



Smithsonian

Fiscal Year 2015

Submitted to the Committees on Appropriations
Congress of the United States

Smithsonian Institution

Fiscal Year 2015

Budget Justification to Congress

March 2014

SMITHSONIAN INSTITUTION
Fiscal Year 2015 Budget Request to Congress
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THE SMITHSONIAN INSTITUTION'S IMPACT ON AMERICA

The Smithsonian greatly appreciates the continued support of the Administration, the Congress, and the American people, and takes seriously the crucial role it plays in advancing the civic, educational, scientific, and artistic life of this nation. To repay this broad public support, the Smithsonian is addressing some of the world's most complex issues — and using new technologies to broaden access to the results for citizens, students, and policy makers nationwide.

Thanks to the generous bequest of English scientist James Smithson, Congress established the Smithsonian Institution in 1846 as an independent federal trust instrumentality, a unique public-private partnership that has achieved outstanding results for 168 years. The federal commitment is the foundation for everything we do, and is especially helpful in attracting private support. We leverage our federal funding to enrich the lives of the American people in accordance with our mission to advance “the increase and diffusion of knowledge.”

The Smithsonian is working to accomplish this mission by being more transparent, accountable, and efficient than ever before. We continue to implement our 2010 Strategic Plan that centers on four “Grand Challenges” and is buttressed by four consortia to promote interdisciplinary and Institution-wide collaboration. We are improving facilities maintenance and collections care to be better stewards of America's treasures. We are also working with new federal, state, and local partners to avoid redundancies and expand our reach.

In support of our Strategic Plan, which was recently extended to 2017, Smithsonian Redesign is helping us automate our management processes, measure and track our progress, and improve our ability to identify and solve problems quickly in real time.

The Smithsonian is large and diverse, encompassing art, history, science, and culture. We have 19 museums and galleries, 20 libraries, 9 research centers, the National Zoo, and 184 affiliate museums in 43 states, Puerto Rico, and Panama. We are open 364 days a year — and admission is free. With the global reach of our research and educational activities, we have facilities in eight states and the District of Columbia, and operate in more than 130 countries.

Our collections include 137 million objects and treasures, of which 127 million are scientific specimens, more than 340,000 works of art, plus nearly two million library volumes, 137,000 cubic feet of archival material — and more than 2,000 live animals (including the new panda cub Bao Bao). We have Morse's telegraph; Edison's light bulb; the Star-Spangled Banner; the Hope Diamond; the Wright Flyer; Amelia Earhart's plane; Louis Armstrong's trumpet; the jacket of labor leader Cesar Chavez; the Lansdowne portrait of George Washington; the Congressional Gold Medal awarded to Japanese American World War II veterans; the *Spirit of Tuskegee* airplane, used to train Tuskegee Airmen during World War II; the camera John Glenn purchased at a drug store and used on his historic voyage into space; Asian, African,

and American art; the Apollo 11 Command Module, *Columbia*; and the space shuttle *Discovery*.

Our experts use these collections to engage the public in exciting learning experiences that start many journeys of discovery. We ask important questions and encourage our fellow citizens to join us in a search for answers.

Last year we had more than 31 million visits, the highest attendance in a decade, as well as four million social media followers on Facebook and Twitter alone. Another five million people visited our traveling exhibitions in communities around the nation.

Our visitors enjoyed nearly 100 new exhibitions, including: *The Civil War and American Art* at the Smithsonian American Art Museum (SAAM); *Roads of Arabia: Archaeology and the History of the Kingdom of Saudi Arabia* at the Sackler Gallery; *Food: Transforming America's Table, 1950–2000* at the National Museum of American History (NMAH); *Changing America: The Emancipation Proclamation, 1863, and the March on Washington, 1963*, from the National Museum of African American History and Culture (NMAAHC); *Reclaiming the Edge: Urban Waterways and Civic Engagement* at our Anacostia Community Museum (ACM); the installation of the Dom Pedro Aquamarine gem at the National Museum of Natural History (NMNH); *Genome: Unlocking Life's Code* at NMNH; *Cerámica de los Ancestros* at the National Museum of the American Indian (NMAI); the Outwin Boochever Portrait Competition at the National Portrait Gallery (NPG); and *Time and Navigation* at the National Air and Space Museum (NASM).

Other offerings include: *Monuments Men: On the Frontline to Save Europe's Art, 1942–1946*, at our Archives of American Art; *American Cool* at NPG; and *Spirit & Opportunity: 10 Years Roving Across Mars*, at NASM. And, from the Smithsonian Asian Pacific American Center, *Beyond Bollywood: Indian Americans Shape the Nation* at NMNH.

At the National Zoo, we opened our new state-of-the-art facilities, *Elephant Trails* and *American Trail*. At *American Trail*, visitors can see seals and sea lions up close, while the Elephant Community Center at *Elephant Trails* gives our elephants room to roam and exercise. We also opened our solar-powered, Speedwell Foundation Conservation Carousel, one of the only solar-powered carousels in the world. We welcomed our new panda cub in August; added a new female Asian elephant, Bozie, in May; and next spring will welcome three new Asian elephants from the Calgary Zoo in Canada. Our Smithsonian Conservation Biology Institute, partnering with George Mason University, opened a new facility at its Front Royal, Virginia campus. It is a LEED Gold complex that will serve the growing need for sustainable global conservation training.

In November of 2013, we held our second annual *Smithsonian Magazine* American Ingenuity Awards. Nine groundbreaking, influential individuals were honored for their achievements in the visual and performing arts, natural and physical sciences, technology, social innovation, historical scholarship and education. This initiative was

featured on Smithsonian.com and in vignettes on The Smithsonian Channel.

Using digital technology allows us to reach new, diverse audiences and more people than ever before. We have more than 270 Smithsonian websites that attracted more than 140 million unique visitors last year, more than four million social media followers on Facebook and Twitter, and many more on nearly 600 other social media sites. In addition, we have launched more than 50 mobile apps that allow us to engage the public. Users can navigate through our museums with an app we developed with Google, and receive a digital version of *Smithsonian Magazine* on their tablet devices.

We are committed to achieving the strategic goal of Broadening Access to our collections. Today more than 8.5 million records and nearly one million images are available to the public through our main website's Collections Search Center, which is used by more than one million people.

On the education front, our digital badging program (similar to merit badges in Scouting) is called Smithsonian Quests. More than 15 of our Museums/units participate in this exciting new digital tool to motivate young learners and give them academic credit for material they master. With the help of a MacArthur Foundation grant, we now have nearly 3,000 registered users from all 50 states and more than 50 countries.

Through our Digitization Office, we are becoming leaders in the field of 3D scanning, allowing our treasures and specimens to be seen in an entirely new light. We recently unveiled our new Smithsonian X 3D Explorer, which features 20 items from the collection, including Lincoln's life casts, the Wright Flyer, fossil whales, and a remnant of the CasA supernova. Not only can users on the Internet view each object from every angle, they also can print replicas of these objects via 3D printer for scientific research or use in the classroom. Soon, students everywhere will be able to do the same. This new technology is another step in our effort to bring the Smithsonian to the nearly 300 million Americans who are unable to come to us in person every year.

We are building more digital platforms to develop a dialogue with the public that will tell the American story. A good example is *Our American Journey*, an Institution-wide initiative to explore the stories of all the migrants and immigrants who helped create this great country. Through partnerships with organizations from the Newseum, here in our nation's capital, and from Ellis Island in New York to Angel Island in California, we will encourage all Americans to share their individual family histories with us, so we can tell their larger story to the public. The idea is to create a mosaic of personal experiences that — taken together — form a picture of how our diverse origins led to the growth of our United States as we know it today.

Another example of our continuing dialogue with the American people involves our recent *Seriously Amazing* advertising campaign to encourage the public to visit our websites, ask questions, and tell us how the Institution can better serve their needs. The

campaign resulted in 76,000 visitors to the *Seriously Amazing* site during a six-week period (September 15 to November 1, 2013).

In terms of the resources we offer, our collections are a vital national asset and we have improved their display and storage conditions, balancing the preservation of and access to these collections. We are stepping up efforts to digitize as many of the collections as funds permit. The collections we maintain serve as a valuable resource for scientists from federal agencies such as the Departments of Agriculture and Defense, and the United States Geological Survey. We work with the White House Office of Science and Technology Policy to coordinate our efforts with federal agencies and avoid duplication of activities. Collections acquired a century or more ago are being used today to address the effects of global change, the spread of invasive species, and the loss of biological diversity and its impact on ecosystems. Federal, state, and local authorities often look to our collections for answers; for example, during flu epidemics, oil spills, volcanic eruptions, and when aircraft are downed by bird strikes.

Today we operate in more than 130 countries, and we do so by coordinating across the federal Government and with the private sector. Last August we signed a Memorandum of Understanding (MOU) with the United States Agency for International Development (USAID), with whom we have worked for many years; e.g., in Haiti after that country's earthquake. With USAID's generous support, the Smithsonian has now trained more than 150 Haitian cultural workers to help save Haiti's rich cultural heritage, and more than 35,000 objects have been spared.

In today's world of long-distance travel and new technologies, deadly viruses can reach around the globe in 24 hours, and nearly 75 percent of emerging pathogens in humans come from animals. Working with the USAID-funded Emerging Pandemic Threats Program, the Smithsonian is helping public health officials avoid the next major pandemic. Veterinary scientists and pathologists from the National Zoo are conducting regional wildlife pathology workshops to train biologists and conservationists to recognize and identify the next global health threat in its initial stages. These efforts, in turn, offer the potential to contain an outbreak before it gets out of control.

The Smithsonian's roughly 500 scientists are tackling vital issues of the day, making important discoveries — and sharing them with the public. The results of our work can be seen everywhere. With our international partners and worldwide reach, the Institution is particularly well connected to tackle biodiversity issues. The Smithsonian Institution's ForestGEO (Global Earth Observatories) network is a worldwide partnership of more than 75 institutions working to monitor the health of five million trees (10,000 species) on 51 plots in 22 countries. Our new initiative, Tennenbaum Marine Observatories, seeks to replicate this success and assess the health of coastal areas and the oceans at large.

At the University of Arizona, Smithsonian scientists are continuing to help with the construction of the large mirrors, 28 feet in diameter, for the Giant Magellan Telescope, which will be built at the Las Campanas Observatory in Chile by an

international consortium led by the Carnegie Institute, with the Smithsonian as a member. This powerful new telescope will enable researchers to see distant stars and galaxies 10 times more clearly than with the aging, space-based Hubble Telescope.

Scientists at the Harvard-based Smithsonian Center for Astrophysics are discovering new planets, using telescopes in outer space while allowing high school students to remotely access our land-based telescopes to find planets on their own. In addition, a National Air and Space Museum geologist is serving at NASA's Jet Propulsion Laboratory, helping with the *Curiosity* mission on Mars. He analyzes data to understand the geological history of the Gale Crater and discover if there might have been habitable environments there in the ancient past.

NMNH is the leading partner in a global effort called the *Encyclopedia of Life* (EOL), an ambitious, five-year project that will become a key repository of scientific information about virtually every form of life on Earth. EOL is an online database that has financial, logistical, and research support from numerous partners, including the MacArthur and Sloan Foundations. It now features information on more than 1.3 million of the world's 1.9 million known species of animals, plants and other life forms. Today, thousands of scientists, students, and teachers worldwide use the EOL as a resource for their own class work, research, and academic and professional studies, and the website attracts more than 4.5 million unique visitors a year.

NMNH also houses the Consortium for the Barcode of Life (CBOL), an international initiative devoted to developing DNA barcoding as a global standard for the identification of biological species. The new technique uses a short DNA sequence from a standardized position in the genome as a molecular diagnostic marker for species identification. As the recognized U.S. leader in DNA barcoding, the Smithsonian seeks to increase its research and training capacity to better work with our partners in expanding the frontiers of knowledge in this exciting new field.

On a related note, the Biodiversity Heritage Library, the scientific literature cornerstone of EOL, is a consortium of 15 natural history and botanical libraries. Led by Smithsonian Institution Libraries, the Biodiversity Heritage Library now has more than 120,000 volumes and 41 million webpages freely available online; it is seen by more than 740,000 unique visitors per year.

The Smithsonian Environmental Research Center in Edgewater, Maryland has launched a new online database, *NEMESIS*, which tracks hundreds of invasive species along our nation's coastal regions.

The strength and spirit of our professional staff have powered the engine of Smithsonian discoveries in science, art, history, and culture for 168 years. One of our most urgent Grand Challenges today is to understand and sustain a biodiverse planet. Recently, a team of Smithsonian scientists, headed by Dr. Kris Helgen of the Smithsonian's NMNH, discovered the previously unidentified olinguito (*Bassaricyon neblina*) — the first new carnivorous species to be discovered in the Americas in 35

years. The team's discovery was published in the August 15th issue of the journal *ZooKeys*. The olinguito is also the newest species in the order Carnivora — an incredibly rare discovery in the 21st century.

As part of our mission to increase the “diffusion of knowledge,” we now deliver educational materials to students and teachers in all 50 states. More than 2,000 learning resources, all tied to state standards, are available online for free. We have seven new education centers in different stages of completion at various museums: the National Museum of the American Indian center in Washington, DC is now open and its New York center will open in the spring of 2015; the American History Museum center opens in the summer of 2015; the Natural History Museum and the American Art Museum centers are now open; the Postal Museum center opened the William H. Gross Stamp Gallery, the world's largest stamp gallery, in September of 2013; and NMNH opened *Q?rius*, our new 10,000-square-foot science education center for teenagers in December.

Education directors are sharing their development processes, research, and methods for rapid prototyping, and they have created teams that will observe audience engagement at each center, share successes and challenges, and make appropriate modifications. Educators will work together to develop reference materials and age-appropriate experiences that maximize family learning in activities and programs throughout the Institution.

The Smithsonian is working with Federal agencies and other science partners to harness their unique expertise and resources to create relevant materials, online resources, and effective delivery mechanisms to reach more students. This would help ensure that materials and methods are aligned to what students are learning in the classroom, while improving the reach of Federal science agency assets. Their efforts include establishing a cross-agency pilot project with NOAA, NASA, NIH, EPA, DOD, and the National Park Service on promoting stewardship of water, which has fostered strong partnerships among agencies around this theme.

For 28 years, the Smithsonian Science Education Center (SSEC) has been addressing science education, and we want to scale up our efforts to reach more students and teachers. The Center's LASER (Leadership and Assistance for Science Education) Program is an innovative STEM program, internationally recognized for its work to improve K–12 science education. The LASER model has been implemented successfully in school districts in Alabama, southern California, Delaware, regions of New Jersey, Pennsylvania, northern New Mexico, Rhode Island, and Washington State since 1985. To date, three million students in classrooms around the country and online have taken part. With the award of an “Investing in Innovation” (I3) grant in 2010 from the Department of Education, the SSEC continues to expand education programs for 75,000 new students, focusing on underserved communities in North Carolina, Texas, and New Mexico.

In addition, our continuing partnership with the ePals global community enables us to offer our lesson plans and resources to more than one million schools. The Smithsonian Learning Center within ePals has had more than 3.3 million visitors and 8.2 million page views, including more than 410,000 downloads of classroom work based on Smithsonian content. To put these numbers in context, this expanded access amounts to more than one million visitors and double the page views and downloads since the year before.

Thanks to our National Museum of American History and our affiliates, the *National Youth Summit: Freedom Summer* took place on February 5th. Eleven affiliates hosted live events, and schools from all 50 states participated, in addition to learners in Canada, the United Kingdom, Tanzania, Pakistan, and Belgium, totaling more than 8,000 students.

We can do all this thanks to more than 6,500 dedicated employees, including award-winning scientists and scholars, curators, researchers, historians, and experts in fields from astrophysics to zoology, as well as more than 6,200 generous volunteers, 745 Fellows, 709 interns, and 789 research associates — brain power that benefits the Smithsonian and the world many times over. They care deeply about this great Institution and the many services we provide to the public. That is why the Smithsonian was, for the fourth year in a row, ranked as one of the best places to work in the federal Government.

With the continuing support of our Board of Regents, the Administration, Congress, and the American people, we will open more doors in the future — like the new National Museum of African American History and Culture.

The Smithsonian has maintained a tradition of serving our nation and the world as a source of inspiration, discovery, and learning. Today, with its free museums, distinguished research and scholars, iconic American treasures, and the remarkable scope of information accessible from its websites, the Smithsonian Institution remains a valuable resource for the American people.

The Institution is full of surprises, big and small. But what we do best is no surprise: to inspire the next generation of scholars, scientists, doctors, educators, innovators, entrepreneurs, and just ordinary folks who have questions to ask or simply want to learn more about the world around them. We provide everyone with a universal lens for learning, no matter where our audience lives — all free of charge. It is our guiding principle for everything we do.

The Smithsonian has become more innovative, disciplined, focused, nimble and self-reliant than ever before. We are determined to expand access to all we have to offer to new and diverse audiences — regardless of where they live — in keeping with our original mission. As we face both exciting opportunities and imposing challenges, we will continue to aggressively address these challenges and take full advantage of our many new opportunities.

SMITHSONIAN INSTITUTION FY 2015 BUDGET REQUEST SUMMARY

Account	FY 2013 Enacted	FY 2014 Enacted	FY 2015 Request
Salaries and Expenses	\$607,261,000	\$647,000,000	\$700,800,000
Facilities Capital	<u>\$165,581,000</u>	<u>\$158,000,000</u>	<u>\$150,100,000</u>
Total	\$772,842,000	\$805,000,000	\$850,900,000
Opportunity, Growth, and Security Initiative	0	0	\$6,800,000

For FY 2015, the Smithsonian's request to fund operating expenses and revitalization of the Institution's physical infrastructure is **\$850.9 million**. The amounts include **\$700.8 million** for Salaries and Expenses (S&E) and **\$150.1 million** for the Facilities Capital account. A detailed summary of the increases requested is provided in the table at the end of this section. In addition, a separate tab in the book discusses the \$6.8 million in the Opportunity, Growth, and Security Initiative that supports Institution research programs.

SALARIES AND EXPENSES

FIXED COST INCREASES

- **Salaries and Related Costs (+\$7,659,000)** — This request funds a 1.0 percent pay raise for FY 2015; annualization of the FY 2014 pay raise; an increase for employee benefits; an increase for Panamanian pay parity; and an adjustment for Workers' Compensation.
- **Non-pay Mandatory Items (+\$6,744,000)** — The Institution requests additional funding, largely for inflation-related increases in rent, utilities, software licenses, and other mandatory operating costs. Details are provided in the S&E section of this budget submission.

PROGRAM CHANGES

This budget request for FY 2015 places the programmatic increases into the broad categories of the Smithsonian's Strategic Plan, thereby linking the funds directly to the Institution's overall mission and the strategic goals.

BROADENING ACCESS

- **Digitization (+\$1,800,000)** — The Smithsonian continues work on its Strategic Plan to become the trusted source of information on the World Wide Web by using new technologies to share its vast collections and

extensive research, along with the expertise of its scholars, scientists, researchers, museum specialists, and curators. This request supports the Smithsonian's Digitization Strategic Plan to stimulate learning and innovation. Digitizing the collections and making them accessible online are major Strategic Plan priorities.

- **Web Access (+\$300,000)** — This request will leverage the Institution's private funding and enable the Smithsonian to make all of its content and resources easily accessible and available to learners everywhere at any time. The Participant Access System will integrate with existing Smithsonian websites, databases and external data sets, including collections, archives, programming, and educational resources. The Institution has found that harnessing technology is the most effective means of Broadening Access to Smithsonian scholarship and educational offerings for citizens nationwide.
- **Exhibits Maintenance (+\$600,000)** — This funding request will enable museums to keep up with the routine maintenance needs resulting from expanded exhibition space, increased visitation, and the more popular, maintenance-intensive, interactive exhibitions.
- **Restore Institution-wide Programs (+\$1,127,000)** — The Smithsonian requests that the Institution-wide funding programs (i.e., Research Equipment Pool, Latino Initiatives Pool, and Collections Information Systems Pool) be restored to their pre-sequestration levels. These programs support the Smithsonian in achieving its Strategic Plan and were reduced during sequestration to assist museums/units in covering payroll and operating costs to ensure that the Institution would not have to furlough staff.

