionary funding. Under the proposal, DOI would receive funding to support renewable energy research through the New Energy Frontier initiative and water availability through the WaterSMART initiative.

The <u>U.S. Geological Survey (USGS)</u> would be allocated \$1.2 billion (8.6 percent increase) in the proposed budget to provide reliable scientific information about the Earth to policymakers and the public. Funding for both the New Energy Frontier and WaterSMART initiatives would derive from several USGS research programs. USGS **Surveys, Investigations and Research** activities are divided into 8 research areas:

- Water Resources \$222.9 million (5.3 percent increase);
- <u>Ecosystems</u> \$180.8 million (12.4 percent increase);
- <u>Climate and Land Use Change</u> \$156 million (10.2 percent increase);
- Natural Hazards \$142.6 million (8.8 percent increase);
- Core Science Systems \$137.2 million (19.3 percent increase);
- Administration and Enterprise Information Science Support \$115.6 million (1.1 percent decrease);
- Energy, Minerals and Environmental Health \$107.4 million (10.4 percent increase); and,
- Facilities \$104.5 million (4 percent increase).

The proposed budget would provide \$55.3 million (no change from FY12 enacted levels) for the USGS <u>Landsat Missions</u> program, which supports ground systems, satellite operation and the use and sharing of Landsat data. The FY14 budget request for NASA provides funding for a successor to the Landsat 8 mission. NASA will be responsible for the development of the satellites, but operational management of the collection and dissemination of the Landsat data will remain with the USGS.

Funding for the DOI programs associated with the departmental New Energy Frontier initiative totals \$771.6 million (11.2 percent increase), including \$99.9 million (39.5 percent increase over FY12 enacted levels) for renewable energy programs. Specific sub-agency activities participating in the initiative include:

- <u>Bureau of Ocean Energy Management</u> \$34.4 million (4.2 percent increase from FY12 enacted levels) for the siting and construction of offshore wind farms on the outer continental shelf;
- <u>Bureau of Land Management</u> \$29.1 million (47.7 percent increase from FY12 enacted levels) to facilitate and promote the development of wind, solar, geothermal, and biomass energy on public lands;
- <u>Fish and Wildlife Service</u> \$14.1 million (101.4 percent increase from FY12 enacted levels) to fulfill endangered species consultation for renewable energy projects;
- <u>U.S. Geological Survey</u> \$9.9 million (67.8 percent increase from FY12 enacted levels) to fund research to support permitting decisions for alternative energy on federal land;
- <u>Bureau of Indian Affairs</u> \$8.3 million (38.3 percent increase from FY12 enacted levels) the implementation of renewable energies on tribal lands;
- Office of Insular Affairs \$3 million (172.7 percent increase from FY12 enacted levels) for the implementation of renewable energies in the overseas territories of American Samoa, Guam, Northern Mariana Islands, and the U.S. Virgin Islands; and,
- <u>Bureau of Reclamation</u> \$1.1 million (37.5 percent increase from FY12 enacted levels) for a pilot initiative to investigate the use of renewable energies in reclamation projects.

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Department of Justice

FY13 CR levels are used for comparison, unless otherwise noted.

The <u>Department of Justice</u> (DOJ) would receive \$27.6 billion in FY14 discretionary funding under the <u>president's budget</u>, a 2.2 percent increase. Funding for research, development and evaluation programs would be increased to support grants and agreements aimed at building research knowledge and translating that knowledge into practice and policy to support the justice system.

A new **Forensics Initiative** would be established to strengthen and enhance the practice of forensic sciences. The budget provides \$9 million in FY14 for the effort. Included in this funding is \$5 million for the National Science Foundation for a forensic science grant program to establish forensic science research centers and \$3 million for the National Institute of Standards and Technology for measuring science and standards in support of forensics.

For the Office of Justice Programs (OJP), the budget request for FY14 totals \$1.4 billion (4.5 percent decrease) with \$134.4 million (18.2 percent increase) for Research, Evaluation, and Statistics. This appropriation includes programs that provide grants, contracts and cooperative agreements for research, development and evaluation; development and dissemination of quality statistical and scientific information; and nationwide support for law enforcement agencies. Of this amount, \$44.5 million (10.6 percent increase) is requested for research, development and evaluation efforts under the National Institute of Justice (NIJ), which serves as the R&D agency of DOJ. NIJ's strategic plan for these funds centers on translational research to transform criminal justice practice and policy. This includes generating knowledge (\$1 million); building and sustaining the research infrastructure (\$1 million); supporting evidence-adoption in practice and policy (\$1 million); and, knowledge translation through effective communication and dissemination (\$1.5 million).

Additional research related funding in the DOJ budget includes:

- \$100 million (20.5 percent decrease) for DNA Related and Forensic Programs and Activities.
 This program provides capacity building grants, training, and technical assistance to state and local governments and supports innovative research on DNA analysis and use of forensic evidence.
- \$9 million (27.8 percent increase) for the **Economic, High-Technology, and Cybercrime Prevention** program, which provides grants, training, and technical assistance to combat economic, high-technology, and internet crimes, including intellectual property crimes.

The president's FY14 budget provides an additional \$96.2 million in program increases (\$668 million total) to address computer intrusions and cybercrimes and to defend the security of the department's information networks as part of the administration's <u>executive order</u> on Improving Critical Infrastructure Cyber Security.

For the Office on Violence Against Women (OVM), the budget request includes \$412.5 million (0.6 percent decrease) for programs to prevent and respond to violence against women and related victims.

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Department of Labor

FY13 CR levels are used for Department of Labor comparisons, unless otherwise noted. The president's budget provides \$12.1 billion in discretionary funding for the Department of Labor (DOL), a 4.1 percent decrease. To help better train workers for jobs in high-demand industries, the Departments of Labor and Education would administer jointly a new \$8 billion Community College to Career Fund to begin in 2015 as a successor to the Trade Adjustment Assistance Community College and Career training program. Funding for the Workforce Innovation Fund, which tests new ideas that states and regions bring forward to implement systematic reforms and evidence-based strategies for training, would increase nearly three-fold in the proposed budget.

For training and employment services under the <u>Employment and Training Administration (ETA)</u>, the budget provides \$3.4 billion (5.8 percent increase). Training and employment services include the following programs:

- <u>Adult Employment and Training Formula Activities</u> \$791.6 million (2.6 percent increase) to
 provide financial assistance to states to help prepare low-skill adult workers for higher-paying
 jobs;
- Youth Activities \$846.6 million (2 percent increase) to provide services to prepare low-income youth for employment and post-secondary education;
- <u>Dislocated Workers Employment and Training Activities</u> \$1.3 billion (2.7 percent increase) to
 provide employment and training services to individuals who have lost their jobs or are unlikely to
 return to employment in a previous industry;
- <u>Pilots, Demonstrations and Research</u> \$25 million (276 percent increase) to rigorously evaluate
 potential low-cost structural changes to the public workforce investment system aimed at
 substantially improving services to seniors; and,
- Workforce Data Quality Initiative \$6 million (7.7 percent decrease) to enable state workforce agencies to build longitudinal data systems that merge workforce information with education data.

The FY13 budget proposes an increase of nearly \$100 million for the Workforce Innovation Fund (WIF). The WIF provides funding to test innovative strategies and replicate evidence-based practices in the workforce system by emphasizing cross-program collaboration and bold systematic reforms to improve education and employment outcomes. Of the \$150 million requested, \$50 million is set aside for veterans, \$20 million would be used for Pay for Success projects, and \$10 million is slated for projects to build knowledge of interventions that work for disconnected youth.

Starting in 2015, DOL and the Department of Education are requesting \$8 billion to administer jointly a **Community College to Career Fund**. The fund would support state and community college partnerships with businesses that build the skills of American workers and make it easier to match employers with skilled workers. This initiative would be the successor to the <u>Trade Adjustment Assistance Community College and Career Training (TAACCT)</u> program, which was established under the American Recovery and Reinvestment Act of 2009 and the Health Care and Education Reconciliation Act of 2010 and provided \$500 million annually in FY11-14. The program aims to prepare students for jobs in high-skilled occupations through grants provided to institutions of higher education.

In an effort to continue reforming the <u>Job Corps</u> program, the administration plans to close a small number of low-performing Job Corps centers, identify and seek to replicate the best practices of high-performing centers, and adopt cost-savings reforms. Job Corps would receive \$1.7 billion in FY14 (1.25 percent decrease) to provide academic and career and technical training to help prepare at-risk youth for opportunities to enter the workforce, the military or to enroll in postsecondary education.

The <u>Bureau of Labor Statistics (BLS)</u> would receive \$614 million (0.2 percent increase) to collect, analyze and disseminate essential economic information to support public and private decision making. The BLS measures labor market activity, working conditions and price changes to the economy. The 2014 request eliminates the **Measure Green Jobs** initiative and **Mass Layoff Statistics** program. Savings would be used to finance other, more critical needs, according to budget documents.

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Department of Transportation

FY12 actual funding is used for Department of Transportation comparisons, unless otherwise noted. The president's Department of Transportation (DOT) FY14 budget request totals \$77.2 billion (6.4 percent increase,) plus an additional \$50 billion in immediate transportation investments in FY14. This year's proposal shifts its focus from large-scale surface reauthorization programs to high-speed rail with a new, five-year \$40 billion rail reauthorization proposal.

The proposed \$50 billion for immediate transportation investments would support critical infrastructure projects that improve roads, bridges, transit systems, border crossings, railways and runways. Of that amount, \$40 billion would support a new "Fix-it-First" program that aims to improve the country's existing transportation system. The remaining \$10 billion would be dedicated to investments that spur reform through competition, including \$4 billion for infrastructure grants and financing to state and local governments and transit agencies and \$1 billion to advance NextGen and other projects that would accelerate NextGen's capabilities.