REVITALIZING EDUCATION

- **STEM Engagement (+\$10,000,000)** — This funding request will enable the Institution to work collaboratively with federal agencies offering Science, Technology, Engineering, and Mathematics (STEM) programs. The request will support the implementation of the Federal STEM Education 5-Year Strategic plan and the Budget's fresh Government-wide reorganization of STEM education programs so that the Smithsonian may: identify and disseminate content that takes advantage of each agency's unique assets; create complementary materials and avoid duplication of effort; and share a centralized portal for the broad dissemination of our engagement offerings. The Smithsonian will manage these endeavors by creating discipline- and subject-based committees that coordinate the efforts of STEM engagement providers, including Smithsonian units, mission agencies, and other non-profit collaborators.

STRENGTHENING COLLECTIONS

- **Collections Care Initiative (+\$2,400,000)** — Collections stewardship is a key component and core priority of the Smithsonian's Strategic Plan. The requested increase will restore the Collections Care and Preservation Fund to its pre-sequestration level, as well as target specific collections and improve overall aspects of collections care. This will require providing resources to meet professional standards of collections care, correcting specific collections management deficiencies identified in the Smithsonian's Inspector General audit recommendations, and addressing the Institution's highest priority collections management needs, including Institution-wide initiatives for the management and preservation of cryo-materials and time-based media.
- **Animal Welfare (+\$700,000)** — This request supports upgrades to the welfare and care of the animal collection. Upgrades to the National Zoo's clinical equipment will enhance the quality of animal care. The new equipment not only enhances the care our staff can provide, but improves staff safety. In addition, Zoo animal feed costs are continuing to rise due to competition between animal and human food markets. The increase is mainly attributed to the impact of drought and other rapidly changing climate conditions that affect the cost/availability of the food and the impact of rising gas and transportation costs. The National Zoo expects prices to rise between 5–10 percent in the near future.

MISSION ENABLING

- **Facilities Maintenance (+\$5,300,000)** — The Smithsonian requests an increase of \$5.3 million to enable its maintenance program to continue stabilizing and standardizing the overall condition of its facilities. The increase will fund high-priority needs and help establish the Smithsonian's Association of Higher Education Facilities Officers, or APPA, rating at a solid level 3 (out of 5) — Managed Care — throughout the Institution. The increase also supports the funding required for the new National Museum of African American History and Culture (NMAAHC) currently under construction.
- **Facilities Operations, Security, and Support (+\$8,050,000)** — The Institution also requests an increase of \$8.05 million to address high-priority operating and safety needs. The increase will enable the Institution to remedy existing staffing and funding shortfalls in facilities operations and improve cleanliness in its facilities. The increase also supports the \$3.25 million in funding requested for the new NMAAHC.

NATIONAL MUSEUM OF AFRICAN AMERICAN HISTORY AND CULTURE (NMAAHC)

- The requested S&E program increase (**+\$9,120,000**) to NMAAHC's base funding reflects the need to continue to provide the resources for the development of exhibitions, programming, and operations. The increase will provide the developmental and fundraising support for both construction and program efforts to meet the opening date and timelines established for the project. This funding will help the Museum ensure that adequate exhibitions and public programs are in place on the building's opening date in FY 2016.

FACILITIES CAPITAL PROGRAM

The request for the Facilities Capital Program (**+\$150,100,000**) aims to arrest deterioration of some of the Smithsonian's oldest buildings and to maintain the current condition of other facilities through systematic renewal and repair. This amount will allow the Facilities Capital Program to address priority one and priority two projects that need to be fixed in FY 2015.

For FY 2015, the requested funds will enable the Institution to continue major revitalization work at the National Museum of Natural History (\$22.9 million) and National Zoological Park (\$15.8 million), and to perform revitalization work at the Renwick Gallery (\$7.5 million); Freer-Sackler Gallery (\$6.0 million); Suitland Collections Facility (\$2.5 million); the National Museum of the American Indian — New York facility (\$2.5 million); and the National Air and Space Museum (NASM) (\$1.0 million). The request also includes funds for an access road at the Smithsonian Environmental Research Center (\$2.0 million) and provides for revitalization projects, costing under \$5 million each, throughout the Institution (\$26.8 million). This request also accounts for planning and design of future projects, estimated at \$22.6 million, and for \$16.5 million in earthquake damage repairs at the Museum Support Center and NASM. The Institution is also requesting \$24 million in construction funds to complete the federal commitment for building the congressionally mandated National Museum of African American History and Culture. Details are provided in the Facilities Capital section of this budget request.

OPPORTUNITY, GROWTH, AND SECURITY INITIATIVE

The President's Budget includes a separate, fully paid for \$56 billion Opportunity, Growth, and Security (OG&S) Initiative. This initiative provides additional discretionary investments in 2015 to spur economic progress, promote opportunity, and strengthen national security.

This initiative fully supports the Institution's Strategic Plan, specifically in the area of Excellent Research. There are five specific research programs (**\$6.8 million**) which support the Institution's strategic goals and objectives. Details on these five initiatives are in a separate section of this budget submission (beginning on page 239 behind the OG&S tab).

**SMITHSONIAN INSTITUTION
FY 2015 BUDGET REQUEST SUMMARY
BY APPROPRIATION ACCOUNT**

SALARIES AND EXPENSES (S&E)	FTEs	Amount
FY 2014 Enacted	4,293	\$647,000,000
FY 2015 Changes		
<u>FIXED COST INCREASES</u>		
Salaries and Related Costs		7,659,000
Utilities, Postage, Rent, Communications, and Other		6,744,000
<u>PROGRAM INCREASES</u>		
Broadening Access		
Digitization	0	1,800,000
Web Access	2	300,000
Exhibits Maintenance	0	600,000
Restore Institution-wide Programs	0	1,127,000
Revitalizing Education		
STEM Engagement	23	10,000,000
Strengthening Collections		
Collections Care Initiative	0	2,400,000
Animal Welfare	0	700,000
Mission Enabling		
Facilities Maintenance	31	5,300,000
Facilities Operations, Security, and Support	122	8,050,000
National Museum of African American History & Culture	33	9,120,000
Total FY 2015 Salaries and Expenses	4,504	\$700,800,000

FACILITIES CAPITAL	FTEs	Amount
FTEs in Base	48	
Revitalization		
National Museum of Natural History		22,900,000
National Zoological Park		15,840,000
Renwick Gallery		7,500,000
Freer-Sackler Gallery		6,000,000
Suitland Collections Facility		2,510,000
Smithsonian Environmental Research Center		2,000,000
National Museum of the American Indian — New York		2,500,000
National Air and Space Museum		1,000,000
Other Revitalization Projects		26,740,000
Earthquake Damage Repairs		16,500,000
Planning and Design		
Facilities Planning and Design		22,600,000
Construction		
National Museum of African American History & Culture		24,010,000
Total FY 2015 Facilities Capital	48	\$150,100,000
FY 2015 REQUEST (S&E and Facilities Capital)	4,552	\$850,900,000
OPPORTUNITY, GROWTH, and SECURITY INITIATIVE		\$6,800,000

**SMITHSONIAN INSTITUTION
SALARIES AND EXPENSES (S&E)
FY 2015 Summary of Increases**

	FTEs	Amount
FY 2014 Enacted	4,293	\$647,000,000
Fixed Costs Increases		
Salaries and Related Costs		7,659,000
Utilities, Postage, Rent, Communications, and Other		<u>6,744,000</u>
Total Fixed Costs Increases		\$14,403,000
Program Increases		
Broadening Access		
Digitization	0	1,800,000
Web Access	2	300,000
Exhibits Maintenance	0	600,000
Restore Institution-wide Programs	0	1,127,000
Revitalizing Education		
STEM Engagement	23	10,000,000
Strengthening Collections		
Collections Care Initiative	0	2,400,000
Animal Welfare	0	700,000
Mission Enabling		
Facilities Maintenance	31	5,300,000
Facilities Operations, Security, and Support	122	8,050,000
National Museum of African American History & Culture	<u>33</u>	<u>9,120,000</u>
Total Program Increases	211	\$39,397,000
Total Increases	211	\$53,800,000
FY 2015 Total Salaries and Expenses	4,504	\$700,800,000

SMITHSONIAN INSTITUTION
Salaries and Expenses
Unit Detail of the FY 2013 and FY 2014 Enacted and FY 2015 Request
(\$ in Thousands)

FTE = Full-Time Equivalent

Page #		FY 2013 Enacted		FY 2014 Enacted		FY 2015 Request to Congress		ANALYSIS OF CHANGE (FY 2015 Increases)		
		FTEs	\$000	FTEs	\$000	FTEs	\$000	Mandatory		Program Increase
								Costs	FTEs	\$000
	MUSEUMS AND RESEARCH CENTERS									
	<i>Unlocking the Mysteries of the Universe</i>									
	37 National Air and Space Museum	161	17,607	161	18,123	161	18,775	452	0	200
	42 Smithsonian Astrophysical Observatory	106	23,615	106	23,746	106	24,159	413	0	0
	46 Major Scientific Instrumentation	0	3,418	0	4,118	0	4,118	0	0	0
	34 Universe Consortium	1	184	1	184	1	184	0	0	0
	Subtotal, Unlocking the Mysteries of the Universe	268	44,824	268	46,171	268	47,236	865	0	200
	<i>Understanding and Sustaining a Biodiverse Planet</i>									
	52 National Museum of Natural History	358	46,460	358	47,428	358	48,424	796	0	200
	63 National Zoological Park	218	22,652	224	24,533	224	25,641	408	0	700
	69 Smithsonian Environmental Research Center	32	3,737	32	3,873	32	3,945	72	0	0
	73 Smithsonian Tropical Research Institute	202	12,736	202	13,940	202	14,280	340	0	0
	34 Biodiversity Consortium	3	1,500	3	1,520	3	1,520	0	0	0
	Subtotal, Understanding & Sustaining a Biodiverse Planet	813	87,085	819	91,294	819	93,810	1,616	0	900
	<i>Valuing World Cultures</i>									
	81 Arthur M. Sackler Gallery/Freer Gallery of Art	45	5,938	45	6,019	45	6,107	88	0	0
	85 Center for Folklife and Cultural Heritage	17	2,364	17	2,490	17	2,525	35	0	0
	89 Cooper-Hewitt, National Design Museum	33	4,348	36	4,710	36	4,787	77	0	0
	94 Hirshhorn Museum and Sculpture Garden	37	4,209	37	4,270	37	4,342	72	0	0
	99 National Museum of African Art	27	4,153	27	4,209	27	4,266	57	0	0
	34 World Culture Consortium	2	284	2	284	2	284	0	0	0
	Subtotal, Valuing World Cultures	161	21,296	164	21,982	164	22,311	329	0	0
	<i>Understanding the American Experience</i>									
	107 Anacostia Community Museum	18	2,044	18	2,079	18	2,112	33	0	0
	111 Archives of American Art	17	1,817	17	1,844	17	1,877	33	0	0
	115 National Museum of African American History & Culture	46	17,994	106	34,162	139	43,969	687	33	9,120
	126 National Museum of American History, Behring Center	165	20,819	165	21,381	165	21,971	390	0	200
	134 National Museum of the American Indian	246	30,877	246	31,293	246	31,745	452	0	0
	138 National Portrait Gallery	55	5,856	55	5,943	55	6,051	108	0	0
	145 National Postal Museum	6	1,038	6	1,052	6	1,080	28	0	0
	149 Smithsonian American Art Museum	88	9,019	88	9,391	88	9,562	171	0	0
	34 American Experience Consortium	4	593	4	593	4	593	0	0	0
	Subtotal, Understanding the American Experience	645	90,057	705	107,738	738	118,960	1,902	33	9,320
	Total Museums and Research Centers	1,887	243,262	1,956	267,185	1,989	282,317	4,712	33	10,420

SMITHSONIAN INSTITUTION
Salaries and Expenses
Unit Detail of the FY 2013 and FY 2014 Enacted and FY 2015 Request
(\$ in Thousands)

FTE = Full-Time Equivalent

Page #

	FY 2013 Enacted		FY 2014 Enacted		FY 2015 Request to Congress		ANALYSIS OF CHANGE (FY 2015 Increases)		
	FTEs	\$000	FTEs	\$000	FTEs	\$000	Mandatory	Program Increase	
							Costs	FTEs	\$000
							\$000	FTEs	\$000
MISSION ENABLING									
<i>Program Support and Outreach</i>									
156 Outreach	62	9,006	65	9,121	88	19,238	117	23	10,000
164 Communications	22	2,660	22	2,556	22	2,593	37	0	0
167 Institution-wide Programs	0	6,357	0	7,778	0	11,305	0	0	3,527
178 Office of Exhibits Central	28	2,909	28	2,950	28	3,002	52	0	0
180 Museum Support Center	23	1,810	23	1,836	23	1,866	30	0	0
182 Museum Conservation Institute	22	3,177	22	3,222	22	3,275	53	0	0
186 Smithsonian Institution Archives	20	2,118	20	2,149	20	2,187	38	0	0
188 Smithsonian Institution Libraries	86	9,804	86	10,337	86	10,493	156	0	0
Subtotal, Program Support and Outreach	263	37,841	266	39,949	289	53,959	483	23	13,527
192 Office of the Chief Information Officer	91	44,896	93	47,856	93	50,464	808	0	1,800
195 Administration	179	32,839	185	34,185	187	34,637	152	2	300
200 Office of the Inspector General	22	2,806	24	3,392	24	3,441	49	0	0
<i>Facilities Services</i>									
202 Facilities Maintenance	359	63,758	367	69,032	398	75,180	848	31	5,300
206 Facilities Operations, Security and Support	1,394	181,859	1,402	185,401	1,524	200,802	7,351	122	8,050
Subtotal, Facilities Services	1,753	245,617	1,769	254,433	1,922	275,982	8,199	153	13,350
Total Mission Enabling	2,308	363,999	2,337	379,815	2,515	418,483	9,691	178	28,977
GRAND TOTAL, SMITHSONIAN INSTITUTION	4,195	607,261	4,293	647,000	4,504	700,800	14,403	211	39,397

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SALARIES AND EXPENSES

FY 2013 Enacted	\$607,261,000
FY 2014 Enacted	\$647,000,000
FY 2015 Estimate	\$700,800,000

For FY 2015, the Institution requests **\$700.8 million** in the Salaries and Expenses (S&E) account. Within the total increase requested, approximately 27 percent is attributable to fixed costs for sustaining base operations (e.g., pay, utilities, rent, etc.), and the remainder is for priority requirements throughout the Institution, including an increase of \$14.0 million for the costs of the congressionally mandated National Museum of African American History and Culture (\$9.8 million for pay and program costs, and \$4.2 million for facilities and security operations).

FIXED COSTS

SALARY AND PAY-RELATED COSTS (+\$7,659,000) — The Institution requests an increase of \$7.7 million for higher salary and pay-related costs. The increase funds a 1.0 percent pay raise in January 2015, annualization of the 2014 pay raise, the final requirements for the Smithsonian Tropical Research Institute’s (STRI) Panama employees, and an adjustment to Workers’ Compensation costs, as follows:

<i>Salary and Related Costs:</i>	<u>Request</u>
▪ 2015 Pay Raise (3/4 year at 1.0%)	\$3,216,000
▪ Annualize 2014 Pay Raise (1/4 year at 1.0%)	\$1,000,000
▪ Employee Benefits	\$3,700,000
▪ Panama (STRI) Employees	\$ 155,000
▪ Workers’ Compensation	\$ <u>-412,000</u>
Total	\$7,659,000

- **Proposed 2015 Pay Raise (+\$3,216,000)** — This provides for a 1.0 percent January 2015 pay raise for three-quarters of a year.
- **Annualization of 2014 Pay Raise (+\$1,000,000)** — This provides for a 1.0 percent January 2014 pay raise for one-quarter of a year.
- **Employee Benefits (+\$3,700,000)** — This funds increased employee benefit costs, including health care premiums and retirement costs, along with the shift of federal employees from the CSRS to FERS retirement system.
- **Panamanian Pay Parity (+\$155,000)** — With the termination of the Panama Canal Treaties in 2000, U.S. and Panamanian laws required a transition to a local-payroll system governed by the labor laws of Panama. To implement a more equitable compensation system for STRI employees, the Institution adopted the U.S. Department of State employment standards and practices used by U.S. Embassies. The requested increase (+\$155,000) completes the three-year transition to provide equitable salaries and benefits for the Panama workforce.

- **Workers' Compensation (-\$412,000)** — This supports the provisions of Section 8147(b) of Title 5, *United States Code*. The Workers' Compensation bill for FY 2015 is based on actual costs of **\$3,418,000** incurred from July 1, 2012 through June 30, 2013, as invoiced by the Department of Labor in August 2013.

FY 2015 Increased Pay Costs
(Dollars in Thousands)

Line Item	2014 Annualized	2015 1.0% Pay	Employee Benefits
National Air and Space Museum	43	135	159
Smithsonian Astrophysical Observatory	39	120	144
National Museum of Natural History	100	315	381
National Zoological Park	53	163	192
Smithsonian Environmental Research Center	9	28	35
Smithsonian Tropical Research Institute	25	74	86
Arthur M. Sackler Gallery/Freer Gallery of Art	11	35	42
Center for Folklife and Cultural Heritage	4	14	17
Cooper-Hewitt, National Design Museum	8	22	26
Hirshhorn Museum and Sculpture Garden	9	29	34
National Museum of African Art	7	23	27
Anacostia Community Museum	4	13	16
Archives of American Art	4	14	15
National Museum of African American History and Culture	20	58	62
National Museum of American History, Behring Center	50	154	186
National Postal Museum	2	5	6
National Museum of the American Indian	57	176	219
National Portrait Gallery	14	43	51
Smithsonian American Art Museum	22	70	79
Outreach	15	46	56
Communications	4	15	18
Museum Support Center	3	12	15
Museum Conservation Institute	7	20	26
Smithsonian Institution Archives	5	15	18
Smithsonian Institution Libraries	20	62	74
Office of Exhibits Central	7	20	25
Office of the Chief Information Officer	34	109	125
Administration	58	293	213
Inspector General	6	20	23
Facilities Maintenance	110	339	399
Facilities Operations, Security, and Support	250	774	931
Total Increased Pay Costs	\$1,000	\$3,216	\$3,700

UTILITIES, POSTAGE, RENT, COMMUNICATIONS, AND OTHER FIXED COSTS (+\$6,744,000) — For FY 2015, the Institution requests an

increase of \$6,744,000 for utilities, postage, rent, communications, and other fixed-cost accounts, as detailed in the chart below. The increase reflects consumption and rate changes in the utilities accounts, inflationary increases, and program needs in the rent accounts. In addition, the increases in the Communications and other accounts are requested to provide for fixed software licensing and maintenance costs and inflationary increases for library subscriptions and audit requirements.

The following table displays the FY 2014 and FY 2015 estimates. The details that follow address the specific changes impacting the FY 2015 accounts.