The president's proposed \$40 billion rail reauthorization plan would shift the department's focus to investing in high-speed and intercity rail corridors projects over the next five years through the creation of the **National High Performance Rail System (NHPRS)** program. The president proposes \$6.4 billion of the five-year funding be allocated for FY14, which consumes a large portion of the <u>Federal Railroad Administration</u>'s total request for \$6.6 billion (306.6 percent increase). This includes \$35.3 million (0.9 percent increase) towards safety-related research and development activities and \$54.7 million for the **Railroad Research**, **Development and Technology** program under the proposed NHPRS Program.

Several other administrations under DOT will see limited change in their research and development budgets, but do account for structural changes that occurred under the passage of the *Moving Ahead for Progress in the 21st Century Act* in 2012. Funding for various research and development initiatives include:

- \$400 million for the <u>Federal Highway Administration's (FHWA)</u> comprehensive **Research**,
 Technology and Education program that would restructure existing FHWA activities into three programs: a highway research and development program, a technology and innovation deployment program, and a training and education activities program;
- \$166 million (1.0 percent decrease) for <u>Federal Aviation Administration</u> research, engineering and development activities related to NextGen and other research areas such as environmental research, safety research and weather research;
- \$30 million for <u>Federal Transit Administration</u>'s Research, Development, Demonstration and Deployment program that would support research activities improve the public transportation industry and support the deployment of innovative technologies, materials, and processes; and,
- \$7 million for the Federal Transit Administration's Transit Cooperative Research program, which would provide funds to the National Academy of Sciences for research related to public transportation.

The president also is requesting \$15 million to elevate the vital role of research in transportation by converting the Research and Innovative Technology Administration (RITA) into the Office of the Assistant Secretary for Research and Technology within the Office of the Secretary.

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Department of the Treasury

FY12 actual funding is used for Department of the Treasury comparisons, unless otherwise noted. The administration's FY14 budget request for the Department of the Treasury's domestic programs is \$16.1 billion (8.4 percent increase), including \$12.9 billion (8.8 percent increase) for the Internal Revenue Service, \$2.9 billion (8.9 percent increase) for International Programs and \$1.3 billion (2.3 percent decrease) for Treasury's other bureaus. A \$950 million permanent cancellation from the Forfeiture Fund would reduce the request. Under the proposed budget, Treasury would continue its programs focused on encouraging small business lending and funding economic development and job creation initiatives.

In FY14 the administration would seek to enhance the Treasury Department's role in supporting economic growth in distressed communities with the launch of two new programs:

- Manufacturing Communities Tax Credit (MCTC) \$2 billion in tax credit authority to be
 granted for each year through 2016 to expand the availability of affordable financing for
 operating businesses and real estate development projects in low-income communities affected
 by military base closures and mass layoffs; and,
- Pay For Success Fund \$300 million in a one-time mandatory appropriation to provide credit
 enhancements and direct grants to support nonprofit institutions with the implementation of
 social impact bonds, preventive social programs that deliver quality social services, maximize the
 use of public investment dollars, and generate measurable returnable savings for government
 service providers. If successful, the Pay For Success Fund would be used to help seed and grow
 a private market for social impact bonds in the United States.

The <u>Community Development Financial Institutions (CDFI) Fund</u> provides infusions of capital to financial institutions that serve economically distressed urban and rural communities. The president's budget proposes \$224.9 million (1.8 percent increase) in funding for the CDFI Fund and its component initiatives, which include:

- <u>CDFI Core Program</u> \$144.3 million (1.2 percent decrease) to use federal resources to invest in CDFIs and to build their capacity to serve low-income people and communities that lack access to affordable financial products and services;
- Healthy Food Financing Initiative \$35 million (59.1 percent increase) to develop healthy food
 outlets in areas classified as "food deserts," low income areas where a majority of residents do
 not have access to a supermarket;
- <u>Native American CDFI Assistance</u> \$12 million (no change) to assist distressed Native
 American communities with access to credit, capital, and financial services through the creation
 and expansion of Native American CDFIs; and,
- <u>Bank Enterprise Award Program</u> \$10 million (44 percent decrease) to incentivize commercial banks to invest in distressed communities.

Financing for the current <u>CDFI Bond Guarantee Program</u> would cost \$2.3 million in FY14, with \$491,000 of the program cost offset by collection of administrative fees on issued loan guarantees. The Treasury proposes to reinvest \$1.8 million in loan revenues to meet the remaining associated administrative costs of the program. The president's budget also would extend the CDFI Bond Guarantee Program through FY15.

The president's FY14 budget would mandate the permanent extension of the New Market Tax Credit Program, which allows Community Development Entities (CDEs) in low-income communities to apply to the CDFI Fund for tax credit investment authority in annual competitive rounds. Tax credits then are awarded to private investors in return for equity investments in CDEs. The proposed extension would allow up to \$5 billion in qualifying investments each year beginning in FY14.

The Small Business Jobs Act of 2010 established Treasury's <u>Small Business Lending Fund (SBLF)</u> and the <u>State Small Business Credit Initiative (SSBCI)</u>, both of which work to encourage small business lending. The SBLF would receive \$20 million (13.4 percent decrease) to provide capital and community development loan funds to qualified community banks. The SSBCI provides states with access to small business lending and investment programs, and would receive \$6.9 million (45.5 percent decrease) for administration expenses while the Treasury works with states to modify the program. Another \$2 million would be allocated from Treasury Departmental Offices' request to enable SSBCI to expand technical assistance provided to program participants beginning in 2013. The assistance would be tailored to the needs of each state program in order to increase their effectiveness in creating businesses and jobs.

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Environmental Protection Agency

FY13 CR levels are used for Environmental Protection Agency comparisons, unless otherwise noted. The president's FY14 budget request of \$8.2 billion for the Environmental Protection Agency (EPA) reflects a 3.5 percent decrease from FY12 enacted. The budget proposal also decreases funding by 1.9 percent for science and technology programs. Priority funding areas in FY14 include implementing an electronic reporting system, support for climate change initiatives, and research surrounding human health risk and transitioning toward a clean energy future.

For <u>Science and Technology (S&T)</u>, including R&D activities, the administration requests \$783.9 million. Funding for S&T represents 9.6 percent of EPA's total budget request. S&T programs include:

- Clean Air and Climate \$126 million (0.6 percent increase)
- Indoor Air and Radiation \$6.7 million (1.6 percent decrease)
- Forensics Support \$15.9 million (3.7 percent increase)
- Homeland Security \$40 million (4.9 percent decrease)
- IT, Data Management and Security \$4 million (9.8 percent increase)
- Pesticides Licensing \$6.2 million (5.4 percent decrease)
- Research \$505.8 million (2.3 percent decrease)
 - o Air, Climate and Energy \$105.7 million (7.1 percent increase)
 - Safe and Sustainable Water Resources \$117.9 million (3.9 percent increase)
 - Sustainable Communities \$147.4 million (15.6 percent decrease)
 - o Chemical Safety and Sustainability \$134.8 million (3 percent increase)

In FY14, EPA is focusing research on the most critical issues facing the agency: assessing the human health and environmental impacts of energy production and use, minimizing the impacts of climate change, and developing effective, systems-based watershed management approaches for green infrastructure, chemical safety and other innovative alternative practices. One area of continued importance in FY14 is hydraulic fracturing. EPA will publish the *Impacts of Hydraulic Fracturing on Drinking Water Resources* later this year.

Funding for EPA's **Science to Achieve Results** (STAR) and the **Greater Research Opportunities** (GRO) fellowship programs, and all funds including nanotechnology fellowships, would be consolidated as part of a comprehensive reorganization to facilitate a cohesive national strategy of STEM education programs (\$16.4 million decrease). The reorganization involves consolidating or restructuring 90 programs across 11 agencies, including the Department of Education, the National Science Foundation and the Smithsonian Institute.

Climate protection programs total \$106.2 million, a 5.6 percent increase, and include:

- \$52.9 million for Energy STAR (5.3 percent increase);
- \$18.9 million for Greenhouse Gas Reporting Registry (18.3 percent increase);
- \$4.8 million for Methane to Markets (5.2 percent decrease); and,
- \$29.6 million for other activities (1.2 percent increase).

The FY14 budget request includes \$1.2 billion for the <u>Clean Water State Revolving Fund</u> and \$817 million for the <u>Drinking Water State Revolving Fund</u>, a reduction of \$472 million from FY12 enacted. These programs provide grants to states to capitalize on their own revolving funds, which finance wastewater and drinking water treatment systems.

The president's budget supports continuation of a new funding approach for the <u>Diesel Emission</u> <u>Reduction Act Grants</u> program. The modified funding strategy uses rebates and revolving loan funds to concentrate resources on communities in a limited set of high exposure areas to transition away from ongoing federal support. The budget includes \$6 million for the effort (76 percent decrease).

Funding for the <u>Great Lakes Restoration Initiative</u> is slated for \$300 million (1.3 percent decrease). The budget requests \$73 million (25.7 percent increase) for the <u>Chesapeake Bay</u> program. These programs work to clean up toxic areas, combat invasive species, protect watersheds, and restore wetlands.

To support the **E-Enterprise initiative**, \$60 million in FY14 funding is requested, which includes \$16.1 million to develop a single portal where customers would register to conduct business with EPA similar to online banking. The system would push tailored information to customers based on their unique needs and allow customers to apply for permits, check compliance, report emissions and learn about new regulations through an online system. The goal is to replace outdated paper reporting systems using advanced technology and shared IT services.

The FY14 budget proposes to eliminate \$54 million from a number of programs that have served their purpose or accomplished their mission. Many of these were slated for elimination in the president's FY13 budget, including the **Clean Automotive Technology** program, **Beach** categorical grants, **Environmental Education**, **State Indoor Radon** grants, support to other federal agencies program within **Superfund** and the **Fibers** program.

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NASA

FY12 actual funding is used for NASA comparisons, unless otherwise noted.