**Federal Utilities, Postage, Rent, Communications,
and Other Fixed Costs
FY 2014–FY 2015
(Dollars in Thousands)**

	FY 2014 Enacted	FY 2015 Estimate	Change
Utilities:			
Electricity	14,298	19,566	5,268
Chilled Water	6,487	6,632	145
Steam	7,571	7,909	338
Natural Gas	3,075	3,068	-7
DC Gov't Water/Sewer	5,177	2,792	-2,385
Other Water and Fuel Oil	<u>1,068</u>	<u>1,105</u>	<u>37</u>
Subtotal, Utilities	37,676	41,072	3,396
Postage	1,611	1,611	0
Motor Fuel	370	370	0
Rental Space:			
Central	28,972	30,972	2,000
Unit	<u>6,864</u>	<u>7,557</u>	<u>693</u>
Subtotal, Rent	35,836	38,529	2,693
Communications	16,923	17,463	540
Other	2,162	2,277	115
Total	\$94,578	\$101,322	\$6,744

UTILITIES (+\$3,396,000) — Justified here, but included in the Facilities Operations, Security, and Support line item, is an increase to support electricity; chilled water; steam; natural gas; Washington, DC Government Water and Sewer; and other water and fuel services. The request includes the following:

- **Electricity (+\$5,268,000)** — Electricity is used to operate the Smithsonian’s large infrastructure. The major use of electricity is for air-conditioning that provides essential climate control to protect the priceless national collections as well as visitors and staff. The request covers anticipated rate changes in FY 2015 for all accounts and restores funds reduced in the FY 2013 sequestration (+\$4,868,000); provides for six months of electricity service for the new National Museum of African American History and Culture (NMAAHC) (+\$351,000); and anticipated decreased reimbursements in FY 2015 (+\$49,000).
- **Chilled Water (+\$145,000)** — Chilled water costs represent both the annual cost of the fixed, 15-year debt service for the joint project between the General Services Administration (GSA) and the Smithsonian to supply chilled water from GSA’s central plant to the Smithsonian’s south Mall facilities, and the variable cost for actual chilled water usage. The request restores necessary funds reduced in the FY 2013 sequestration (+\$155,000), and includes anticipated increased reimbursements in FY 2015 (-\$10,000).
- **Steam (+\$338,000)** — The Smithsonian uses steam for heating and humidification, and to produce hot water for facilities on the Mall and in New York City. The estimate covers a projected rate increase in FY 2015 and restores funds reduced in the FY 2013 sequestration (+\$338,000).
- **Natural Gas (-\$7,000)** — The Smithsonian uses natural gas for heating and generating steam. The estimate covers rate changes anticipated in FY 2015 for all accounts and adjustments to FY 2014 estimates (-\$38,000), provides for six months of service for NMAAHC (+\$48,000), and includes anticipated increased reimbursements in FY 2015 (-\$3,000).
- **DC Water and Sewer (-\$2,385,000)** — Funds cover the costs of both water and sewer services provided by the District of Columbia Water and Sewer Authority (DCWSA). The decrease represents rate and billing adjustments transmitted by DCWSA to the Smithsonian in April 2013 (-\$2,377,000), as well as anticipated increased reimbursements in FY 2015 (-\$8,000).
- **Other Water and Fuel Oil (+\$37,000)** — Funds provide water service for facilities outside of Washington, DC, and purchase of fuel oil used in dual-fuel boilers and emergency generators. The estimate covers rate increases for water to all facilities (+\$34,000), provides for fuel oil used in boilers and emergency generators (+\$4,000), and includes anticipated increased reimbursements in FY 2015 (-\$1,000).

POSTAGE — Funds provide for all official domestic and international mail services. No increases are requested for postage in FY 2015.

MOTOR FUEL — Funds provide for motor fuel that powers the Smithsonian's motor vehicle fleet and research vessels. No increases are requested for motor fuel in FY 2015.

RENTAL SPACE (+\$2,693,000) — Funds provide for the long-term rental of office, collections and warehouse storage, and laboratory space. For FY 2015, the Smithsonian requests increases of \$2,000,000 for centrally-funded lease requirements and \$693,000 for unit-funded, programmatic lease requirements, as follows:

- **Central Rent (+\$2,000,000)** — Justified here, but included in the Facilities Operations, Security, and Support line item, are increases needed to support leased office and storage space, as follows:

Escalation and Additional Base Funds (+\$2,000,000) — This request provides funding for the annual escalation of lease costs and rent-related services, and restores essential base funds reduced in the FY 2013 sequestration. Lease escalation costs are in accordance with the terms of current lease contracts. Among the contracts, the annual escalation rate for base rent averages three percent, and operating and real-estate taxes are each projected at four percent.

- **Unit Rent (+\$693,000)** — Justified here, but included in the following museums' line items, are unit-funded rent increases needed to support Smithsonian programs. The increases are as follows:

Escalation (+\$193,000) — Provides funding for the annual escalation of contractual lease costs and rent-related services. The requested increase supports leased space occupied by the Cooper-Hewitt, National Design Museum (+\$21,000); National Museum of African American History and Culture (+\$47,000); National Postal Museum (+\$15,000); and the federal share of costs for the Smithsonian Astrophysical Observatory (+\$110,000).

National Museum of African American History and Culture (+\$500,000) — Provides funds additional leased-space requirements and one-time, fit-out costs for NMAAHC to house an anticipated increase in essential staff to set up the exhibitions, programming, and operations of the Museum before it opens to the public.

COMMUNICATIONS (+\$540,000) — The communications base funds support the operations of the Institution’s voice and data telecommunications infrastructure. The requested increase covers the costs of software license fees and hardware maintenance. Maintenance fees are incurred as an essential part of protecting the Institution’s information technology (IT) investments. Justified here, but included in the Office of the Chief Information Officer line item, are increases for additional equipment and hardware maintenance to support the new National Museum of African American History and Culture, as well as to increase Wi-Fi service for the public **(+\$150,000)**.

In addition, the Smithsonian Tropical Research Institute in Panama is building a new state-of-the-art building to house the molecular biology program and new laboratories. The requested funds are necessary to provide the site with voice and high-speed data connectivity to support research activities and allow scientists to more efficiently transfer large amounts of data. The building will be linked to the fiber-optic system of the Panama Canal Authority that will provide the laboratory with a high-speed connection to expedite the researcher’s work **(+\$100,000)**.

Furthermore, the Institution uses the high-bandwidth Internet2 network for key segments of its wide-area network and for communications with research and education networks across the United States. The Smithsonian’s current connection to Internet2 is not sufficient to sustain the increased mission requirements placed on the connection by partnerships with Oak Ridge National Laboratories. The enhanced Internet2 connectivity is also necessary to make the digital collections and research information available to a broader cross-section of the research and education communities **(+\$140,000)**.

Also, the Institution’s Federal Information Security Management Act (FISMA) security program requires operational IT Security/information assurances that support the confidentiality, integrity and availability of the Smithsonian’s major systems, based on the recommended security practices of the IT industry, National Institute of Standards and Technology (NIST), and the Office of Management and Budget **(+\$150,000)**.

OTHER SUPPORT (+\$115,000) — Justified here, but included in the National Air and Space Museum’s (NASM) line item, are funds required to support the service contract at the Udvar-Hazy Center in Virginia. The Metropolitan Washington Airports Authority (MWAA) service contract provides essential police, fire, and emergency ambulance services for the Center, and the requested increase is a required cost that NASM must pay to MWAA.

SUMMARY OF S&E PROGRAM INCREASES

	\$000s	
	FY 2014 Enacted	FY 2015 Increase
Excellent Research ^{/1}	86,200	0
Broadening Access	73,891	+3,827
• Digitization and Web Access	8,977	+2,100
• Exhibits Maintenance	49,017	+600
• Institution-wide Program Funds	4,181	+1,127
Revitalizing Education	18,182	+10,000
• STEM Engagement	0	+10,000
Strengthening Collections	70,366	+3,100
• Collections Care Initiatives	3,597	+2,400
• Animal Welfare	17,598	+700
Mission Enabling	398,361	+13,350
• Facilities Maintenance	69,032	+5,300
• Facilities Operations, Security, and Support	197,098	+8,050
• Information Technology	57,915	0
• Management Operations	74,316	<u>0</u>
National Museum of African American History and Culture (NMAAHC)	[34,162]	+9,120
Total S&E Program ^{/2}	\$647,000	+\$39,397

/1: Excellent Research increases are included in the Opportunity, Growth, and Security Initiative section

Note: For a complete list of program categories, see page 33. The NMAAHC baseline number, (bracketed above), is included in each of the above major program categories.

/2: The program increase total (+\$39.4M) does not include the Fixed Costs increases (\$14.4M) detailed on pages 18–23.

EXCELLENT RESEARCH (GRAND CHALLENGES)

The Smithsonian’s Strategic Plan for FYs 2010–2017 articulates four Grand Challenges that provide an overarching strategic framework for Smithsonian programs and operations. The four Grand Challenges are:

- *Unlocking the Mysteries of the Universe*
- *Understanding and Sustaining a Biodiverse Planet*
- *Valuing World Cultures*
- *Understanding the American Experience*

Meeting these Grand Challenges will allow the Smithsonian to integrate the work of many disciplines within its museums and research centers, as well as broaden the Institution's external collaborations. The challenges are grounded in research and emphasize complementary education and outreach programs. Together, they will influence how the Smithsonian directs its resources and focuses its energies for maximum effectiveness.

The Institution has established consortia in each Grand Challenge area to fuse and optimize efforts across the Institution and coordinate work with the Smithsonian's research partners to ensure that our combined efforts have the maximum impact. The consortia will also help the Institution raise funds for these efforts. However, all research will continue to be conducted by our existing museums and research centers.

The Institution's FY 2015 budget request includes increases for Excellent Research in the Opportunity, Growth, and Security Initiative section of this budget submission.

STRENGTHENING COLLECTIONS / BROADENING ACCESS

Collections stewardship and broadening access through digitization are key components and core priorities of the Smithsonian's Strategic Plan. Assembled over 167 years, Smithsonian collections are fundamental to carrying out the Institution's mission and Grand Challenges, serving as the intellectual base for scholarship, discovery, exhibition, and education. As recognized by the America COMPETES Act reauthorization, the proper management, documentation, preservation, and accessibility of collections are important to the nation's research and education infrastructure, enabling researchers to address such significant challenges facing society as the effects of climate change, the spread of invasive species, and the loss of biological diversity and its impact on the global ecosystem. The Institution must substantially improve collections care to ensure that Smithsonian collections remain available for current and future use. The volume, characteristics, complexity, and age of Smithsonian collections, as well as the variety of discipline-specific standards that apply to their care, make their management and digitization as unprecedented, challenging, and complex as the collections themselves.

This budget request supports the Smithsonian's Strategic Plan to continually improve the quality of collections preservation, storage space, management, information content, and physical and electronic access while leveraging internal resources to support Institution-wide initiatives that strategically address Smithsonian collections care. Because collections stewardship is fundamental to the Smithsonian's mission, there is a need for new resources to accomplish basic collections management activities for accountability, preservation, storage, digitization, and accessibility of the collections.

The increase requested will assist in achieving the strategic goals of Strengthening Collections and Broadening Access by improving collections care, mitigating collections deterioration, digitizing collections, and supporting Smithsonian-wide initiatives that strategically address high-priority collections care and digitization needs.

<u>Category</u>	FY 2014 Base (\$000s)	FY 2015 Increase (\$000s)
STRENGTHENING COLLECTIONS	\$70,366	
• Collections Care Initiative		+2,400
• Animal Welfare		<u>+700</u>
Total FY 2015 Increase		+<u>\$3,100</u>

Collections Care Initiative (+\$2,400,000)

This request supports and maintains an integrated, strategic and Institution-wide approach to collections care by prioritizing and systematically addressing collections care needs based on current collection care methodologies, sound assessment data, economies of scale, and project-driven activities, including collections moves. This increase provides the resources to strategically correct physical collections care deficiencies identified by the comprehensive collections condition assessment and collections space survey; address the Smithsonian's Inspector General collections-related audit recommendations; and improve the preservation, storage, and accessibility of collections currently at risk of loss or damage. The increase will restore the fund to the pre-sequester level. Additional details are provided in the Institution-wide Programs section.

Animal Welfare (+\$700,000)

The National Zoological Park (NZIP) is requesting an increase of \$700,000 to provide equipment upgrades for the welfare of the Smithsonian's living collection. Excellence in animal care is paramount for maintaining the Zoo's accreditation by the Association of Zoos and Aquariums (AZA), as well as for maintaining compliance with the Animal Welfare Act. Today, NZIP's clinical equipment is in need of upgrades. Examples such as freezers purchased in 2007, a centrifuge from 1988, an autoclave from 2006, and a no longer supported x-ray machine point to a need for increased operational support for equipment necessary to provide high-quality animal care. With more than \$2 million in fixed assets devoted to animal care, and with a range of life spans on the equipment, NZIP requests \$500,000 for yearly equipment needs. This equipment not only enhances the quality of care our staff can provide, but improves staff safety as well.

NZIP also requests \$200,000 for increasing commissary costs. Changes in the Zoo's supply chain, and the expanding collection (tiger, lion, and cheetah cubs), as well as general increases to fossil fuel and raw ingredient costs, contribute to the need for more resources. The requested increase supports animal feed costs that are continually rising due to competition between animal and human food markets. The NZIP expects prices to rise between 5–10 percent in the near future and this will impact the total amount of funds required to feed the Zoos collection. Details are provided in the NZIP section.

<u>Category</u>	FY 2014 Base (\$000s)	FY 2015 Increase \$000
BROADENING ACCESS	\$73,891	
• Digitization		+1,800
• Web Access		+300
• Exhibits Maintenance		+600
• Restore Institution-wide Program Funds		<u>+1,127</u>
Total FY 2015 Increase		+\$3,827

Digitization (+\$1,800,000)

This request implements cost-efficient models for digitizing Smithsonian collections. The requested funding will scale up rapid capture prototypes for common collection materials which can be leveraged across units, and target digitization of collections which support broader Smithsonian strategic objectives. The requested funding increase will also expand the number of collections under digital inventory control, and enhance the Institution's capacity for applying 3D technology to collections digitization. These activities will improve the quantity and quality of Smithsonian assets available for scientific inquiry and public engagement, particularly for audiences who are unable to visit the collections in person. Additional details are provided in the Office of the Chief Information Officer section.

Web Access (+\$300,000, +2 FTEs)

As an integral part of its role in Broadening Access to collections, the Institution has developed a prototype of a Participant Access System (PAS) that will enable the Smithsonian to make all of its content and resources easily accessible and available to learners everywhere at any time. The PAS will integrate with existing Smithsonian websites, databases, and external data sets, including collections, archives, programming, and educational resources. Users of the PAS, called MySI, will be able to search Smithsonian content by any subject matter and receive information from any of the Smithsonian's museums or research centers addressing that subject matter.

At this time, the Smithsonian delivers content but does not engage users of this content as contributors and evaluators. MySI will facilitate use as well as the Institution's understanding of how the Smithsonian's content is used and the needs of learners of all ages. The Institution is requesting 2 FTEs who will directly support MySI: a senior technology manager (\$150,000) and a lead developer (\$150,000). Additional details are included in the Administration section.

Exhibits Maintenance (+\$600,000)

Smithsonian museums have a long tradition of raising private funds to design and install new exhibitions. The presence of visitors results in damage to the spaces and displays within the museums' halls, and increases the cost to maintain them.

Exhibit maintenance is defined as the custodial, exhibit, and conservation operations of exhibit areas; cleaning of casework and objects; paint touch-ups; carpet replacement; and upkeep of other exhibit components, including media and interactive technology.

A Smithsonian task force worked to gather data on the current square footage for interior, exterior, staffing, and resources expended, and developed a methodology for rating the level of quality in maintaining exhibitions. This methodology closely resembles the benchmarking work already in place for Smithsonian-run facilities. It uses the APPA (Association of Higher Education Facilities Officers) service level standards to measure overall appearance and maintenance. The requested funding will enable the Smithsonian to continue to address the exhibition maintenance backlog and improve efforts to maintain existing and new exhibits at a standard that reflects a world-class institution. This budget will ensure that the museums' exhibitions are clean and in good repair, and that the media components are fully operational and up to date. Priority will be given to providing energy-efficient lighting and updating the technological components in computerized interactive exhibits which, in many cases, have become obsolete. Specifically, the requested funding would be provided to the National Museum of American History (**+\$200,000**); the National Museum of Natural History (**+\$200,000**); and the National Air and Space Museum (**+\$200,000**). Additional details are included in each Museum's narrative.

Institution-wide Program Funds (+\$1,127,000)

<u>Program</u>	FY 2014 Base (\$000s)	FY 2015 Increase (\$000s)	FY 2015 Total (\$000s)
Research Equipment Pool	\$733	+\$467	\$1,200
Latino Initiatives Pool	\$661	+\$460	\$1,121
Collections Information Systems Pool	\$566	+\$200	\$ 766

The Smithsonian's FY 2013 operating plan realigned pool funds from the above accounts to each of our museums/units to assist in covering payroll and operating costs and ensure that the Institution would not have to furlough staff during FY 2013. Now that the Smithsonian has received the FY 2014 appropriation, the Institution requests the Pool funds be restored to the above accounts. These Institution-wide programs support the Smithsonian's Strategic Plan. Additional details are provided in the Institution-wide Programs section.

REVITALIZING EDUCATION

Science, Technology, Engineering, and Mathematics (STEM) Engagement — (+\$10,000,000, +23 FTEs)

The Smithsonian is requesting **\$10 million** to provide authentic and inspiring STEM experiences for teachers and students by drawing on the scientific and engineering assets of the federal Government — including scientists, labs, satellites,

museums and research centers. The Smithsonian's STEM engagement supports the implementation of the Federal STEM Education 5-Year Strategic plan and the Budget's fresh Government-wide reorganization of STEM education programs. The Smithsonian will serve as a conduit between federal mission agencies and other non-profits — including the Smithsonian's 184 Affiliate museums. The Institution will grow and support learning communities that include educators in schools and informal learning settings; assist with the identification of curriculum in a variety of modalities; and work with our partners to identify, develop and disseminate STEM engagement materials and experiences. The STEM initiative will also advance professional development opportunities that take into consideration the Next Generation Science Standards and align with state education standards.

The Smithsonian will work collaboratively with federal agencies offering STEM programs so that we may: identify and disseminate content that takes advantage of each agency's unique assets; create complementary materials; avoid duplication of effort; and share a centralized portal for the broad dissemination of our engagement offerings.

The Smithsonian will manage these endeavors by creating discipline- and subject-based committees that coordinate the efforts of STEM engagement providers, including Smithsonian units, mission agencies, and other non-profit collaborators. We will also increase the capacity of Smithsonian units that offer programs, experiences and services in the creation, dissemination, and evaluation of STEM education content. Additional information is included in the Outreach section.

MISSION ENABLING

Facilities Maintenance (+\$5,300,000, +31 FTEs)

The Smithsonian requests an increase of **\$5.3 million** to enable its maintenance program to continue the work of stabilizing and standardizing the overall condition of its facilities. The requested increase will fund high-priority needs, including partial-year funding to establish a maintenance program for the new National Museum of African American History and Culture (NMAAHC). The funds will also help establish maintenance programs for new laboratories coming online at the Smithsonian Environmental Research Center (SERC) and the Smithsonian Tropical Research Institute (STRI), and solidify the Smithsonian's Association of Higher Education Facilities Officers, or APPA, rating at a solid level 3 (out of 5) — Managed Care — across the Institution. The following chart summarizes the requested requirements:

<u>Category</u>	FY 2014 Base (\$000s)	FY 2015 Increase (\$000s)	FY 2015 Increase FTEs
Facilities and Systems Support		+4,265	+18
Support for African American Museum		+950	+12
Security Maintenance		+85	+1
Total Facilities Maintenance	\$69,032	+\$5,300	+31

Additional details are included in the Facilities Maintenance section.

Facilities Operations, Security, and Support (+\$8,050,000, +122 FTEs)

The Institution also requests an increase of **\$8.05 million** to address high-priority operating and safety requirements. The increase also includes partial-year support to fund facilities and security operations for the National Museum of African American History and Culture. The request will also support operations for new laboratories coming online at the Smithsonian Environmental Research Center (Mathias) and the Smithsonian Tropical Research Institute (Gamboa). The following chart is a summary of the requested requirements:

<u>Category</u>	FY 2014 Base (\$000s)	FY 2015 Increase (\$000s)	FY 2015 Increase FTEs
Facilities Requirements		+2,800	+37
Support for African American Museum		+3,250	+75
Security Requirements		+2,000	+10
Total Facilities Operations, Security, and Support	\$185,401	+\$8,050	+122

Additional details are included in the Facilities Operations, Security, and Support section.

NATIONAL MUSEUM OF AFRICAN AMERICAN HISTORY AND CULTURE (+\$9,120,000, +33 FTEs)

The National Museum of African American History and Culture (NMAAHC) has strategically planned for needed federal support by addressing all its requirements — construction, staffing, and operation — until the Museum’s opening in FY 2016. As the Museum moves ahead with plans and operations geared toward opening, it is necessary that the required resources be fully provided to support the professional and technical expertise needed for all aspects of this project. This will continue the positive momentum fueling the private-sector fundraising campaign, and enable the Smithsonian to leverage federal appropriations for donor support.