The president's FY14 budget request for NASA totals \$17.7 billion in discretionary funding (0.3 percent decrease). The focus remains on investing in space technologies, advancing human exploration, and the cultivation of innovative commercial partnerships. The budget allows for full funding of the Space Launch System's heavy lift rocket and the Orion Multi-Purpose Crew Vehicle to continue NASA's exploration program. NASA's education directorate sees the greatest proportional decrease in funding compared to other directorates due to the president's reorganization of several agencies' STEM programs into an overarching STEM initiative under the Department of Education.

Funding for major NASA directorates and offices includes:

Directorate or Office	FY14 Request	Percent Change
Science	5,017.8	(1.1)
Exploration	3,915.5	5.6
Space Operations	3,882.9	(7.2)
Space Technology	742.6	29.4
Construction & Environmental Compliance &		
Restoration	609.4	23.2
Aeronautics	565.7	(0.7)
Education	94.2	(30.8)

Under the proposed FY14 budget, **NASA's <u>Science</u>** account would receive \$5 billion (1.1 percent decrease) to fund the development of innovative satellite missions and tools to empower U.S. scientists. Significant funding under the Earth Science program would be dedicated to revamping the **Landsat** program in partnership with the United States Geological Survey to explore strategies to obtain optimal land observations. In addition, <u>The James Webb Space Telescope</u>, the Hubble Telescope's successor, would receive full funding to maintain its track towards launch in 2018. Research areas in the budget include:

- <u>Earth Science</u> \$1.8 billion (4.6 percent increase);
- Planetary Science \$1.2 billion (18.9 percent decrease);
- James Webb Space Telescope \$658.2 million (26.9 percent increase);
- Heliophysics \$653.7 million (1.4 percent increase); and,
- <u>Astrophysics</u> \$642.3 million (0.9 percent decrease).

To reduce foreign dependency for transport to the International Space Station, this year's request for \$3.9 billion (5.6 percent increase) for **NASA Exploration** includes significant investment in the <u>Commercial Crew & Cargo</u> program that supports private aerospace enterprises and positions U.S. industry for space travel. In FY14, NASA will finalize preparations for the first exploration test flight of the **Orion Multi-Purpose Crew Vehicle (MPVC)** without a crew. Research areas in the budget include:

- Exploration Systems Development \$2.7 billion (9.1 percent decrease);
- Commercial Spaceflight \$821.4 million (102.3 percent increase); and,
- Exploration Research & Development —\$364.2 million (20.2 percent increase).

There is no request for funding of the **Space Shuttle** program that ended in calendar year 2011 in the FY14 proposal for **NASA Space Operations**; however, support remains for the <u>International Space Station</u> with a request for \$3 billion (9.3 percent increase). Funding for the station allows NASA to perform technology demonstrations and scientific research only possible in microgravity. The remaining \$833.8 million in funds would be dedicated to **Space & Flight Support** at a 3.6 percent increase.

NASA's <u>Space Technology</u> budget request totals \$742.6 million (29.4 percent increase) and is aimed at building new capabilities such as solar sails and solar electric propulsion, green rocket propellants, laser communications, advanced manufacturing capabilities, radiation protection and other innovative technologies. Space technology will continue releasing solicitations to ensure the availability of advanced technologies as part of larger national technology goals. Program funding includes:

- Crosscutting Space Technology Development \$277.6 million (51 percent increase);
- Exploration Technology Development \$244.5 million (28.7 percent increase);
- SBIR & STTR \$186.4 million (8.6 percent increase); and,
- Partnerships Development & Strategic Integration \$34.1 million (15.6 percent increase).

NASA's **Aeronautics** directorate would conduct new research to streamline the process for certifying new composite materials to be used in advanced aircraft. The president's total request for the directorate is \$565.7 million (0.7 percent decrease).

Under the FY14 proposal, the president would redirect funding from NASA's STEM program under its Education directorate to similar programs in other agencies. NASA would retain \$94.2 million (30.8 percent decrease) for high-performing existing programs and other education and outreach programs including the Space Grant, EPSCoR, MUREP and GLOBE. NASA would consolidate the **Aeronautics Research Mission Directorate**, **Science Mission Directorate** and **Human Exploration and Operation Mission Directorate** into a single coordinated **STEM Education and Accountability Project**. Program funding includes:

- STEM Education & Accountability Project \$31.2 million (37.6 percent decrease);
- Minority University Research Education Programs \$30 million (no change);
- NASA Space Grant \$24 million (40 percent decrease); and,
- <u>EPSCoR</u> \$9 million (51.2 percent decrease).

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National Science Foundation

Actual FY12 funding levels are used for NSF comparisons

The <u>National Science Foundation (NSF)</u> <u>FY14 budget request</u> is \$7.6 billion (7.3 percent increase over FY12 actual). Of that amount, \$6.2 billion (7.9 percent increase) would be designated to research and related activities, \$210.1 million (6.1 percent increase) for R&D facilities and equipment and \$880.3 million (6 percent increase) for education and training.

Nearly 90 percent of the funding is awarded through a merit review process that includes the distribution of grants and cooperative agreements. The president's budget proposes funding for three new intiatives to improve program effectiveness and efficiency that would be established in FY14:

- **Public Access** \$2.5 million to make government more open and accessible by improving public access to NSF-funded research, including a publicly accessible repository for publications;
- **Evaluation Capability** \$5.5 million to establish a centralized capability that would coordinate the evaluation of NSF-wide activities to expand data collection and ensure that the results of evaluation are used to improve NSF programs; and,
- **Merit Review Process** \$4.1 million to support a multi-year effort to improve major aspects of the process.

Encompassing nearly 11 percent of the agency's proposed FY14 budget, NSF has identified six priority areas where progress in basic research is vital to addressing key national challenges (e.g., innovation in manufacturing, improving data storage and analysis). These priority areas include:

	FY14	Percent
	Request (\$	Change (from
FY14 NSF Priority Research Area	millions)	FY12 actual)
Cyber-enabled Materials, Manufacturing, and Smart Systems		
(CEMMSS)	300.4	108.2
Science, Engineering, and Education for Sustainability (SEES)	222.8	41.4
Cyberinfrastructure Framework for 21st Century Science,		
Engineering, and Education (CIF21)		
	155.5	70.4
Secure and Trustworthy Cyberspace (SaTC)		
	110.3	2.6
Integrated NSF Support Promoting Interdisciplinary Research and		
Education (INSPIRE)	63	116.5
NSF Innovation Corps (I-Corps)	24.9	267.1

The FY14 budget request would include funding for several other initiatives that cross several NSF directorates. Highlights from these initiatives include:

- <u>Networking and Information Technology Research and Development (NITRD)</u> \$1.2 billion (0.9 percent increase) to support large-scale networking, cybersecurity, high-confidence software and systems, human-computer interactions and software productivity;
- <u>National Nanotechnology Initiative (NNI)</u> \$430.9 million (7.6 percent decrease) is a contribution by NSF to coordinate nanotech efforts across 25 federal agencies;
- <u>Faculty Early Career Development (CAREER)</u> \$223.7 (3.8 percent decrease) to support
 exceptionally promising college and university junior faculty who are committed to the intergration
 of reseach and education and who are most likely to become the leaders in their respective fields;
- Clean Energy Technology \$372.5 to support investments including research related to sustainability science and engineering;
- <u>U.S. Global Change Research Program (USGCRP)</u> \$326.4 million (2.1 percent decrease) to advance basic research, integrative modeling and product development in the areas of climate change and evolving ecosystems;
- Enhancing Access to the Radio Spectrum (EARS) \$50 million (233.3 percent increase) to
 identify interdisplinary research opportunitites that will lead to future enhances in the efficiency by
 which the radio spectrum is used and increase access to broadband wireless services and other
 benefits derived from efficient spectrum use;
- Advanced Manufacturing \$159.7 million (44.3 percent increase) to invest in emerging advanced manufacturing technologies; and,
- Research at the Interface of Biological Mathematical and Physical Sciences (BioMaPS) \$50.7 million to support interdisciplinary research that brings together researchers from the biological, mathematical and physical sciences.

NSF Center Programs

NSF requests \$289.7 million (4.3 percent increase) for the center programs, which are the principal means by which NSF fosters interdisciplinary research. Many NSF centers receive additional support from research-based state TBED strategies. NSF center programs include:

- <u>Science & Technology Centers (STCs)</u> \$71.7 million (40.3 percent increase) to advance interdisciplinary discovery and innovation in both science and engineering through funding for reseach, education, knowledge transfer and workforce development efforts;
- Engineering Research Centers (ERCs) \$70.5 million (0.2 percent increase) to fund
 partnerships working towards the development of next-generation advances in engineered
 systems;
- Material Centers \$56 million (13 percent increase) to support centers that materials research
 and education efforts at academic institutions across the country;
- <u>Centers for Chemical Innovation (CCIs)</u> \$33.3 million (27.7 percent increase) to support longterm "big questions" in basic chemical research;
- Centers for Analysis & Synthesis \$26.4 million (0.1 percent increase) toward the development of new tools and standrds for management of biological information and to support data analysis capabilitites across the country:
- <u>Sciences of Learning Centers (SLC)</u> \$19 million (13.4 percent decrease) to conduct research that advances the understanding of learning and its societal implications; and,
- Nanoscale Science and Engineering Centers (NSECs) \$12.9 million (61.5 percent decrease) towards research to advance the development of ultra-small technology in electronics, materials, medicine, environmental science and other fields.

NSF is organized into several directorates, offices and a commission. FY14 funding for these directorates would include:

Directorate, Office or Commission	FY14 Request (\$ millions)	Percent Change (From FY12 Actual)
Geosciences	1,393.9	5.5
Mathematical & Physical Sciences	1,386.1	5.9
Computer & Information Science & Engineering	950.3	1.4
Engineering	911.1	10.5
Biological Sciences	760.6	6.8
Social, Behavioral & Economic Sciences	272.4	7.1
Office of International and Integrative Activities (see note)	536.6	34.6
U.S. Arctic Research Commission	1.4	3.3

Note: The Office of International Sciences and Engineering and the Office of Integrative Activities would be combined to provide a diverse array of agency-wide activities.