As the Museum prepares for its opening, NMAAHC requests an increase of **\$9,120,000** in programmatic increases. In addition, the Institution requests \$547,000 to cover the lease costs of office space for new employees, which is included in the Fixed

Costs section of this budget submission. It is the Smithsonian’s plan to leverage the contributions of potential donors (who provide collections, in-kind services, and funding), which includes NMAAHC cultivating relationships with supporters while building a firm financial base of private funding. Details of the requested increases are in NMAAHC’s narrative section.

NO-YEAR FUNDING — The following table provides the FY 2015 Salaries and Expenses requests for No-Year Funding.

No-Year Funding Request

(Dollars in Thousands)

Salaries and Expenses	FY 2014 Enacted	FY 2015 Request
No-Year Funds		
National Museum of African American History and Culture	34,162	43,969
National Museum of Natural History		
Exhibition Reinstallation	954	954
Repatriation Program	1,346	1,367
Major Scientific Instrumentation	4,118	4,118
Collections Acquisition	435	435
Total, No-Year	\$41,015	\$50,843

OBJECT CLASS — The following table provides an object-class breakout of resources for the Salaries and Expenses account.

Object-Class Request

(Dollars in Millions)

Salaries and Expenses	FY 2014 Enacted	FY 2015 Request
Salaries and Benefits	417	436
Travel and Transportation	5	5
Rent, Utilities, Communications, and Other	87	95
Other Services	101	120
Supplies and Materials	17	18
Equipment	14	21
Land and Structures	6	6
Total	\$647	\$701

FEDERAL RESOURCE SUMMARY BY PERFORMANCE OBJECTIVE AND PROGRAM CATEGORY

The Smithsonian has developed its FY 2015 budget request by reviewing all resources, both base amounts and identified increases or decreases, in relation to the Institution's performance plan and Strategic Plan. In the sections that follow, detailed justifications are provided for all funding and FTEs by the Institution's strategic goals and by performance objectives under each goal.

The Institution's program performance goals and objectives are aligned with the program categories used in the federal budget and the Institution's financial accounting system. This enables the Institution to more clearly demonstrate the relationship between dollars budgeted and results achieved.

The table on the following page summarizes the Institution's FY 2014 and FY 2015 **Salaries and Expenses** estimates and the proposed changes by strategic goal, performance objective, and program category.

Federal Resources by Performance Objective and Program Category
Salaries and Expenses (\$s in thousands)

Performance Objective/Program Category	FY 2014		FY 2015		Change	
	FTEs	\$000	FTEs	\$000	FTEs	\$000
Excellent Research						
Research						
Engage in research and discovery	451	69,921	452	71,294	1	1,373
Ensure the advancement of knowledge in the humanities	115	16,279	118	17,161	3	882
Broadening Access						
Digitization and Web Support						
Provide improved digitization and Web support	70	8,977	72	11,650	2	2,673
Public Programs						
Provide reference services and information	137	15,897	140	17,212	3	1,315
Exhibitions						
Offer compelling, first-class exhibitions	351	49,017	356	51,281	5	2,264
Revitalizing Education						
Education						
Engage and inspire diverse audiences	157	18,182	192	29,237	35	11,055
Strengthening Collections						
Collections						
Improve the stewardship of the national collections	559	70,366	564	76,372	5	6,006
Mission Enabling						
Facilities						
Improve the overall cleanliness and efficient operation of Smithsonian facilities	688	126,542	761	140,485	73	13,943
Implement an aggressive and professional maintenance program	367	69,032	398	75,180	31	6,148
Execute an aggressive, long-range revitalization program and limited construction of new facilities	1	515	1	535	0	20
Security and Safety						
Provide world-class protection for Smithsonian facilities, collections, staff, visitors, and volunteers	725	63,476	780	67,033	55	3,557
Provide a safe and healthy environment	45	6,565	45	6,576	0	11
Information Technology						
Modernize the Institution's information technology systems and infrastructure	141	57,915	141	61,512	0	3,597
Management Operations						
Strengthen an institutional culture that is customer centered and results oriented	208	28,292	205	28,938	-3	646
Ensure that the Smithsonian workforce is efficient, collaborative, committed, innovative, and diverse	97	17,064	97	16,872	0	-192
Modernize the Institution's financial management and accounting operations	82	11,469	82	11,763	0	294
Enhance the reputation of the Smithsonian by maintaining good relations with the news media and with federal, state, and local governments	27	3,346	27	3,389	0	43
Modernize and streamline the Institution's acquisitions management operations	55	7,132	55	7,220	0	88
Ensuring Financial Strength						
Secure the financial resources needed to carry out the Institution's mission	17	7,013	18	7,090	1	77
TOTAL	4,293	647,000	4,504	700,800	211	53,800

GRAND CHALLENGES AND INTERDISCIPLINARY RESEARCH

	APPLICATION OF OPERATING RESOURCES							
	FEDERAL APPROPRIATIONS		GENERAL TRUST		DONOR/SPONSOR DESIGNATED		GOV'T GRANTS & CONTRACTS	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2013 ENACTED	10	2,561	0	0	0	652	0	0
FY 2014 ENACTED	10	2,581	0	0	0	335	0	0
FY 2015 ESTIMATE	10	2,581	0	0	0	88	0	0

STRATEGIC GOAL: EXCELLENT RESEARCH

Federal Resource Summary by Performance Objective and Program Category

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Excellent Research						
Research						
Engage in research and discovery	4	1,704	4	1,704	0	0
Ensure the advancement of knowledge in the humanities	6	877	6	877	0	0
Total	10	2,581	10	2,581	0	0

BACKGROUND AND CONTEXT

The Smithsonian's Strategic Plan for 2010–2017 articulates four Grand Challenges which provide an overarching strategic framework for Smithsonian programs and operations. Meeting these challenges will enable the Institution to integrate the work of many disciplines within the Smithsonian museums and research centers, as well as broaden our external collaborations. The challenges are grounded in research and emphasize complementary education and outreach programs; together, they influence how the Smithsonian directs its resources and focuses its energies. The Smithsonian has developed and implemented a Grand Challenges Awards initiative to advance cross-disciplinary, integrated scholarly efforts across the Institution that relate to one or more of the four Grand Challenges. Using a competitive internal process, the Smithsonian is distributing externally raised grant funds designated for the purpose of advancing research, broadening access, revitalizing education, and encouraging new ways of thinking that involve emerging technology. The grant funding may also help to leverage additional funding, both internal and external, thereby amplifying the scope and breadth of cross-cutting research initiatives. The Smithsonian uses

the Grand Challenges to present the high-level view in the budget; funds are distributed through interdisciplinary consortia, but most of the actual expenditures are made by existing Smithsonian units.

The Smithsonian created interdisciplinary consortia around each of the four Grand Challenges to leverage the scholarship and experience that reside in each field of knowledge. These consortia spark innovative research and educational programs, as well as broker partnerships with private and public entities that support these goals. In addition, the Smithsonian will fortify existing external relationships and forge new ones as potential collaborators emerge in priority areas. These consortia are not new programmatic units, but work through existing museums and research centers to facilitate innovative scholarship and outreach.

The four Grand Challenges are:

- *Unlocking the Mysteries of the Universe*
- *Understanding and Sustaining a Biodiverse Planet*
- *Valuing World Cultures*
- *Understanding the American Experience*

There are no increases for consortia research requested in FY 2015. The Institution will continue to advance the prior-year research funding in the four Grand Challenges. Below is a summary of the FY 2015 Consortia budget.

Consortium	FTEs	\$000s
Universe	1	184
Biodiversity	3	1,520
World Culture	2	284
American Experience	4	593
Total	10	\$2,581

However, the President’s Budget includes a separate, fully paid for \$56 billion Opportunity, Growth, and Security (OG&S) Initiative. This initiative provides additional discretionary investments in 2015 to spur economic progress, promote opportunity, and strengthen national security.

This initiative fully supports the Institution’s Strategic Plan, specifically for the four Grand Challenges. There are five specific research programs (**\$6.8 million**) which are key to the success of achieving the Smithsonian Institution’s strategic goals and objectives. Details on these five initiatives are in a separate section of this budget submission (beginning on page 239 behind the OG&S tab).

Introduction, *Unlocking the Mysteries of the Universe*

The Smithsonian will continue to lead in the quest to understand the fundamental nature of the cosmos, using next-generation technologies to explore our own solar system, meteorites, the Earth's geological past and present, and the paleontological record of our planet.

RESEARCH Goal: The Smithsonian will continue to advance knowledge at the forefront of understanding the universe and the solid Earth.

ACCESS Goal: Inspire people to probe the mysteries of the universe and planetary systems.

UNITS primarily associated with this Grand Challenge:

- **National Air and Space Museum**
- **Smithsonian Astrophysical Observatory**
- **Major Scientific Instrumentation**

The President's Budget includes a separate, fully paid for \$56 billion Opportunity, Growth, and Security (OG&S) Initiative. This initiative provides additional discretionary investments in 2015 to spur economic progress, promote opportunity, and strengthen national security.

This initiative fully supports the Institution's Strategic Plan, specifically in the area of Excellent Research. Two specific research programs, the Greenland and Giant Magellan Telescopes, are both key to the success of achieving the Smithsonian Institution's strategic goals and objectives. Details on these programs are in a separate section of this budget submission (on pages 239–241 behind the OG&S tab).

NATIONAL AIR AND SPACE MUSEUM

	APPLICATION OF OPERATING RESOURCES							
	FEDERAL APPROPRIATIONS		GENERAL TRUST		DONOR/SPONSOR DESIGNATED		GOV'T GRANTS & CONTRACTS	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2013 ENACTED	161	17,607	52	5,990	17	4,975	2	1,213
FY 2014 ENACTED	161	18,123	46	6,001	22	6,460	6	499
FY 2015 ESTIMATE	161	18,775	46	6,061	22	6,525	6	504

STRATEGIC GOALS: EXCELLENT RESEARCH; BROADENING ACCESS; REVITALIZING EDUCATION; STRENGTHENING COLLECTIONS; AND MISSION ENABLING

Federal Resource Summary by Performance Objective and Program Category

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Excellent Research						
Research						
Engage in research and discovery	3	1,124	3	1,145	0	21
Ensure the advancement of knowledge in the humanities	25	3,100	25	3,158	0	58
Broadening Access						
Public Programs						
Provide reference services and information	6	869	6	885	0	16
Exhibitions						
Offer compelling, first-class exhibitions	40	5,455	40	5,757	0	302
Revitalizing Education						
Education						
Engage and inspire diverse audiences	12	1,287	12	1,311	0	24
Strengthening Collections						
Collections						
Improve the stewardship of the national collections	47	2,827	47	2,879	0	52
Mission Enabling						
Information Technology						
Modernize the Institution's information technology systems and infrastructure	9	1,033	9	1,052	0	19
Management Operations						
Strengthen an institutional culture that is customer centered and results oriented	19	2,428	19	2,588	0	160
Total	161	18,123	161	18,775	0	652

BACKGROUND AND CONTEXT

The mission of the National Air and Space Museum (NASM) is to commemorate the development of aviation and space flight, and educate and inspire the nation by:

- preserving and displaying aeronautical and space flight equipment and data of historical interest and significance to the progress of aviation and space flight;
- developing educational materials and conducting programs to increase the public's understanding of, and involvement in, the development of aviation and space flight; and
- conducting and disseminating new research in the study of aviation and space flight and their related technologies.

NASM is administered as one Museum with multiple locations: the National Mall building; the Udvar-Hazy Center; and the Garber Facility in Suitland, Maryland. NASM provides access to the nation's aviation and space flight history to an average of 7– 9 million on-site visitors from around the world each year, making it one of the most visited museums in the world. In addition, NASM draws tens of millions of virtual visitors to its website and broadcast and webcast educational programming.

In FY 2015, NASM will collect and preserve the nation's aviation and space artifacts and perform original research in aviation and space history and planetary science to support its broad array of exhibitions, programs, publications, and outreach activities. To accomplish its public service mandate and reach diverse audiences, the Museum draws upon a mixture of in-house resources and a large corps of volunteers.

The budget request includes an increase of \$652,000. The increase includes \$337,000 for necessary pay and other related salary costs for existing staff funded under this line item; \$115,000 for Metropolitan Washington Airport Authority (MWAA) services; and \$200,000 for exhibits maintenance.

MEANS AND STRATEGY

Public Engagement — NASM continues to reach diverse audiences through exhibitions, educational programming, publications, and electronic outreach. The exhibitions incorporate written labels, interactive devices, and programming elements that appeal to a wide range of ages and interests. Based on the success of the renovated *Pioneers of Flight* exhibition, future plans for all galleries will include components that are physically and intellectually accessible to the Museum's youngest visitors, ages 3–8. To illustrate complex concepts, exhibitions will continue to build on past success by using mechanical and computer interactive devices, which are appealing to most visitors but especially to school-age children and their families.

To further enhance visitor experiences, NASM staff and volunteers will continue to provide a variety of Museum programs, from daily activities, such as docent-led tours and science demonstrations that reach hundreds of thousands of visitors annually, to big family day events, such as the *Become a Pilot Family Day* that can reach 10,000 to 50,000 visitors at one event. NASM programs will continue to encourage visitors, especially school groups, to use the Museum's collections and experts to support life-long learning. NASM will seek to replicate the National Mall building's Early Childhood Education Program at the Udvar-Hazy Center, and continue to build on the student Explainers Programs at both Museum locations in FY 2015. The astronomy programs, which include the Public Observatory and educational programming in the planetarium, will remain an important component of STEM (science, technology, engineering and mathematics) education throughout FY 2015.

NASM will continue to develop digital outreach programs that educate and inspire audiences on-site, online and on the go. Staff will increase access to the Museum assets, activities, content and expertise, with a focus on creating unique online experiences and educational programs that reflect the Museum's mission and the visitor experience. In addition, NASM staff will develop new models for on-line learning and work to involve audiences more directly in achieving our mission. NASM will continue to integrate online outreach and engagement into Museum practice and support a culture of sharing and collaborative creation of knowledge.

In FY 2014, NASM continued to inspire and educate audiences at the National Mall building and the Udvar-Hazy Center through new and updated exhibitions. In the first quarter of FY 2014, the Museum celebrated the tenth anniversary of the opening of the Udvar-Hazy Center. Also in FY 2014, an exhibition of Mars exploration images was mounted in the *Flight and the Arts* gallery; *Hawaii by Air* was displayed in gallery 104; and *Airport Towers*, images by NASM photographer Carolyn Russo, was displayed in the *Flight and the Arts* gallery. In addition, the Museum began the reinterpretation and re-design of the *Milestones of Flight* in galleries 100 and 108. These galleries are the first and last impressions that visitors have of the Museum because they are at the entrance/exit points of the building. They are scheduled for reopening in the summer of 2016. The Museum continues to expand its integrated website and on-site visitor information capabilities. These features now enable visitors to plan their visit on the Web, and to customize their Museum experience — from pre-visit planning, to on-site Museum tours, to post-visit learning.

As part of NASM's ongoing efforts to achieve the strategic goals of Broadening Access and Strengthening Collections, aircraft and spacecraft continued to be moved into the Udvar-Hazy Center for restorations and relocations.

Collections — The Museum's new conservation and restoration hangar and collections storage areas handle portions of the Museum's collections of more than 46,000 artifacts. The traditionally high level of craftsmanship shown in the NASM restoration program now is matched by first-class facilities that can handle the

various types of objects and materials the Museum manages. Preparations continue for the move of the selected collections and restoration/conservation activities from the Paul E. Garber Facility in Suitland, Maryland to the Udvar-Hazy Center in Chantilly, Virginia, and will continue in FY 2015 and beyond, as funding permits. NASM will continue its loan program, which encompasses more than 1,300 aviation and space artifacts, including some of the most sought-after artifacts of the last century: spacesuits and lunar spacecraft.

NASM continues to advance the strategic goal of Broadening Access to its collections by moving collections information to a publicly accessible website. The curatorial databases contain extensive information on the history and provenance of each artifact, and the best way to offer more of this in-depth information to the public is through electronic means. NASM's electronic resources allow more people access to the Museum's archival collections, with a resulting increase in archival information requests by the public.

Scientific Research — To achieve the strategic goal of Excellent Research, NASM's Center for Earth and Planetary Studies conducts basic research related to planetary exploration, with an emphasis on Mars, Mercury, and the moon, and curates galleries and public offerings in the planetary sciences. NASM scientists continue to work as members of the science teams for the Mars Exploration Rover, Mars Express, Mars Reconnaissance Orbiter, Lunar Reconnaissance Orbiter, Mars Science Laboratory, and MESSENGER missions. NASM scientists work with the data from these and other missions to solar system bodies, and convey this exciting information to the public. Basic research continues to concentrate on the National Research Council and NASA priorities to determine the origin of solar system bodies and habitable planets, with an emphasis on understanding the past climate of Mars and publishing the results of this research in scientific literature.

Historical Research — NASM will continue to lead in the field of flight history by publishing books and papers, and by making presentations at professional conferences on the history of aerospace technology, aviation, aerodynamics, space flight, and space sciences. Based on their research and expertise, the curatorial staff will continue to evaluate potential acquisitions for the national collections and respond to numerous public inquiries. NASM will also continue to upgrade exhibits dealing with aviation and space flight, thereby ensuring that current materials are available to the public.

Management — NASM will achieve the Mission Enabling strategic goal by using the single infrastructure it has developed to support the National Mall building, the Udvar-Hazy Center, and the Garber Facility, while continuing to strive for consistency of high-quality operations at each facility.

EXPLANATION OF CHANGE

The budget estimate includes an increase of \$652,000. The increase includes \$337,000 for necessary pay and other related salary costs for existing staff; \$115,000 for support of the Metropolitan Washington Airport Authority (MWWA) services; and \$200,000 for exhibits maintenance.

- The \$115,000 for the MWWA service support for police, fire, emergency, and ambulance services provided to the Museum at the Udvar-Hazy Center.
- The \$200,000 for exhibits maintenance will ensure that the Museum's exhibitions are clean and in good repair, and that the media components are fully operational and up to date. The Museum has a long tradition of raising private funds to design and install new exhibitions. For more than a generation, these exhibitions have been the reason why millions of visitors come to the Museum. However, the very success of these exhibitions brings commensurate costs. The mere presence of record numbers of visitors results in increased wear and tear to displays within the halls, and increases the cost to maintain them. In addition, the increasingly interactive nature of today's exhibits increases maintenance needs. Specifically, the Museum will replace worn and dirty carpet and improve exhibit lighting by replacing outdated lighting track and fixtures with LED fixtures. The LED fixtures last longer and use less power, resulting in significant energy savings and reduced manpower costs.

NONAPPROPRIATED RESOURCES — General trust funds support research, education, exhibitions, and fund raising, including salaries and benefits. Donor/sponsor-designated funds support costs related to specific programs and projects. Fund raising is under way for future galleries and the endowment of public programs. Government grants and contracts support research and other scientific activities.

SMITHSONIAN ASTROPHYSICAL OBSERVATORY

	FEDERAL APPROPRIATIONS		GENERAL TRUST		DONOR/SPONSOR DESIGNATED		GOV'T GRANTS & CONTRACTS	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2013 ENACTED	106	23,615	100	20,018	17	4,187	213	75,298
FY 2014 ENACTED	106	23,746	99	24,108	2	1,818	206	75,649
FY 2015 ESTIMATE	106	24,159	99	24,108	2	1,818	206	75,649

STRATEGIC GOALS: EXCELLENT RESEARCH; BROADENING ACCESS; AND MISSION ENABLING

Federal Resource Summary by Performance Objective and Program Category

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Excellent Research						
<i>Research</i>						
Engage in research and discovery	103	21,751	104	22,274	1	523
Broadening Access						
<i>Public Programs</i>						
Provide reference services and information	3	450	2	300	-1	-150
Mission Enabling						
<i>Information Technology</i>						
Modernize the Institution's information technology systems and infrastructure	0	500		510	0	10
<i>Management Operations</i>						
Ensure that the Smithsonian workforce is efficient, collaborative, committed, innovative, and diverse	0	1,045		1,075	0	30
Total	106	23,746	106	24,159	0	413

BACKGROUND AND CONTEXT

The mission of the Smithsonian Astrophysical Observatory (SAO) is to advance the public's knowledge and understanding of the universe through research and education in astronomy and astrophysics. The secondary mission is to be of service to the national and international astronomical communities, and to society in general, in areas associated with our primary mission. The Observatory has a strong record of achievement in developing and successfully implementing large, complex, and innovative observational and theoretical research projects. SAO also supports the investigative research carried out by individual researchers and small groups. These varied activities

create the distinctively fertile research environment that drives SAO's success and makes the Observatory a recognized leader in the global astrophysical field of science.

SAO's work directly supports the first of the Grand Challenges outlined in the Smithsonian's Strategic Plan: Unlocking the Mysteries of the Universe. The goal calls for the Smithsonian to "advance knowledge at the forefront of understanding the universe and solid Earth."

Founded in 1890, SAO is the largest and most diverse astrophysical research institution in the world. SAO has helped develop some of the world's most sophisticated astronomical instruments, with high resolution at wavelengths across the electromagnetic spectrum, to probe the universe. Alone, and in powerful partnerships with the National Science Foundation (NSF), the National Aeronautics and Space Administration (NASA), and the Department of Energy, it has pioneered the development of orbiting observatories and large, ground-based telescopes; the application of computers to study astrophysical problems; and the integration of laboratory measurements and theoretical astrophysics. Observational data are gathered at SAO's premier facilities: the Submillimeter Array (SMA) in Hawaii; the 6.5-meter diameter Multiple Mirror Telescope (MMT); the Very Energetic Radiation Imaging Telescope Array System (VERITAS); and related telescopes at the Fred Lawrence Whipple Observatory in Arizona. In addition, SAO conducts research with a broad range of powerful instruments aboard rockets, balloons, and spacecraft (most notably the Chandra X-ray Observatory, the Spitzer Space Telescope, the Hinode Telescope, and the Solar Dynamics Observatory); and at locations as diverse as the high plateaus of northern Chile and the Amundsen South Pole Station. Headquartered in Cambridge, Massachusetts, SAO collaborates with the Harvard College Observatory to form the Harvard-Smithsonian Center for Astrophysics.

For more than 50 years, SAO astronomers and their colleagues have made revolutionary discoveries that have changed our fundamental understanding of the universe and our place in it. We have discovered and examined planets in orbits around other stars, watched as new stars are born, and discovered bizarre remnants of dead stars that emit vast quantities of x-rays. We have determined that the universe is 13.7 billion years old, and that it is populated with billions of galaxies, many of which have supermassive black holes at their centers. In addition, we have found convincing evidence that most of the matter in the universe is an unexpected mixture of some unseen "dark matter," with normal matter making up less than four percent of the total; and that the expansion of the universe is apparently accelerating, driven by a mysterious and invisible "dark energy." At the same time, SAO astronomers work systematically on the vital basic research that seeks to explain the sun and its x-ray-emitting corona, the nature of the solar system, the abundant elements in our Milky Way Galaxy, the gas and dust between the stars, the formation and evolution of galaxies, and other important questions about the nature of the universe. Today, SAO is taking a lead role in the science of "precision astronomy," using past discoveries and advanced technologies to produce a coherent story of the cosmos from the Big Bang to life here on Earth.

SAO's research is unique and world renowned because of the strength and diversity of its observers, theorists, instrument developers, engineers, and laboratory experimentalists, and because SAO emphasizes multiple strategies that draw from the strengths of both small projects and large research centers. Indeed, SAO's extraordinary research success is partly the result of the rich cross-fertilization that its outstanding scholars bring to each other in a climate that nurtures collaborative excellence.

SAO's pre-eminence is underscored by the recognition that its researchers receive from leading scientific organizations. For instance, a senior SAO scientist received the 2014 Karl Schwarzschild Medal (after the previous year winning the 2013 Julius Edgar Lilienfeld Prize of the American Physical Society), which recognizes a lifetime of outstanding contributions to astrophysics. Another senior SAO scientist won the Grote Reber Prize for Radio Astronomy, the highest award for radio astronomy. Other SAO scientists were elected as Fellows of the American Academy of Arts and Sciences and of the American Association for the Advancement of Science. These are only a few examples of the many awards received by SAO staff in FY 2013 and FY 2014. Together with its partner, the Harvard College Observatory, SAO is the top choice of graduate- and postdoctoral-level young scientists for astrophysics. Federal support makes this continued leadership possible.

The budget estimate includes an increase of \$303,000 for the necessary pay and other related salary costs for existing staff funded under this line item, and \$110,000 for increased lease costs of existing space, which is justified in the Fixed Costs section of this budget.

MEANS AND STRATEGY

To achieve the goal of Excellent Research, SAO scientists will make optimal use of various astronomical facilities to support their research, including the ground-based optical and radio telescopes owned and operated by SAO in Arizona and Hawaii, and space-based telescopes, most notably the Chandra X-ray Observatory, which is operated by SAO on behalf of NASA, and NASA's Solar Dynamics Observatory. SAO scientists also have research privileges at the two 6.5-meter Magellan telescopes in northern Chile (because of SAO's partnership with the Harvard College Observatory). In addition, SAO scientists and engineers are leading the science operations team and carrying out a vital scientific research program in very high-energy astrophysics at the VERITAS telescope in southern Arizona. These facilities enable SAO scientists to make substantial progress in answering fundamental questions about the origin and nature of the universe, including dark energy and dark matter, as well as questions about the formation and evolution of Earth and similar planets. In addition, SAO scientists will continue their work on future space missions, collaborating with NASA and its research center on missions to study the sun, the x-ray universe, and the outer solar system.

SAO scientists and engineers play leading roles in the development of new techniques and instrumentation for astronomy. In FY 2013, SAO scientists designed

the critical mirror-phasing system for the Giant Magellan Telescope (GMT); in addition, a successful “proof of principle” test was conducted on the Magellan Clay Telescope. SAO scientists and engineers designed the “atmospheric dispersion corrector” for the GMT; this optical element corrects distortions produced by the passage of light through the Earth’s atmosphere. SAO also leads the design and development of the first instrument that will be installed on the GMT: the GMT-Consortium Large Earth Finder (G-CLEF), which will enable astronomers to detect signs of life on planets orbiting nearby stars.

SAO scientists will continue to take a leadership role in astrophysics by participating in or hosting national and international conferences (e.g., the American Astronomical Society, the International Astronomical Union, and the Astronomical Data Analysis Software and Systems conference series), by participating as keynote and/or invited speakers at such meetings, and by serving on a diverse range of astronomical and astrophysical review panels. SAO scientists will also continue to publish in leading peer-reviewed journals such as the *Astrophysical Journal*, the *Astronomical Journal*, and *Astronomy & Astrophysics*. In addition, SAO developed and operates the Astrophysics Data System, which is a world leader in the dissemination of scientific literature.

SAO will achieve the strategic goal of Broadening Access by producing and delivering educational services and products rooted in SAO research to meet the educational needs of the Observatory’s audiences. This sustained outreach effort will give SAO increased publicity and recognition.

The goal of Mission Enabling will be achieved by making SAO’s information technology (IT) infrastructure robust, reliable, and secure; maintaining a cooperative environment through communication and activities that underscore SAO’s special mission and each staff member’s contribution to its success; evaluating management officials and supervisors on their compliance with applicable equal opportunity laws, rules, and regulations, and on the effectiveness of their efforts to achieve a diverse workforce; and facilitating the use of small, minority, women-owned, and other underused businesses in SAO’s procurement and business relationships. These management tools will continue to support and enhance SAO’s scientific and educational missions.

NONAPPROPRIATED RESOURCES — General trust funds come primarily from overhead charged on grants and contracts. SAO uses these funds to support administrative functions approved in the Indirect Cost Budget submitted to the Defense Contract Audit Agency and the Office of Naval Research, as required by Office of Management and Budget Circular A-122, *Cost Principles for Nonprofit Organizations*. Donor/sponsor-designated funds come primarily from restricted gifts from individuals, foundations, and corporations, which are earmarked for particular purposes; restricted endowment funds; and non-governmental grants and contracts. Government grants and contracts come from Government agencies for research in areas of SAO’s expertise. SAO often conducts this research in cooperation with governmental, academic, and research institutions in the United States and abroad.

MAJOR SCIENTIFIC INSTRUMENTATION

	APPLICATION OF OPERATING RESOURCES							
	FEDERAL APPROPRIATIONS		GENERAL TRUST		DONOR/SPONSOR DESIGNATED		GOV'T GRANTS & CONTRACTS	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2013 ENACTED	0	3,418	0	0	0	0	0	0
FY 2014 ENACTED	0	4,118	0	0	0	0	0	0
FY 2015 ESTIMATE	0	4,118	0	0	0	0	0	0

STRATEGIC GOAL: EXCELLENT RESEARCH

Federal Resource Summary by Performance Objective and Program Category

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Excellent Research						
Research						
Engage in research and discovery	0	4,118	0	4,118	0	0
Total	0	4,118	0	4,118	0	0

BACKGROUND AND CONTEXT

Smithsonian science is engaged in research and discovery focused on the origin and evolution of the universe, the formation and evolution of Earth and similar planets, the discovery and understanding of biological diversity, and the study of human diversity and cultural change.

The Smithsonian Astrophysical Observatory's (SAO) work directly supports the first of the Grand Challenges outlined in the Smithsonian Institution Strategic Plan: Unlocking the Mysteries of the Universe. This goal calls for the Smithsonian to "advance knowledge at the forefront of understanding the universe and solid Earth."

To achieve the strategic goal of Excellent Research, the Smithsonian uses its no-year funding from the Major Scientific Instrumentation (MSI) line item to develop large-scale instrumentation projects with advanced technologies that enable scientists at SAO to remain at the forefront of astronomy and astrophysics research. The Smithsonian's criteria for proposing and selecting MSI projects are: 1) the instrumentation will enable compelling scientific advances that would not otherwise occur (either at SAO or anywhere else in the world) for some time to come; 2) the instrumentation is novel and technically advanced, and would not be developed

without SAO's contribution; and 3) the science enabled by the innovative instruments is consistent with the Smithsonian Institution's Strategic Plan. The fundamental role for federal appropriations is to support the basic scientific infrastructure that enables SAO to conduct research, compete for external grants and funding, publish in peer-reviewed journals, and inform the public about the latest scientific discoveries in an exciting and compelling manner. Because of the magnitude of the costs and the time required to fabricate major new instruments and reconfigure existing ones, the Institution requests that MSI funds for these projects be kept available until they are spent.

For the past 50 years, astronomers have made fundamental discoveries about the universe, such as the existence of more than 1,000 planets around nearby stars and the bizarre remnants of dead stars that emit large quantities of x-rays in the Milky Way Galaxy. Scientists have determined that the universe is 13.7 billion years old and that it is populated with billions of galaxies, many of which have supermassive black holes at their centers. Research has produced strong evidence that the expansion of the universe is accelerating due to a mysterious and invisible "dark energy." Today, SAO scientists use advanced technologies to produce a coherent story of the cosmos from the Big Bang to the origins of life on Earth. MSI funds are used to meet this objective.

Three SAO projects are included in the FY 2015 MSI line item: the Greenland Telescope; the Submillimeter Telescope Array (SMA) on Mauna Kea, Hawaii; and instrumentation for the converted Multiple Mirror Telescope (MMT) at SAO's Fred L. Whipple Observatory at Mt. Hopkins, Arizona.

In addition, the President's Budget includes a separate, fully paid for Opportunity, Growth, and Security (OG&S) Initiative. This initiative provides additional discretionary investments in 2015 to spur economic progress, promote opportunity, and strengthen national security. This initiative fully supports the Institution's Strategic Plan and the four Grand Challenges in particular. Specifically, the OG&S Initiative supports additional funding for the Greenland telescope and the Giant Magellan Telescope. These research programs are administered by SAO and are key to the success of achieving the Smithsonian Institution's strategic goals and objectives. Details on these two programs are in a separate section of this budget submission (beginning on page 239 behind the OG&S tab).

MEANS AND STRATEGY

SAO's mission is to engage in astrophysical research and discovery. Observational astrophysics is the basic science responsible for the understanding of the universe and its components beyond Earth. SAO has made leading contributions to many key discoveries in astrophysics, including: 1) the remarkable discovery that the universe is accelerating; 2) the discovery of enormous patterns traced by galaxies in the universe; 3) the most compelling demonstration of the existence of supermassive black holes at the centers of most galaxies; 4) the discovery of very

high-energy gamma rays; 5) the most convincing observational evidence to date for the existence of dark matter; and 6) the discovery of planets orbiting other stars. SAO scientists contributed to these discoveries by using key facilities that enable observations in several different bands of the electromagnetic spectrum (i.e., the broad range of light that is emitted by objects in the universe). These contributions have put SAO in the forefront of this generation of astronomers and astrophysicists.

SAO's pre-eminence is underscored by the recognition that its researchers receive from leading scientific organizations. For instance, Dr. Margaret Geller received the 2014 Karl Schwarzschild Medal (after the previous year winning the 2013 Julius Edgar Lilienfeld Prize of the American Physical Society), which recognizes a lifetime of outstanding contributions to astrophysics. Dr. James Moran won the Grote Reber Prize for Radio Astronomy, the highest award for radio astronomy. Dr. David Latham was elected a Fellow of the American Academy of Arts and Sciences, and Dr. Scott Kenyon was elected a Fellow of the American Association for the Advancement of Science. These are only a few examples of the many awards received by SAO staff in FYs 2013 and FY 2014. Together with its partner, the Harvard College Observatory, SAO is the top choice of graduate- and postdoctoral-level young scientists. Federal support makes this continued leadership possible.

SAO's strength in observational astrophysics depends on its major ground-based facilities, the SMA and MMT, and the National Aeronautics and Space Administration's space-based facilities, including the Chandra X-ray Observatory, the Spitzer Space Telescope, and the Solar Dynamics Observatory. Access to both ground- and space-based observatories enables SAO scientists to conduct research that would be impossible with either type of observatory alone. SAO's future strength in ground-based observational astrophysics is critically dependent on equipping the SMA and MMT with powerful new instruments and establishing the new Greenland Telescope. This leadership depends on developing specialized instruments and facilities that do not now exist. A team of talented scientists and engineers must work together, over a period of several years, to bring these tools into being with support from multi-year MSI funding.

Greenland Telescope (\$500,000)

SAO, in partnership with the National Science Foundation (NSF) Polar Division, has identified a high, dry, northern site on the Greenland ice sheet as the ideal place for the Smithsonian's 12-meter radio antenna. The telescope will conduct single-dish terahertz observations and very long baseline observations with telescopes in Chile and the Smithsonian's submillimeter telescope array in Hawaii. The Smithsonian will provide the infrastructure and logistics support required, in coordination with NSF Polar Division, which is developing the new site near their present Summit Station to enable clean climate and related research. Specifically, MSI funds will be used to initiate the design of the cold-temperature instrumentation package for use in Greenland. The Smithsonian considers this an

excellent opportunity for a highly leveraged use of federal funds with high-value science returns on the investment. Additional support for this project is discussed in the Opportunity, Growth, and Security Initiative section of this budget submission (on page 239).

Submillimeter Telescope Array (\$1,718,000)

The SMA is an array of eight 6-meter-diameter antennas located on the summit of Mauna Kea, Hawaii, that functions as one giant telescope. It is a collaborative project of SAO and the Academia Sinica Institute of Astronomy and Astrophysics in Taiwan. With its unprecedented capability to observe at high resolution and high frequency, this facility enables scientists to study a wide range of astronomical phenomena, from the formation of the earliest galaxies in the universe to the formation of new planets around nearby stars.

The feasibility of conducting a particular scientific observation with the SMA is directly linked to instrument sensitivity. Given that the total collecting area of the array antennas is fixed, sensitivity is governed by three factors: the receiver noise, the instantaneous system bandwidth, and atmospheric transmission and stability.

Instrument sensitivity can be improved by adding duplicate sets of receivers similar to those currently in operation, increasing receiver bandwidth, or compensating for the effects of atmospheric instabilities to improve the signal and image quality. Thanks to recent developments in microwave technology, and innovative millimeter-wave technology developed at SAO, *we have increased the receiver bandwidth by a factor of four* over the original SMA instrument design. We are currently implementing the first phase of a second-generation spectrometer, which, when coupled with the broadband receivers, will enable 16 gigahertz of bandwidth to be processed in a single observation. This will increase the throughput and sensitivity of the SMA by *another factor of two*, and will enable spectral line surveys to be conducted on a wide variety of astronomical sources.

While the second-generation spectrometer will improve all types of astronomical observations with the SMA, the addition of yet more spectrometer capacity is required to fully exploit the increase in bandwidth offered by the new SMA receivers. The Institution is requesting funds in FY 2015 to complete the second tranche of the new spectrometer capability, which will result in a *further doubling* of the throughput of the SMA. The added spectrometer capability will also enable sensitive dual polarization measurements to be made with the SMA, provided that additional sets of receivers are incorporated. The Smithsonian therefore requests additional funds to fabricate receiver hardware to enable broadband, dual polarization observations. This upgrade will increase our understanding of the role that magnetic fields play in star formation, the formation of proto-planetary disks, and the accretion of matter onto black holes. The SMA is leading efforts in these areas, and even a two-fold increase in sensitivity to magnetic fields will significantly increase the population of observable sources.

In addition, the proposed upgrades will enable the SMA to become fully compatible with other facilities, which are themselves undergoing upgrades as part of the Event Horizon Telescope that has the long-term goal of imaging supermassive black holes and addressing fundamental questions of general relativity theory.

In FY 2015, MSI funds are requested to complete the bandwidth upgrades and install the dual polarization hardware.

Multiple Mirror Telescope (\$1,900,000)

The MMT, a joint project of SAO and the University of Arizona, dedicated in 1979, was originally made up of six identical 1.8-meter telescopes in a single altitude-azimuth (naval-gun-type) mount. The multiple-mirror design provided a state-of-the-art solution to the technological limitation in casting large mirrors at that time. Following advances in mirror-casting technology developed by the University of Arizona in the 1990s, SAO replaced the six smaller mirrors of the original MMT with a single mirror 6.5 meters in diameter. This large mirror more than doubled the light-gathering capability of the telescope, and a set of large corrector lenses increased its field of view 400 times.

The converted MMT is an extremely powerful telescope, but requires sophisticated instruments to analyze the light it collects. Binospec, an imaging spectrograph with dual 8'x15' fields of view, will replace two generations of earlier spectrographs and is expected to become the dominant instrument used during dark moon phases when the best observations can be made.

SAO expects Binospec to be a “game-changer,” enabling the MMT to compete on an equal footing with the largest telescopes in the world. Binospec’s huge light grasp will enable SAO scientists to carry out pioneering explorations of the structure and evolution of galaxies, the structure of the Milky Way, and the nature of dark matter and dark energy. Binospec’s nimbleness in moving between spectroscopy and imaging will enable Smithsonian scientists to lead in observing transient events like supernova explosions and gamma-ray bursts to map the geometry of the universe and accurately detect objects at the furthest reaches of the universe. The scientific opportunities opened by Binospec will help attract the critical next generation of astrophysicists who will exploit the power of the Giant Magellan Telescope for the next 20 to 30 years.

In FY 2015, MSI support will be used to complete the testing, integration, calibration, and commissioning of Binospec. With additional external support (in the form of committed National Science Foundation funds competed for in the Telescope System Instrumentation Program), Binospec will be shipped to the MMT for commissioning and its first research observations in FY 2015. SAO’s expertise in building large and powerful instruments is a crucial capability in the era of extremely large telescopes that is now upon us. Continued MSI funding will conduct this research and maintain the United States’ lead in this important scientific field.

Introduction, *Understanding and Sustaining a Biodiverse Planet*

The Smithsonian will use the resources of its scientific museums and research centers to significantly advance our knowledge and understanding of life on Earth, respond to the growing threat of environmental change, and sustain human well-being.

RESEARCH Goal: The Smithsonian advances and synthesizes knowledge that contributes to the survival of at-risk ecosystems.