The administration's FY14 request for spending on research and related activities within its directorates and offices would total \$6.2 billion (7.9 percent increase).

Selected programs from NSF directorates and offices include:

- <u>Emerging Frontiers (EF)</u> \$116.2 million (9.4 percent increase) within the Biological Sciences
 Directorate provides funding to identify, incubate and support infrastructure and research areas
 that transcend scientific disciplines and/or advance the conceputal foundations of biology;
- Industrial Innovation Partnerships (IIP) \$225.5 million (20.1 percent increase) within the Engineering Directorate to support the commerciazliation and technology transfer efforts of institutions of higher education. Programs of interest within the IPP budget request include the Partnership for Innovation program, Industry/University Cooperative Research Centers (I/UCRC) program and Accelerating Innovation Research (AIR) program. The IPP administered Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs would receive \$177.2 million (20.7 percent increase);
- Office of Emerging Frontiers in Research Innovation (EFRI) \$32.2 million (3.9 percent increase) also administered by the Engineering Directorate helps NSF focus on emerging areas in a timely manner. EFRI recommends, prioritizes, and funds interdisciplinary topics at the frontiers of engineering research and education; and,
- Experimental Program to Stimulate Competitive Research (EPSCoR) \$163.6 million (8.4 percent increase) to promote the development of eligible states' S&T resources through partnerships involving universities, industry, government and the federal R&D enterprise.

As part of the administration's effort to streamline and better coordinate its science, technology, engineering and mathematics (STEM) education efforts, NSF would become the federal government's lead agency in enhancing undergraduate STEM instruction and graduate fellowships. The administration's proposed funding for STEM initiatives includes:

- Total, Graduate Fellowships & Traineeships \$380.2 million (30.5 percent increase) to build
 the critical human capital base required for future STEM investigation and innovation. NSF would
 receive \$325.1 million (64.3 percent increase) for its National Graduate Research Fellowship
 program to enhance the federal government's STEM graduate fellowship efforts;
- Catalyzing Advances in Undergraduate STEM Education (CAUSE) a proposed \$123.1 million portfolio program that would consolidate three existing within the Division of Undergraduate Education (DUE) and several research and related activity programs from other directorates under the STEM reorganization initiative. Through the CAUSE portfolio, NSF would fund a range of project types from foundational research to scaling and effectiveness studies. Funding also would be made available for individual investigators and research teams with expertise cutting across one or more STEM disciplines and STEM education research;
- <u>Discovery Research K-12 (DR K-12)</u> NSF Directorate for Education and Human Resources (EHR) would contribute \$77.9 million (3 percent increase) in support for the DR K-12, a partnership between NSF and the Department of Education to support evidence-based solutions for improved K-16 mathematics education and knowledge building;
- <u>Total, Reseach Experiences for Undergraduates (REU)</u> \$79.2 million (0.5 percent decrease) to support enhanced research experiences for students in their first two years of college;
- **NSF Research Traineeship program (NRT)** \$59.8 million for a new program in FY14 to support effectual innovation and design of graduate programs within specific disciplines; and,
- Increasing the Participation and Advancement of Women in Academic Science and Engineering
 <u>Careers (ADVANCE)</u> \$16.6 million (6.5 percent decrease) that would fund transformative
 efforts to address the systemic barriers to women's full participation in academic STEM.

Approximately \$37 million in lower priority education and research programs would be terminated, reduced or consolidated — the president's FY13 proposal called for nearly \$67 million in cuts to lower priority efforts. Reduced or consolidated efforts include:

- Integrative Graduate Education and Research Training (IGERT) would sunset in FY14 with the initiation of the NSF Research Traineeships (NRT) program; and,
- **Communication Science Broadly (CSB)** for the second straight year, CSB would receive no funding in FY14 and is up for termination.

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Regional Commissions and Authorities

FY13 CR funding is used for the following comparisons, unless otherwise noted.

The president's FY14 budget proposal includes requests for four regional commissions and the Tennessee Valley Authority, which work to develop the economies of economically distressed regions.

- Appalachian Regional Commission (ARC) \$64.8 million (5.9 percent decrease) to provide development and technical assistance in 420 counties in 13 states. ARC would receive \$10 million to continue work on the Appalachian Regional Development Initiative to promote diverse and sustainable economic growth in the region. Though no budgetary figures are provided, the request also would instruct ARC to continue work on the implementation of the Startup Appalachia initiative, to strengthen entrepreneurship in the region.
- Delta Regional Authority (DRA) \$11.3 million (8.3 percent decrease) to build and sustain strong economies in 252 counties and parishes in eight states. The FY14 budget would support multistate planning, small business development and green economic job creation.
- <u>Denali Commission</u> \$7.4 million (36.4 percent decrease) to improve health, safety and economic strength in the rural areas of Alaska. Under the proposed budget, the commission would continue to coordinate cost-share infrastructure projects, with a 50 percent matching requirement on funded projects. Grants to distressed communities would have a 20 percent matching requirement.
- Northern Border Regional Commission \$1.4 million (no change) to support the federal-state partnership addressing economic distress in a 36-county region in Maine, New Hampshire, New York, and Vermont.
- <u>Tennessee Valley Authority (TVA)</u> \$44.1 million (1.4 percent increase) to develop the
 Tennessee Valley river basin across seven states. TVA generates its own income, but requires
 Congress to determine and reaffirm its budgetary authority. According to a White House <u>budget</u>
 <u>document</u>, the administration plans to begin a strategic review of TVA to reduce the federal
 government's role in its operations.