ACCESS Goal: The Smithsonian inspires all generations of learners to turn knowledge of life on Earth into awareness and action aimed at improving sustainability.

UNITS primarily associated with this Grand Challenge:

- **National Museum of Natural History**
- **National Zoological Park**
- **Smithsonian Environmental Research Center**
- **Smithsonian Tropical Research Institute**

The President's Budget includes a separate, fully paid for \$56 billion Opportunity, Growth, and Security (OG&S) Initiative. This initiative provides additional discretionary investments in 2015 to spur economic progress, promote opportunity, and strengthen national security.

This initiative fully supports the Institution's Strategic Plan, specifically in the area of Excellent Research. MarineGEO is a specific research program that is key to the success of achieving the Smithsonian Institution's strategic goals and objectives. Details on this program are in a separate section of this budget submission (beginning on page 242 behind the OG&S tab).

NATIONAL MUSEUM OF NATURAL HISTORY

	APPLICATION OF OPERATING RESOURCES							
	FEDERAL APPROPRIATIONS		GENERAL TRUST		DONOR/SPONSOR DESIGNATED		GOV'T GRANTS & CONTRACTS	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2013 ENACTED	358	46,460	25	5,015	51	18,826	11	3,858
FY 2014 ENACTED	358	47,428	25	5,610	55	21,700	11	3,965
FY 2015 ESTIMATE	358	48,424	25	5,660	57	24,850	11	4,055

STRATEGIC GOALS: EXCELLENT RESEARCH; BROADENING ACCESS; REVITALIZING EDUCATION; STRENGTHENING COLLECTIONS; AND MISSION ENABLING

Federal Resource Summary by Performance Objective and Program Category

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Excellent Research						
Research						
Engage in research and discovery	123	16,483	123	16,759	0	276
Broadening Access						
Digitization and Web Support						
Provide improved digitization and Web support	4	471	4	479	0	8
Public Programs						
Provide reference services and information	14	1,661	14	1,689	0	28
Exhibitions						
Offer compelling, first-class exhibitions	50	6,713	50	7,026	0	313
Revitalizing Education						
Education						
Engage and inspire diverse audiences	30	3,385	30	3,442	0	57
Strengthening Collections						
Collections						
Improve the stewardship of the national collections	102	13,930	102	14,163	0	233
Mission Enabling						
Facilities						
Improve the overall cleanliness and efficient operation of Smithsonian facilities	4	802	4	816	0	14
Security and Safety						
Provide a safe and healthy environment	1	173	1	176	0	3
Information Technology						
Modernize the Institution's information technology systems and infrastructure	15	2,129	15	2,165	0	36

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
<i>Management Operations</i>						
Strengthen an institutional culture that is customer centered and results oriented	4	548	4	557	0	9
Enhance the reputation of the Smithsonian by maintaining good relations with the news media and with federal, state, and local governments	7	712	7	724	0	12
Ensure that the Smithsonian workforce is efficient, collaborative, committed, innovative, and diverse	3	324	3	329	0	5
Modernize the Institution's financial management and accounting operations	1	97	1	99	0	2
Total	358	47,428	358	48,424	0	996

BACKGROUND AND CONTEXT

The mission of the National Museum of Natural History (NMNH) is to inspire curiosity, discovery, and learning about nature and culture through outstanding research, collections, exhibitions, and education. Building upon its unique and vast collections and associated data, field research stations, specialized laboratories, and internationally recognized team of staff scientists, research associates, federal agency partners, and Fellows, the Museum provides fundamental research information to a wide array of constituencies ranging from federal agencies to the public. The Museum's particular strengths are in all four of the following Smithsonian Grand Challenges: Unlocking the Mysteries of the Universe; Understanding and Sustaining a Biodiverse Planet; Valuing World Cultures; and Understanding the American Experience. The Museum's research provides new understanding and relevance to broader national and international scientific agendas, looking at such important societal issues as global change, biodiversity, cultural conflict, and natural hazards.

The Museum's stewardship of its collections, making up more than 127 million natural history specimens and human artifacts, is at the core of its mission. This set of collections, the largest of its kind, is an unparalleled resource for collections-based research on the diversity of life on Earth, including plants, animals, fossils, minerals, and human activity. These anthropological, biological, and geological specimens and objects are the foundation for all of the Museum's scientific products. With their unparalleled spatial breadth and temporal depth, the collections promote analyses and interpretations that enable scientists to connect observations of contemporary phenomena with the past and around the world so that we can better understand our planet and the effect of human activities on it. The Museum's collections capture the imagination and stimulate the next generation of scientists, and are important for maintaining the Institution's intellectual infrastructure and the Administration's continuing goal of competitiveness in international science and application of scientific knowledge. NMNH collections and their attendant information are a dynamic resource used by researchers, educators, and policy makers worldwide.

In addition, NMNH's collections serve as critical reference materials for U.S. Government agencies. These resources are actively and collaboratively used by staff members of the Departments of Defense, Commerce, Agriculture, and Interior, who are housed in NMNH facilities. For example, tens of thousands of insects urgently requiring identification are sent to NMNH from ports of entry each year. Scientists at the U.S. Department of Agriculture and NMNH consult the collections and rapidly provide identifications to border control agencies so that U.S. agricultural and economic interests are kept secure from damage by potential invasive species. The NMNH bird collections provide answers to the Federal Aviation Administration (FAA) and the U.S. Department of Defense, revealing the species of birds that damage aircraft, and leading to improved habitat control around airports and improved aircraft and engine design.

In addition, the National Cancer Institute relies upon NMNH as a trusted repository for plant specimens that must be kept as vouchers for pharmacological and biomolecular research. Similarly, the U.S. Department of the Interior Bureau of Ocean Energy Management relies on the NMNH as a trusted repository for the ecologically significant invertebrate animals it collects in the course of its research. Meteorites collected from Antarctica are deposited at NMNH by the Johnson Space Center and the National Aeronautics and Space Administration (NASA). One recent addition to the collections included a Martian meteorite that fell to Earth in the desert of southern Morocco; it was the first Martian meteorite to fall since 1962 and is only the fourth known.

In the area of law enforcement, the Federal Bureau of Investigation benefits from the identifications and analyses conducted by experts in the Department of Anthropology, who consult the human skeletal collections when providing answers about the remains of crime victims. In the area of public health, analyses of the collections have provided vital clues regarding the spread of H5N1, the Avian Flu virus, and the etiology of past influenza epidemics.

NMNH's first-class research supports its exhibitions and educational outreach. As one of the most visited museums in the world, NMNH provides diverse public audiences with presentations on every aspect of life on Earth. In FY 2013, the Museum hosted more than eight million visitors, and, through many affiliations and partnerships, NMNH takes its science, exhibitions, and public programs to other museums and non-traditional exhibition venues, such as libraries, schools, and universities across the country. With a growing network of interactive websites, distance-learning experiences, social media and software applications (apps), the Museum is transforming itself into a true electronic classroom, which is potentially accessible to everyone — free of charge.

The budget request includes an increase of \$996,000. The increase includes \$796,000 for necessary pay and other related salary costs for existing staff funded under this line item and a program increase of \$200,000 for exhibits maintenance.

MEANS AND STRATEGY

To achieve the strategic goals of Broadening Access and Revitalizing Education, funding will be used to maintain and upgrade permanent exhibitions, replace outdated exhibits with multi-disciplinary, interactive exhibitions on the Mall and in other venues through traveling exhibits, and to conduct more electronic outreach across the country. Both the permanent and traveling exhibitions reflect best practices in visitor experience upgrades and informal science education, and these exhibits are developed as part of an array of public outreach activities. In FY 2013, NMNH welcomed more than 8 million visitors, and recent evaluations show that exhibitions now engage visitors for longer periods and in more dynamic ways than they did 10 years ago. The effectiveness of NMNH exhibitions and presentations can be seen in the excitement they generate and their popularity with family audiences.

Having completed the planning and design phase, FY 2015 will mark the start of the actual renovation of the 30,000-square-foot Fossil Halls in preparation for the *Deep Time* exhibit scheduled to open in 2019. This project has required removing and conserving about 2,000 paleontological collections. The specimens are now being remounted for display when the exhibit opens. In addition to these major projects, donated funding supports scientific updates and visitor experience upgrades throughout the Museum's 300,000 square feet of public space.

In December 2013, the Museum opened Q?rius, a new STEM learning facility that brings the NMNH Research and Collections assets to the forefront allowing for public participation on site, online and through classrooms.

In FY 2014, the Museum opened five new temporary exhibits, thanks to donor support and some creative partnerships. Temporary exhibitions included *Unintended Journeys* (February 2014), which tells the story of migrations of people around the world who are forced by environmental disasters to relocate. Featuring photographs from professional photographers, stories include the tsunami in Japan, Hurricane Katrina in New Orleans and an earthquake in Haiti. This project was funded by the Windland Smith Rice Nature's Best Photography fund. *Beyond Bollywood: Indian Americans Shape the Nation* (February 2014) explores the heritage, daily experience and numerous, diverse contributions that Indian immigrants and Indian Americans have made to shaping the United States. This exhibition is part of a collaboration with the Smithsonian's Asian Pacific American Center, which provided funding for this exhibition. The Smithsonian Traveling Exhibition Service (SITES) will take the exhibition on tour for four years after its run of 20 months at NMNH. The *Wilderness Forever* photography show (September 2014) commemorates the 50th anniversary of the passage of the Wilderness Act and features approximately 50 images taken by people around the country. Selected through a nationwide photography contest developed specifically for this purpose, the images feature wilderness landscapes and wildlife from around the United States. This exhibition is funded through donations from the Wilderness 50

Coalition, made up of non-Governmental organizations and Government agencies with a commitment to celebrating and preserving American wilderness. In addition, several temporary exhibits will supplement our dinosaur programming including an augmented reality dinosaur exhibit, a display of how NMNH is processing its new *Tyrannosaurus Rex* specimen, and several smaller displays.

One temporary exhibit is planned for FY 2015. *The Last American Dinosaurs* (November 2014) will introduce visitors to the major themes of our new *Deep Time* exhibition, provide our team with a venue to test exhibition concepts and strategies, and allow visitors continued access to the FossilLab where paleontological experts prepare specimens for research and display. Funded by a gift from David H. Koch, and supplemented with federal funds, this exhibition will provide continued access to dinosaur collections while the main halls are under renovation.

In FY 2015, NMNH will continue implementing its public engagement plan to coordinate and integrate its many outreach efforts. This plan focuses the Museum's permanent and temporary exhibitions, educational programs, and Web outreach on the major research themes identified in the Science Strategic Plan: understanding the formation of the Earth and similar planets, discovering and understanding life's diversity, and exploring human diversity and cultural change.

In FY 2015, the Museum's fundamental commitment to education and outreach will be further deepened and expanded in support of the Smithsonian's strategic goal of Revitalizing Education. The Museum will build on its cutting-edge research, vast collections, and exciting exhibitions such as the *Sant Ocean Hall*, *David H. Koch Hall of Human Origins*, *Race: Are We So Different?*, and *Butterflies + Plants: Partners in Evolution*. In addition, the Museum's new STEM education and experience center, Q²rius, which brings out NMNH science experts and collections from behind the scenes and provides opportunities to engage with scientists, their research, collections and research-grade scientific equipment. The Museum will reach out to a growing local, national, and international audience, including children and families, students and teachers, adults, and especially teen-agers who visit the Museum on the Mall or its extensive presence online. Outreach activities will include traveling exhibitions, distance learning, and in-depth, online resources, including the Ocean Portal, Human Origins website, Q²rius.si.edu and digitized collections, as well as long-standing programs of lectures, films, and teacher education. These programs and resources will inspire citizens by making them aware of current issues related to the natural and cultural world, helping them understand their role in addressing those issues, and enabling them to participate in experiences that inspire stewardship, conservation, and protection of natural and cultural diversity. In addition, there is a focused effort to build new youth audiences and increase youth participation in a continuum of opportunities that inspire, nurture, grow and diversify the next generation of STEM professionals. These efforts will serve

visitors to our nation's capital and, through innovations in educational technology, tens of millions of people around the world who cannot visit the Museum in person. NMNH will continue to evaluate the effectiveness and impact of its public education and outreach efforts with focused audience research and evaluation.

Also in FY 2015, NMNH will continue a rich array of monthly on-site and online public programs to complement the Museum's exhibitions, including the *Hall of Human Origins* and *Sant Ocean Hall*, and will present programs locally and nationally for the *Human Genome* exhibition and the new paleontology temporary exhibition. These programs will include intergenerational programming, public lectures, hands-on lab experiences and additional events for local and national audiences. NMNH will continue to prepare and disseminate new educational resources for the public, and for students and teachers, to support major exhibitions. In particular, NMNH will focus its science programs on greater outreach to the public and on increased public access to the collections through Web-based resources and use of distance-learning technologies. This outreach includes maintaining engagement through the Ocean Portal and the Human Origins interactive educational websites, beginning development on a new paleobiology website, and continuing to incorporate evolving social media. NMNH will continue to increase access to exhibits, research, and collections for people with disabilities as well as economically disadvantaged students. In addition, NMNH will continue to expand its professional volunteer community to enrich programming at the Museum. New media tools and new partnerships and services will be used to reach traditionally underserved audiences.

A critical element of NMNH's plans for FY 2015 is the Museum's commitment to the stewardship of its federal scientific collections in support of the Smithsonian's strategic goal of Strengthening Collections. As was underscored by a recent survey of federal collections, these resources play an important role in public health and safety, homeland security, trade and economic development, medical research, and environmental monitoring. They also provide the foundation for the Museum's diverse research, exhibits, and public outreach programs. NMNH will continue to strengthen its commitment to cutting-edge research and state-of-the-art stewardship of the collections, in partnership with affiliated federal agencies such as the Departments of Defense, Commerce, Agriculture, and the Interior. Federal funding is the linchpin for maintaining and preserving these priceless collections and their valuable information for future generations, while also supporting their use for critical ongoing research that, for example, facilitates recovery efforts after natural disasters such as volcanic eruptions and the associated loss of biodiversity. The breadth of NMNH research and its collections of biological, geological, and anthropological objects foster an interdisciplinary environment that attracts other academic institutions, foreign researchers, and national and international policy makers.

Furthermore, the NMNH has a long history of training future scientists here and abroad to examine and monitor biodiversity in their own countries,

among their other research endeavors, which also strengthens the NMNH collections and connections with these countries. The NMNH is committed to training future generations of scientists by increasing the number of its postdoctoral Fellowship awards and providing an entry-level research experience for the most talented undergraduates in the Earth and life sciences as well as anthropology. Collaboration with foreign students and colleagues will continue to be emphasized to broaden the international science network.

In FY 2015, the NMNH will continue collections preservation and access projects related to strategic initiatives in preserving indigenous languages through preservation of manuscripts, recordings and moving images, and photographs; preserving and digitizing fossil collections and associated paper records; and preserving biological specimens at ultra-cold temperatures to document biodiversity. In addition to these new strategic initiatives, other high-priority collections improvement projects identified through the comprehensive, quantitative assessment of the collections will continue. These include the re-housing of large collections of marine invertebrates; integration of DNA sequences generated from NMNH's research activities into the biorepository; inventory of selected ethnographic collections; re-housing of geological collections in need of microclimates to prevent deterioration; securing vertebrate collections cabinetry; improving mitigation and prevention strategies for management of pests, re-housing and organization of unique collections of slide-mounted microscopic invertebrates; re-housing and creation of digital surrogates of selected insect collections; and recuration and arrangement of fossil plant and animal collections.

The NMNH will continue to significantly increase the number of specimen records in its electronic databases for scientists, the Research and Collections Information System, or RCIS, and to expand the availability of these valuable and unique assets via the Internet to worldwide researchers, policy makers, and the public. NMNH will continue digitization of selected plant, insect, and artifact collections.

To achieve the Smithsonian's goal of Excellent Research in FY 2015, NMNH will continue to implement its five-year strategic plan that is linked to the Smithsonian Strategic Plan, and focus on initiatives related to new insights in geology and mineralogy, paleobiology, systematics, genomics, evolutionary biology, ecology and its relationship to biodiversity, and anthropology. Increasing the number of digitized specimens will enable researchers to leverage the knowledge inherent in the diverse collections to address many of today's pressing issues regarding invasive species, disease vectors, and the impact of humans on biodiversity and climate. As a result, NMNH publications will have a more integrated quality, providing insights from all viewpoints of the Museum on pressing national and international topics.

The NMNH's strengths in research have been diversified and infused with some exciting hires in the past few years. Areas focused on, which also link directly to the Smithsonian's Grand Challenge areas of research, are as follows: maintenance, documentation, and analysis of indigenous languages of Mesoamerica; the analysis of microbial production of certain minerals in polluted environments to identify remediation strategies; the evolution of pelagic invertebrates that swim up off the sea floor, as opposed to their ancestors that actually lived on the sea floor; chemistry at the core-mantle boundary of our planet and its influence on geochemistry at the Earth's surface; discovery of unknown mammal species; the evolutionary and ecological histories of some four-limbed marine tetrapods that made the great transition from life on land to sea; and the paleoecology of whales and dolphins.

The opening of three laboratories at NMNH will facilitate groundbreaking research in the coming years. These labs include one with enhanced genomic capabilities; an experimental volcanology lab that can simulate some types of volcanic eruptions; and a geomicrobiology lab that can demonstrate the impact of microorganisms on geological processes.

Highlights of research that NMNH scientists will continue in FY 2015 include: spacecraft-based research that has shown the planet Mercury is rich in iron and titanium oxides, suggesting that Mercury has a more complex geologic history than was previously thought; international fieldwork that yields discoveries like the first new species of mammalian carnivore identified in 35 years, the olinguito (a member of the raccoon family); microfossil research demonstrating that Neanderthals consumed both plants and cooked food; paleo-archeological research at Miles Point on the Chesapeake Bay Peninsula, demonstrating that the area was occupied more than 5,000 years before the presently accepted date for the human occupation of the Americas; study of the evolution and genetic diversity of vertebrates, which resulted in the discovery of a living fossil eel; work in ocean environments and studies on current circulation, focusing on past intervals and greenhouse climate; studies of the large-scale evolutionary relationships among birds, insects, and plants as part of collaborative research projects in the National Science Foundation (NSF)-funded *Tree of Life* initiative, and, in particular, studies of the large-scale evolutionary relationships among Lepidoptera (moths and butterflies), spiders, and ants; archaeological research that can yield surprising results such as the confirmation of cannibalism in early Jamestown; research on ecological recoveries from mass extinctions and the innovations in the history of life, with special emphasis on the Cambrian explosion, the Permo-Triassic, and the Paleogene eras (recent research in this area makes a case for a new form of developmental regulation in how animals diversified over time); research as part of the Endangered Language Program, which will preserve and make accessible through digitization more than 11,400 sound recordings of endangered languages in the National Anthropological Archives and Human Studies Film Archives, many of which currently exist only

on endangered recording media; and NSF-funded research into the spread of the earliest humans from Africa and Asia.

In addition, the NMNH will continue its work on the scientific effort started in 2007, the *Encyclopedia of Life*, which has the simple and compelling mission to gather and share knowledge about Earth's 1.9 million known living species and make it freely accessible online to anyone, anywhere in the world. The NMNH hosts the Secretariat (administrative and leadership hub) for the *Encyclopedia of Life* (EOL), which is funded through two foundation leadership grants as well as base federal funding. This Web-based, online database is expected to encompass these 1.9 million known species of animals, plants, and other life forms, and should be complete in three more years. The database will be configurable for all types of audiences, from students and scientists to policy makers and the general public. The most recent innovation involved translating the EOL for a more international audience and offering EOL in Spanish and Arabic in addition to English. The NMNH is uniquely positioned to contribute to this global effort of documenting every known species currently living on Earth, because of its extensive and broad collections and scientific staff who provide the context for these specimens. The specimens require the scientific expertise of NMNH staff to provide related ecological and evolutionary information.

In FY 2015, the NMNH will continue to support the strategic goal of Strengthening Collections by providing maintenance for mobile shelving, nitrogen cabinets, and freezers at the state-of-the-art research, conservation, and collection storage facility at the Museum Support Center (MSC) in Suitland, Maryland, as well as by relocating tissue collections from various sites into the Bio-Repository at MSC, and assisting in remediating collections damaged in the 2011 earthquake. The Museum will continue renovating major building systems and improving security in the building, resulting in better collections housing, upgraded laboratory facilities for researchers, and more useful public spaces for exhibitions and educational opportunities. Management will continue to support a robust and reliable information technology infrastructure for new online facilities, and to broaden access to the Museum's collections and research through Web programs which support NMNH-specific electronic outreach goals. This focus on Broadening Access helps make collections data easily accessible via the Internet, maintain important collaborative Web projects such as the Ocean Portal and the Human Origins websites, and enables the Museum to launch new websites and update them with current information in a timely manner.

EXPLANATION OF CHANGE

The budget estimate includes an increase of \$996,000. The request includes \$796,000 for necessary pay and other related salary costs for existing staff, and a program increase of \$200,000 for exhibits maintenance. The increase for exhibit maintenance is as follows:

- (+\$200,000) The requested funding increase will support the Museum's continuing efforts to address the exhibits maintenance backlog and maintain existing and new exhibits at a standard that reflects a world-class scientific institution. This budget will ensure that the Museum's exhibits are clean and in good repair, and that the media components are fully operational and up to date. Priority will be given to providing energy-efficient lighting and updating the technological components in computerized interactive exhibits which, in many cases, have become obsolete. With this support, the NMNH will address wear and tear on its public spaces caused by hosting more than seven million visitors each year. The Museum will replace approximately 15,000 square feet of worn and dirty carpet, which covers two of NMNH's 30 exhibit halls. In addition, the Museum will improve exhibit lighting in at least two halls by replacing outdated lighting tracks and fixtures, using longer lasting LED fixtures to reduce manpower and utility costs. The NMNH will also replace worn and faded graphics, nonfunctioning monitors and playback devices, and stained and unattractive cabinet and display finishes where needed.

NONAPPROPRIATED RESOURCES — General trust funds support salaries and benefits of administrative personnel, development and business activities, and other program-related costs. The Museum raises funds from private sources to support research, exhibitions, public programs, and administrative functions. This includes securing donations from special events to promote new exhibitions and educational initiatives, and public outreach. Donor/sponsor-designated funds are critical to support exhibition hall renovation, such as the major gifts that are helping to fund an ongoing major renovation of the *Fossil Hall*, the Museum's *Human Origins Hall*, and Fellowships for the *Encyclopedia of Life* project, through which a freely accessible webpage is being created for each of the Earth's 1.9 million known species, and Q?rius, the new STEM education and experience center. In addition, significant endowment gifts support internships and Fellowships which will introduce more students to the natural sciences, as well as help the Museum maintain and update its educational programs for the *Ocean Hall*, and study of human origins. Other examples include the Johnson and Hunterdon endowments, which provide operational support for the Smithsonian Marine Station at Fort Pierce, Florida, in addition to supplying a significant portion of the base funds needed to run the NMNH research station at Carrie Bow Cay in Belize. The endowments also support research in the biodiversity, life histories, and ecology of marine organisms in the coastal waters of Florida by almost 50 scientists each year, including staff from NMNH, the Smithsonian Environmental Research Center, the Smithsonian Tropical Research Institute, and collaborators from universities nationwide.

The Museum continues to receive grants and contracts from both non-Government and Government institutions. The NMNH was awarded grants and contracts totaling \$11.6 million in FY 2013 (and anticipates awards totaling approximately \$5 million in FY 2014). These funds support both cutting-edge

research and exhibitions, and demonstrate international collaboration in addition to cross-agency collaboration on shared projects and issues. For example, researchers in the Departments of Mineral Sciences and Paleobiology continue to receive significant grants from NASA and the NASA Jet Propulsion Laboratory for various research projects. Two significant foundation grants are going to preserve recordings and manuscripts of languages no longer actively spoken in the United States and other parts of the world. The remaining community members rely heavily on NMNH collections to help revive their dying languages. The U.S. Air Force and the U.S. Department of Transportation continue to support the bird/aircraft strike hazard program that provides critical data to the FAA and other agencies on the types of birds that can get caught in airplane engines. Funds were provided to continue work on the Consortium for the Barcode of Life, an international initiative devoted to developing DNA barcoding as a global standard for the identification of biological species. In addition, NMNH has received funds from a health research company to analyze specimens related to malaria outbreaks in Brazil. Also, the U.S. Department of Health and Human Services has provided funding to identify invasive fish species, and the U.S. Park Service is supporting indigenous language documentation in the Bering Strait region of Alaska.

The effects of environmental change are documented, monitored, and assessed in various ways. One NMNH researcher and his colleagues at George Mason University received an NSF grant to develop new computer models which will simulate human societies and analyze their responses to climate change. The NMNH also continues to receive funding from the National Cancer Institute to inventory important plant voucher and invertebrate specimens. Finally, NMNH also receives funds from the U.S. Department of Defense to continue environmental monitoring in and around the St. Lucie Estuary and the Southern Indian River Lagoon in Florida, an area rich in biological diversity.

The NSF also continues to support the NMNH's leadership in training the next generation of scientists, with funding to strengthen the Natural History Research Experience's Program through a multiple-year grant of nearly \$1 million. The 10-week internship program was implemented with seed money from NMNH endowments in 2010, and now has solid funding through FY 2015.

As part of the Smithsonian's National Campaign, the Museum is committed to raising private funds to support the strategic priorities outlined in the NMNH strategic plan for 2010–2015: *Knowledge for a Sustainable Future*.

NATIONAL ZOOLOGICAL PARK

	APPLICATION OF OPERATING RESOURCES							
	FEDERAL APPROPRIATIONS		GENERAL TRUST		DONOR/SPONSOR DESIGNATED		GOV'T GRANTS & CONTRACTS	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2013 ENACTED	218	22,652	26	3,896	20	6,998	6	1,363
FY 2014 ENACTED	224	24,533	28	4,000	20	7,000	6	1,363
FY 2015 ESTIMATE	224	25,641	30	5,000	20	7,000	6	1,363

**STRATEGIC GOALS: EXCELLENT RESEARCH; BROADENING ACCESS;
REVITALIZING EDUCATION; STRENGTHENING COLLECTIONS; AND
MISSION ENABLING**

Federal Resource Summary by Performance Objective and Program Category

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Excellent Research						
<i>Research</i>						
Engage in research and discovery	30	2,586	30	2,641	0	55
Broadening Access						
<i>Exhibitions</i>						
Offer compelling, first-class exhibitions	5	757	5	766	0	9
Revitalizing Education						
<i>Education</i>						
Engage and inspire diverse audiences	2	259	2	263	0	4
Strengthening Collections						
<i>Collections</i>						
Improve the stewardship of the national collections	165	17,598	165	18,599	0	1,001
Mission Enabling						
<i>Security and Safety</i>						
Provide world-class protection for Smithsonian facilities, collections, staff, visitors, and volunteers	5	793	5	802	0	9
<i>Information Technology</i>						
Modernize the Institution's information technology systems and infrastructure	4	816	4	823	0	7

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Management Operations						
Strengthen an institutional culture that is customer centered and results oriented	9	1,126	9	1,142	0	16
Ensure that the Smithsonian workforce is efficient, collaborative, committed, innovative, and diverse	0	116	0	116	0	0
Enhance the reputation of the Smithsonian by maintaining good relations with the news media and with federal, state, and local governments	4	482	4	489	0	7
Total	224	24,533	224	25,641	0	1,108

BACKGROUND AND CONTEXT

In FY 2013, the Smithsonian National Zoological Park (NZIP) completed an exciting, five-year strategic plan that included input from many parties both inside and outside the Zoo. The strategic plan continues to be our guide and states that:

- Our mission is to provide engaging experiences with animals and create and share knowledge to save wildlife and habitats.
- Our vision is to save species from extinction.

Using the strategic plan for direction, the Zoo's focus in FY 2015 will be:

Ensuring the Survival of Species at Risk

Much of NZIP's focus is on endangered species. For example, highlighting a species' conservation status is now a part of all of our new exhibits. On a more detailed level, NZIP's animal care staff and researchers at the Zoo's Conservation Biology Institute (SCBI) work to ensure the future of endangered species both in captive zoo populations and in their home countries. The National Zoo is a leader in understanding the reproductive and animal husbandry needs of animals in zoos, and in understanding how to ensure the safety and security of both the animals and the collection in the process.

Saving species from extinction will require new approaches and technologies. In FY 2013, NZIP produced the first-ever births of a Przewalski's horse and a Persian Onager by artificial insemination, and achieved the first success at freezing and reviving the algae within coral, called zooxanthellae — cells that are potentially a key component to improving thermal tolerance for coral around the world. Many of these species have sensitive environmental needs and, in FY 2013, NZIP developed a wildlife premium mechanism for the valuation of forests that contain wildlife (not just valuing carbon).

Throughout FY 2014, NZIP will be reviewing its collection to ensure that it is prioritized to meet the challenges of saving species from extinction. In FY 2014, NZIP will welcome three new Asian elephants from the Calgary Zoo. Also in

FY 2014, the NZP's elephant Shanti will begin wearing a radio collar to test whether tracking devices alter behavior or stress levels.

Expanding Our Reach and Impact through the Guest Experience

Saving species from extinction requires resources beyond the scientific community alone. Each visitor welcomed to Rock Creek Park has an opportunity to strengthen their understanding of the wonder of biodiversity and the precariousness of the status of many endangered species. Toward that end, the NZP is committed to ensuring a vibrant and changing animal collection is the key to a quality visit. The past two years, FYs 2012 and 2013, have seen increased visitation over FY 2011, and in FY 2014 visitation may be even higher.

The addition of the three Asian elephants, as well as a fourth addition to the herd — Bozie — who arrived in FY 2013, fosters learning about this significant species. Another visitor favorite in FY 2014 is likely to be the giant panda cub Bao Bao. In the less than one month that she has been on exhibit, she has drawn an estimated 50,000 visitors and 11.9 million visits via the webcams.

Two other approaches to increasing visitation involve expanding Zoolights — which provides a peek into animal life after hours — and increasing the number of animal care talks and demonstrations — a popular and effective method to connect the conservation message with the public.

Sustainability

Sustainability is a core tenet of NZP's strategic plan. In FY 2013, NZP concentrated on reducing water consumption — roughly 50 percent of the National Zoo's utilities bill. This was achieved by identifying and fixing leaks in old plumbing systems throughout the Zoo. Further water savings in FY 2014 will be made possible by the new *American Trail* closed-loop life-support system for the seal and sea lion exhibit. Another focus was on stormwater management. Permeable pavers were used in high-traffic and high-visibility locations such as the popular Speedwell Conservation Carousel and the Pachyderm Plaza.

The FY 2015 budget request includes an increase of \$1,108,000. The increase includes \$408,000 for necessary pay and other related salary costs for existing staff funded under this line item and a programmatic increase of \$700,000 to support the welfare and care of the animal collection.

MEANS AND STRATEGY

NZP welcomes more than two million visitors per year and many times more via its website. The key to a successful zoo is managing change, because, by their very nature, zoos are not stagnant environments. The natural cycle of births and deaths ensures that there is always something new to inspire and engage the public. For example, in FY 2014, NZP visitors will relish getting acquainted with Bao Bao — the new giant panda cub, as well as the new sloth

bear cub, the Andean bear cubs, new tiger cubs, and new lion cubs, in addition to all the other new birds and reptiles. Furthermore, in FY 2014, the Zoo will bring back a bison exhibit in celebration of the 125th anniversary of NZP (the bison was the first animal in the Zoo collection). The first full year of *American Trail* operations have allowed visitors to learn about animals native to the United States, and the completion of the Elephant Community Center has allowed Zoo visitors to enjoy getting to know Bozie the elephant.

American Trail and the newly opened Elephant Community Center are important components of the 2008 Comprehensive Facilities Master Plan. In this plan, NZP proposed to shutter certain existing exhibits, renovate others, and bring new exhibits online. In FY 2014, the Zoo will study its older exhibits — focusing on the more costly, less efficient and less impactful animal exhibits, in order to develop a schedule of exhibit changes in accordance with the Master Plan.

The next major renovation effort will focus on the Zoo's Bird House. As part of a multi-year effort, FY 2015 will see the completion of the concepts, the development of schematics for both the facility and exhibit interpretation, and the evolution of the animal collection plan (both pre- and post-construction).

FY 2014 is also the second year of operations for the Smithsonian-Mason School of Conservation (SMSC) at the Smithsonian's Front Royal facility. Currently, there are two distinct 16-credit programs: "Conservation, Biodiversity and Society," and "Wildlife Ecology and Conservation," each offering a set of five integrated courses that include hands-on experience as well as classes focusing on conservation theory and applications. SMSC graduate courses offer in-depth explorations of advanced and highly specialized topics in applied conservation studies on a diverse selection of topics. The courses focus on biodiversity conservation and lessons range from adaptive management, statistics in ecology and conservation to non-invasive genetic techniques. Finally, SMSC professional training courses offer in-depth explorations of highly specialized topics in biodiversity conservation. Specific courses cover a diverse selection of topics ranging from effective conservation leadership and applied analysis of climate change to designing and implementing a biodiversity action plan.

In recognition of the strategic importance of the NZP-SCBI Front Royal facility, it was selected as a National Ecological Observatory Network (NEON) site. NEON is a major, National Science Foundation (NSF) funded program that will gather long-term comparative physical (oxygen, carbon dioxide, etc. water flows, soil nutrients etc.) and biological data (species composition, distribution, changes over time) on a real-time basis (24/7) across more than 20 eco-regions within the United States. It will provide important information for understanding and sustaining natural systems, their components, and the ecological services they provide. The SCBI facility and NEON program complement the Smithsonian's Global Earth Observatory (SIGEO) project — which began as a project to understand tropical forest ecosystems at the Smithsonian Tropical

Research Institute. Consequently, NZP scientists and SMSC students will be able to address unique questions while training the next generation of environmental and conservation scientists. FY 2014 will mark the completion of NZP's participation in developing the SIGEO plot.

EXPLANATION OF CHANGE

The FY 2015 budget request includes an increase of \$1,108,000. The increase includes \$408,000 for necessary pay and other related salary costs for existing staff funded under this line item and a programmatic increase of \$700,000 as detailed below:

Animal Welfare

- (+\$500,000) — This request would provide the maintenance support for NZP's equipment to care for the animals. The additional funding will also enable the replacement of research equipment that will allow NZP to stay on top of ever-changing technological changes.

Providing excellence in animal health care is one of NZP's highest priorities. Just as new technologies, equipment, and studies enhance human health care, similar strides are being made on the veterinary front. However, just as with human care, these new veterinary advances are often costly and rely heavily on clinical equipment. In the past, when NZP's clinical equipment failed, funding was provided through the research equipment pool. Today, NZP's clinical equipment would greatly benefit from an upgrade. Examples such as freezers purchased in 2007, a centrifuge from 1988, an autoclave from 2006, and a no-longer-supported x-ray machine point to a need for increased operational support for the equipment necessary to provide high-quality animal care. Further the wear and tear inflicted by the animals themselves shortens the lifespan of some of the equipment used daily such as scales, animal restraint devices, and staff radio equipment. With well more than \$3 million in fixed assets devoted to clinical equipment for veterinary and husbandry purposes, NZP seeks \$500,000 in funding for yearly equipment needs to enhance the quality care Zoo staff can provide.

- (+\$200,000) — Changes in the NZP supply chain (the beef-based carnivore supplier stopped manufacturing animal food in December 2013); expanding collection (new tiger, lion, and cheetah cubs); as well as general increases in fossil fuel and raw ingredient costs contribute to the escalation of required resources. The requested increase supports animal feed costs that are continually rising due to competition between animal and human food markets. The NZP expects prices to rise between 5–10 percent in the near future and this will impact the total amount required to feed the Zoo collection.

For many years, NZP has led the way in methods to control zoo food costs, and was one of the first zoos to centralize commissary functions, which allowed savings through more cost-effective purchasing. More recently, cost control measures have been more modest, such as reducing the use of shavings as bedding (especially at *Kids Farm*), smart purchasing by monitoring the futures market, breeding earthworms and other small food items. However, these savings have been modest and insufficient to offset the expected cost increases.

NONAPPROPRIATED RESOURCES — General trust funds support salaries and benefits of the director and general operational requirements for adequate animal care, professional training in conservation sciences, and animal acquisitions. Donor/sponsor-designated funds support the costs related to specific programs and projects, including field and captive studies on Sahelo-Saharan antelopes, amphibians, cheetahs, giant pandas, Asian elephants, tigers and clouded leopards; ecological studies on migratory birds; and the documentation and monitoring of biodiversity and habitat quality in selected sites around the world. A large percentage of these funds supplement federal funding for renovating and modernizing the Zoo. Private donations for Asia Trail II, *Elephant Trails*, contribute to a portion of construction costs and support all exhibit interpretive design and implementation. Government grants and contracts support a wide array of scientific studies on the biology and habitats of endangered and threatened species. NZP education, visitor services, and volunteer programs are funded almost exclusively by the Friends of the National Zoo (FONZ).

SMITHSONIAN ENVIRONMENTAL RESEARCH CENTER

	APPLICATION OF OPERATING RESOURCES							
	FEDERAL APPROPRIATIONS		GENERAL TRUST		DONOR/SPONSOR DESIGNATED		GOV'T GRANTS & CONTRACTS	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2013 ENACTED	32	3,737	9	825	8	1,538	40	5,463
FY 2014 ENACTED	32	3,873	9	990	7	1,000	40	5,600
FY 2015 ESTIMATE	32	3,945	9	900	7	1,000	40	4,800

STRATEGIC GOALS: EXCELLENT RESEARCH; REVITALIZING EDUCATION; AND MISSION ENABLING

Federal Resource Summary by Performance Objective and Program Category

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Excellent Research						
<i>Research</i>						
Engage in research and discovery	24	3,232	24	3,287	0	55
Revitalizing Education						
<i>Education</i>						
Engage and inspire diverse audiences	1	111	1	113	0	2
Mission Enabling						
<i>Management Operations</i>						
Strengthen an institutional culture that is customer centered and results oriented	4	303	4	312	0	9
Modernize the Institution's financial management and accounting operations	3	227	3	233	0	6
Total	32	3,873	32	3,945	0	72

BACKGROUND AND CONTEXT

The Smithsonian Environmental Research Center (SERC) is a leader in research on land and water ecosystems in the coastal zone. SERC's innovative research and unique setting advance basic environmental science in the zone where most of the world's population lives, and provides society with the knowledge to solve the environmental challenges of the 21st century.

Research and discovery remain the core activities at SERC. Scientists use the unique site on the shore of the Chesapeake Bay, and other sites, including the Smithsonian Marine Science Network, to investigate the ecological

interconnections of aquatic, terrestrial, and atmospheric components of complex landscapes, with comparative studies on regional, continental, and global scales.

SERC achieves the goal of Revitalizing Education by engaging and inspiring diverse audiences through school-based programs, teacher training, and public outreach. SERC programs serve more than 12,000 school children and public visitors annually.

SERC maintains a vigorous professional training program dedicated to producing the next generation of scientists. Through its efforts to achieve extramural funding and establish external partnerships, SERC hosts a large number of undergraduate interns, graduate students, postdoctoral Fellows and visiting scientists, with a particular success in reaching candidates from underserved communities.

SERC will continue to update and streamline management systems and functions, and advance construction of its Facilities Master Plan. In FY 2015, SERC will complete the renovation of the Mathias Laboratory, which includes replacing many temporary trailers on the campus, thus helping to ensure the safety and protection of staff, Fellows, volunteers, and visitors. In addition, the Center will begin making improvements to the one-mile entrance road, which is necessary for the safe travel of staff and visitors in passenger vehicles and school buses.

The budget estimate includes an increase of \$72,000 for necessary pay and other related salary costs for existing staff funded under this line item.