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Small Business Administration

FY13 CR funding is used for Small Business Administration comparisons, unless otherwise noted. The administration's FY14 budget request for the Small Business Administration (SBA) would provide \$810 million, a 22.5 percent decrease from FY13 (not including presidential disaster funding). The reduction in proposed funding for FY14 primarily is due to a decrease in estimated subsidy costs for SBA's business loans programs. Under the proposed budget, SBA's non-credit technical assistance programs, which include its entrepreneurial training programs and regional economic development initiatives, would receive \$210.3 million (21.6 percent increase). Another \$111.6 million (47.1 percent decrease) in subsidy funds would be available for SBA loan programs, which would be able to support \$25 billion in small business financing.

To help develop regional economies across the country, SBA would continue investment in its Regional Innovation Clusters (RIC) program and introduce a new **Growth Accelerators** program. The RIC program currently provides support to 56 industry clusters around the country. Under the proposed budget, SBA would receive \$5 million (no change) to continue the effort, which operates in partnership with the Departments of Commerce, Energy and Labor. The Growth Accelerators initiative would provide matching grants to university and private sector accelerators to start new programs or scale existing programs. Awards would be made competitively and require a 4:1 match. The budget requests \$5 million for the new effort.

SBA's <u>Small Business Development Centers</u> (SBDCs), which provide support to small businesses through a network of 63 centers and 900 outreach locations, would receive \$104.7 million (8.6 percent decrease).

The proposed FY14 budget includes funding for several new or expanded entrepreneurial training programs. The Entrepreneurship Education Emerging Leaders program, which provides intensive training to small business owners, would receive \$40 million. The program initially was introduced in 2008, but the revamped version would become a public-private partnership, funded with SBA and private matching funds. SBA would expand its pilot programs to assist veterans in becoming entrepreneurs by providing \$7 million to the Boots to Business initiative. The initiative offers training and resources to veterans to help them start their own businesses. Another \$8.8 million would support the National Veterans Entrepreneurial Training program.

The president's FY14 budget includes \$6 million for SBA's contribution to the multi-agency <u>BusinessUSA</u> <u>Initiative</u>, which would support the development of BusinessUSA.gov. The site would serve as a one-stop resource for businesses to access government support services and to coordinate federal business assistance programs.

To boost economic diplomacy, SBA's <u>International Trade Program</u> would be bolstered with \$13 million (a 23 percent increase).

Other SBA non-credit programs include:

- Microloan Technical Assistance \$19.9 million (0.8 percent decrease);
- Women's Business Centers \$13.1 million (6.8 percent decrease);
- SCORE \$6.5 million (7 percent decrease);
- 7(j) Technical Assistance Program \$2.8 million (0.1 percent decrease);
- Veteran's Business Outreach Centers \$2.5 million (no change);
- <u>HUBZone Program</u> \$2 million (20 percent decrease);
- Native American Outreach 1.1 million (16 percent decrease); and,
- National Women's Business Council \$900,000 (9.8 percent decrease).

Funding for PRIME Technical Assistance would be eliminated in FY14.

Under the budget request, SBA would be able to provide \$25 billion in small business financing, including \$17.5 billion in 7(a) loan guarantees and \$7.5 billion in guarantees through the 504/Certified Development Company (CDC) program. The authorization for the 7(a) loan guarantee program, which helps provide financing to businesses that do not qualify for conventional credit, includes \$15.7 billion for term loans and \$1.8 billion in revolving lines of credit. No additional subsidy authority would be provided. The 504/CDC program, which assists small businesses to acquire major fixed assets needed for expansion or modernization, would receive \$107 million (1 percent decrease) in credit subsidy budget authority. The remaining \$4.6 million (34.3 percent decrease) in authority would support the Microloan Direct Program to provide \$25 million (41.9 percent decrease) in microloans of under \$50,000 for new businesses.

SBA also would undertake a few initiatives to increase small business access to its capital programs. The budget would waive fees on 7(a) program loans less than \$150,000 to promote lending to the businesses that face the greatest constraints on credit access. The request would provide \$7 million for **SBA ONE**, a unified set of forms and web resources to apply for all 7(a) loans.

The <u>Small Business Investment Company (SBIC)</u> program, which promotes lending to small businesses through a network of licensed, privately-owned and -managed investment funds, would receive an increase in authority for its debenture program to \$4 billion (33.2 percent increase).

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State Science & Technology Institute



5015 Pine Creek Drive Westerville, 0H 43081 (614) 901-1690

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