MEANS AND STRATEGY

SERC has an advantage in furthering its research goals and priorities by operating its 2,650-acre site on the Chesapeake Bay. Using the unique assemblage of streams, shoreline, forests and agricultural fields, its scientists investigate the interconnections of aquatic, terrestrial, and atmospheric components of complex landscapes. SERC's research campus also supports research efforts of other collaborators and agencies (e.g., U.S. Department of Agriculture, U.S. Geological Survey, U.S. Fish and Wildlife Service, and many universities and state agencies). SERC develops innovative approaches and instrumentation to measure environmental changes at four ecological levels (i.e., global change, landscape ecology, ecology of coastal ecosystems, and population and community ecology), and has developed unique, long-term, and experimental data sets on environmental change. SERC also participates in developing the Smithsonian's Marine Science Network of sites along the western Atlantic Ocean for comparative coastal studies, and in using the Smithsonian's long-term field stations to assess ecological patterns and processes. SERC is a partner site in the National Ecological Observation Network (NEON). As such, in FY 2014 construction is scheduled to begin on a new sampling tower array to

support a node for environmental data collection that will feed a national network established to observe and interpret changes in terrestrial environments. Construction will be completed in FY 2015. During its 48-year history, SERC has built a reputation for world-class research, producing many publications that are rich in data and multi-disciplinary and integrative in analysis.

SERC's research, education, and outreach efforts are closely aligned with the Smithsonian's Strategic Plan. By building on existing strengths and special programs, SERC enhances its successful research on the following topics: land-sea linkages of ecosystems; landscape ecology of coastal watersheds; estuarine ecology; invasive species (especially in coastal ecosystems); global change impacts on biotic and chemical interactions; biocomplexity of structure and processes in key ecosystems; and community and population ecology.

During the next five years, SERC research on coastal marine ecology will focus on four key, interrelated areas: the structure and dynamics of marine food webs; the integrity and biodiversity of crucial marine ecosystems; linkages of ecosystems at the land-sea interface; and the ecological regulation of marine biodiversity. SERC seeks to expand its expertise in the ecology of invasive species and how they affect coastal ecosystems. To implement these goals, SERC will link its research with national and international research networks and enhance the Marine Science Network. SERC is also developing scientific and technological capabilities in analytical chemistry, remote sensing, and instrumentation in coastal watersheds and connected ecosystems. SERC has been a lead contributor in establishing a consortium, known as TMON (Tennenbaum Marine Observatories Network), in an effort to coordinate and align the extensive marine research efforts ongoing throughout the Smithsonian. In addition, SERC is working with partners in the National Museum of Natural History and the regional research community to develop DNA barcode libraries for all of the species of fishes and major groups of invertebrates of the Chesapeake Bay. This will become a shared resource for tracking biodiversity, species distributions, and foodweb structures in the nation's largest estuary.

SERC uses its website to provide more information to the public about environmental issues in general, and the Center's research and education programs in particular. On-site education will focus on serving more than 12,000 students and members of the general public. SERC will continue to focus on improved access for traditionally underserved audiences, as well as those participants located offsite from the SERC campus.

SERC has strengthened its public outreach programs and continues to participate in the National Park Service's Chesapeake Gateways Network. Through partnerships with various agencies in the Maryland state government and the Gateways program, SERC has continued developing a series of new trails and visitor experiences on the historic 575-acre Contee Farm, which was acquired in 2008. In addition to providing a lecture series, workshops, and expert

consultation for the public, teachers, and public officials, SERC remains open to the public six days a week. Also, besides offering formal programs to the public, SERC encourages visitors to explore the Center's many trails through forests and fields, as well as more than 12 miles of shoreline along the Chesapeake Bay.

SERC continues to implement its comprehensive Facilities Master Plan through projects that provide critical infrastructure improvements and allow for controlled and operationally sustainable growth during the next 20 years. One of the key components of the plan is the focus on reducing energy and water consumption across the campus. The incorporation of sustainable improvements into the campus will ensure long-term savings in operating costs and a reduction in SERC's carbon footprint. As an example, the Charles McC. Mathias Laboratory has been designed to achieve a designation of Leadership in Energy and Environmental Design (LEED) Platinum — the highest measure of environmental sustainability afforded by the US Green Building Council. SERC expect future projects to reach similar design standards as SERC establishes its leadership in the area of innovative design and functionality.

SERC has established management controls to ensure proper accounting for its research activities, including indirect cost recovery in its sponsored research program. Moreover, the staff strives to maintain an excellent record of safety and protection for all staff and visitors. In conjunction with the Institution's central administrative offices, SERC maintains its excellent record of property management and protection of sensitive information and data.

NONAPPROPRIATED RESOURCES — General trust funds support fund raising and intern/fellowship programs. In addition, core administrative support is funded through an indirect cost surcharge applied to extramural research and education awards. Donor/sponsor-designated funds provide critical operating support related to specific programs and projects in research, public education, and professional training. Most of SERC's scientific research program of \$6 million annually is supported by Government grants and contracts, including the National Ballast Information Clearinghouse, which was established by Congress as part of the National Invasive Species Act of 1996.

SMITHSONIAN TROPICAL RESEARCH INSTITUTE

	APPLICATION OF OPERATING RESOURCES							
	FEDERAL APPROPRIATIONS		GENERAL TRUST		DONOR/SPONSOR DESIGNATED		GOV'T GRANTS & CONTRACTS	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2013 ENACTED	202	12,736	50	2,258	31	4,562	17	2,353
FY 2014 ENACTED	202	13,940	53	1,660	32	4,280	17	1,400
FY 2015 ESTIMATE	202	14,280	51	1,750	32	4,700	17	1,470

STRATEGIC GOALS: EXCELLENT RESEARCH; BROADENING ACCESS; REVITALIZING EDUCATION; AND MISSION ENABLING

Federal Resource Summary by Performance Objective and Program Category

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Excellent Research						
<i>Research</i>						
Engage in research and discovery	118	9,101	120	9,231	2	130
Broadening Access						
<i>Digitization and Web Support</i>						
Provide improved digitization and Web support	3	132	3	133	0	1
Public Programs						
Provide reference services and information	15	892	15	942	0	50
Revitalizing Education						
<i>Education</i>						
Engage and inspire diverse audiences	2	354	2	358	0	4
Mission Enabling						
<i>Security and Safety</i>						
Provide world-class protection for Smithsonian facilities, collections, staff, visitors, and volunteers	15	663	15	671	0	8
Provide a safe and healthy environment	2	159	2	161	0	2
Information Technology						
Modernize the Institution's information technology systems and infrastructure	4	237	4	239	0	2
Management Operations						
Strengthen an institutional culture that is customer-centered and results oriented	11	978	9	990	-2	12
Ensure that the Smithsonian workforce is efficient, collaborative, committed, innovative, and diverse	5	288	5	292	0	4
Modernize the Institution's financial management and accounting operations	10	587	10	706	0	119

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Enhance the reputation of the Smithsonian by maintaining good relations with the news media and with federal, state, and local governments	4	94	4	96	0	2
Modernize and streamline the Institution's acquisitions management operations	13	455	13	461	0	6
Total	202	13,940	202	14,280	0	340

BACKGROUND AND CONTEXT

In 1910, Smithsonian Secretary Charles Walcott requested and received permission from President William Howard Taft to send a scientific expedition to Panama to study the environmental impact of the Panama Canal. The President of Panama, Pablo Arosemena, invited the Smithsonian to extend its study to the entire isthmus (1910—1912), establishing a relationship that 100 years later continues to be a remarkable scientific resource for both countries and the world. The Smithsonian Tropical Research Institute (STRI) is now the principal U.S. organization dedicated to advancing fundamental scientific discovery and understanding of biological diversity in the tropics and its contribution to human welfare. STRI plays a critical role for the U.S. Government and the Smithsonian by maintaining world-class research facilities in Panama, where annually more than 1,400 resident and visiting international scientists access the diverse tropical environments STRI stewards. Of these, STRI most notably serves as the official custodian for the Barro Colorado Nature Monument (BCNM) in Panama under the terms of the Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere, ratified by the U.S. Senate in April 1941. The BCNM is the only mainland tropical reserve under U.S. stewardship and served as the original base of operations for the 1910 expedition.

Why is the Smithsonian in Panama? What is now Panama was underwater until about 3 million years ago. The rise of the Isthmus of Panama changed the world. It connected North and South America and separated the Atlantic from the Pacific, setting into motion global change that dramatically impacted marine and terrestrial life. STRI has been located at the heart of this event for a century. Its nine research facilities, situated throughout Panama's diverse ecosystems, serve as an unparalleled field research platform to investigate the critical events that shaped the world and its tropical diversity.

SCIENTIFIC PRODUCTIVITY

The relevance, quality, and performance of STRI scientists is top tier, as evaluated by a Visiting Committee of outside experts. In their last review, the Visiting Committee used National Research Council criteria to measure the productivity and impact of STRI science compared to 142 of the best university research departments in the United States; STRI scientists ranked first in all measures of scientific relevance (e.g., publication citations), quality (e.g.,

scientific honors), and productivity (e.g., publication numbers). In addition, the number of young scientists who choose STRI as the base for their graduate and postgraduate research training provides an annual measure of the relevance and quality of STRI science to the future of tropical biology and policy.

STRI's 40 staff scientists and 160 research assistants-in-residence share our science platform with scientists from U.S. and international organizations. Each year, more than 1,200 visiting scientists conduct research at STRI facilities with STRI scientists who are leaders in their fields. This collaborative effort has produced more than 11,000 scientific publications of record during the last century. In recent years, STRI scientists have published an average of 400 articles in peer-reviewed journals annually.

SCIENTIFIC DIRECTION

The long-term research conducted by STRI scientists and collaborators is a critical contribution to the Smithsonian Institution's 2010–2017 Strategic Plan "A Smithsonian for the 21st Century," set forth in 2009, particularly through its contributions to the Grand Challenge, Understanding and Sustaining a Biodiverse Planet. However, STRI also contributes to Unlocking the Mysteries of the Universe through its paleontology program, and to Valuing World Cultures through its anthropology and archeology programs. In addition to investigating animal behavior and the evolutionary changes that have occurred in the tropics both morphologically and now from a genetic perspective, STRI has invested for the long-term in several other core research directions. These include:

Environmental and Human Health

The Panama Canal Watershed provides drinking water for more than one million Panama residents. Much of the watershed has been deforested. STRI's Agua Salud Project uses the Panama Canal's central role in world commerce to focus global attention on the ecosystem services provided by tropical forests in comparison with other types of land cover, providing rigorous quantitative data on a critical topic much debated by policy makers. The hydrology portion of the project focuses on the roles of forests on water-related ecosystem services such as flood and drought mitigation and water purification.

An innovative research program funded by the National Institutes of Health (NIH), STRI's International Cooperative Biodiversity Groups Program, builds on nearly 100 years of research on the natural history of Panama's tropical forests and reefs to enhance the drug discovery process for novel compounds to cure diverse diseases, cancer and HIV/AIDS. A wealth of natural history data from STRI researchers allows biomedical scientists to streamline their efforts and target natural chemicals for further research at the University of Panama and at Panama's government research and technology institute, INDICASAT.

STRI's geographical position on the narrow Isthmus of Panama, which is a migratory route for North American birds to and from South America, combined with STRI's outstanding relationships with Panama's Health Ministry, led the NIH to fund development of regional surveillance and diagnostic capabilities for avian influenza. This effort couples STRI expertise in avian population biology and the Gorgas Institute (Panama Ministry of Health) expertise in virology to improve surveillance and early detection of zoonotic disease in the Western hemisphere.

Monitoring Forest Health and the Global Carbon Cycle

Combining private and federal support, STRI collaborates with the Smithsonian Environmental Research Center (SERC), Smithsonian Conservation Biology Institute/National Zoological Park (SCBI/NZP), National Museum of Natural History (NMNH) and the Smithsonian Astrophysical Observatory (SAO) to create the Smithsonian Institution Global Earth Observatories (SIGEO), the largest terrestrial-based Earth observation system in the world. Additional U.S. partners and supporters include the National Science Foundation, National Aeronautics and Space Administration, National Oceanic and Atmospheric Administration (NOAA), the US Department of Agriculture (USDA) Forest Service, and the U.S. Geological Survey (USGS), and the Centers for Disease Control and Prevention, as well as 80 partner institutions. STRI's Center for Tropical Forest Science (CTFS), now named ForestGEO, coordinates research activities in 24 countries on 56 standardized forest parcels, ranging from two to 50 hectares, in which each tree is mapped and measured every five years. This global network provides rigorous, systematic data on forest dynamics and carbon budgets, which can be used by decision-makers to address climate change policy.

Paleontology and Earth Science

The long history of partnership with the Panama Canal Authority, coupled with a STRI leadership eager to seize research opportunities, lets U.S. scientists take advantage of new canal excavations by bringing modern tools to study the geology and fossils of the region. This once-in-a-century research opportunity allows scientists to better understand one of the great geological events in the history of the planet — the rise of the Isthmus of Panama three million years ago, which established a biological bridge between the North and South American continents and a land barrier between the previously connected tropical Pacific and Atlantic Oceans.

STRI is important because of its mission, the Institute's location in the mainland tropics on the narrow Isthmus of Panama, and its relationship with the Government of Panama. Beyond its mission for the Smithsonian, two recent examples of collaboration with U.S. agencies underscores the important role STRI plays in Panama. The security and facilities infrastructure of Barro Colorado Island led the USGS to establish seismic monitoring equipment as part of its Caribbean Tsunami Warning System. In addition, NOAA is using STRI's marine station in Bocas del Toro as a site to monitor sea level rise.

Marine Invasions

New data are filling gaps in the understanding of the rise of the Isthmus and its changing role in invasion biology, biodiversity and global climate. As trade through the Panama Canal expands, STRI scientists and colleagues at the SERC in Maryland document the distribution of invasive marine organisms, providing an unparalleled platform to understand the biology of invasive species on a scale comparable to that of the Great American Interchange of terrestrial organisms that occurred when Panama first linked North and South America. Such research has profound implications for mitigating the problems of invasive species in the great seaways of the world, from the Panama Canal to the Great Lakes.

The budget request includes an increase of \$340,000 for necessary pay and other related salary costs for existing staff funded under this line item.

MEANS AND STRATEGY

STRI is the only major research institute to locate modern scientific instrumentation and facilities at the edges of tropical forests and reefs. STRI staff members lead internationally respected research while also assisting visitors with visas, collecting permits, transportation, housing, computing, and library needs and by mentoring students from universities across the United States and around the world. Superb Panamanian staff and the supportive Government of Panama have fostered Smithsonian research in Panama for 100 years and has been an exceptional ambassador of goodwill for the United States in Panama and throughout Latin America.

As part of its core mission, STRI will continue to enhance the Smithsonian's platform for long-term research on biodiversity, ecosystems, and the impacts of environmental change through novel research, education of the next generation of scientists and communication of findings to our audiences.

Global climate systems and life on the planet are in flux. Policy makers and scientists need long-term data on fluctuations in the primary productivity of forests around the globe, as well as information on changes in the abundance and distribution of biological diversity, to distinguish the components of global change that can be ascribed to planetary processes from those that may be caused by human activity. The Smithsonian Institution is building on its unique research infrastructure to provide the required data by expanding its global network of dynamic, long-term tropical forest plots into the temperate zone, and by collecting additional data on vertebrates, insects, and soil microorganisms, in addition to the trees that scientists have monitored for more than three decades. Smithsonian researchers are answering the following questions: Does environmental change significantly alter forest biomass, and does the rate of carbon sequestration by forests vary with latitude, hydrological condition, and soil fertility? How are the diversity and the relative abundance of forest organisms

changing over time and space? What components of observed changes are due to human activities? How can people modify their behavior and economies to ameliorate any changes detrimental to global society?

STRI shares knowledge, experience and expertise with the next generation of tropical scientists. STRI hosts more than 800 pre- and postdoctoral students each year. For many, their experience at STRI is their first real opportunity to be full-fledged scientists. The experience is transformational. As mentors, the Institute's researchers guide these future investigators, encouraging their curiosity and challenging them to develop the scientific rigor required to make new discoveries, and to relate them to the welfare of humankind.

STRI continues to work with primary school science teachers to inspire wonder and critical thinking skills in the classroom. In Panama and through digital partnerships with school districts in the United States, STRI will continue to explain field science experiments and make them accessible to teachers and students.

ENABLING STRI'S MISSION THROUGH ORGANIZATIONAL EXCELLENCE

STRI continues to advance the vision detailed in the 20-year plan for upgrading its facilities, many of which date back to the pre-World War II era of Panama Canal defense. The 20-year STRI facilities plan represents a spectacular opportunity for the Smithsonian to provide its world-class group of tropical scientists with the modernized, sustainable, and state-of-the-science facilities needed to face the challenges of the 21st century, when biological challenges will play a central role in global events.

STRI also offers important facility resources for federal agencies and universities. For terrestrial research, STRI serves as the headquarters for ForestGEO, and as a base for tsunami-monitoring equipment installed by the USGS. The Institute provides the Environmental Protection Agency with sites to monitor mosquitoes and their role as disease vectors, and assists the National Institutes of Health (NIH) with its funded projects to survey birds as carriers of avian influenza. For marine research, the two-ocean stage provided by STRI marine facilities permits scientists to move between experiments in the eastern Pacific Ocean and the Caribbean Sea in a few hours, and represents a principal component of the Smithsonian MarineGEO network that extends from the Chesapeake Bay to Florida, Belize, and Panama. The recurring two-ocean theme in marine science at STRI has resulted in landmark studies of the evolution and ecology of tropical marine species and communities, as well as research funded by NSF and NIH for the ecologically guided discovery of new pharmaceutical compounds. STRI maintains two MarineGEO sites which provide direct access to two oceans, and take on increased importance as experimental platforms for studying the impact of climate change and ocean acidification on coastal coral reefs, sea grasses, and mangroves.

For additional information and funding for the MarineGEO project, see the detail provided in the Opportunity, Growth, and Security (OG&S) Initiative section of this budget submission (on page 242 behind the OG&S tab).

Managing growth is an enviable challenge and STRI continues to position itself for scientific and educational success by never losing focus of the need to maintain operational excellence. FY 2015 will be another year STRI continues to seek to more efficiently use the resources available while at the same time adapting to work in the ever-expanding economy of Panama. STRI's organizational efforts will continue to focus on upgrading its physical plant by seeking to reduce the aggregated deferred maintenance and by design planning for the challenges of renegotiating the property agreements with our host nation of Panama in 2020. STRI will also restructure its Information Technology department to better meet the needs of its scientific computing community as well as the business needs of its administrative departments. Lastly, STRI will continue to find innovative ways to allocate available resources for novel research that helps the Smithsonian meet the Grand Challenge of Understanding and Sustaining a Biodiverse Planet.

NONAPPROPRIATED RESOURCES — General trust funds support salaries for a small percentage of STRI employees involved in research, public outreach, and fund raising. Donor/sponsor-designated funds support specific programs and projects to investigate key indicators of global environmental health.

Donor-designated support also provides an endowed chair for the director of STRI, an endowed staff position in tropical paleoecology and an endowed chair for the director of ForestGEO. The chair in paleoecology currently investigates climate change during the last 60 million years, in part by taking advantage of the multi-billion-dollar expansion of the Panama Canal, which is exposing new fossils and geology during the massive excavations. Donor-designated support also funds postdoctoral studies of the relationship between brain size and behavioral complexity, and postdoctoral fellowships in tropical marine biology, using STRI's Bocas del Toro and Galeta field stations in the Caribbean and its Naos laboratory and Rancheria Island field station in the eastern Pacific Ocean. In addition, the generosity of donors has enabled STRI to initiate the first country-wide carbon sequestration study using advanced technologies such as Light Detection and Ranging, or LiDAR, overflights in the tropics.

Government grants and contracts support programs such as the Panama International Cooperative Biodiversity Group (ICBG), funded by the NIH and administered by STRI, which conducts innovative biomedical research and training, and monitors wildlife that could be carriers of avian influenza and other animal-borne diseases.

Introduction, Valuing World Cultures

As a steward and goodwill ambassador of cultural connections, with a presence in some 100 countries and expertise and collections that encompass the globe, the Smithsonian will build bridges of mutual respect and present the diversity of world cultures and the joy of creativity with accuracy and insight.

RESEARCH Goal: The Smithsonian contributes insights into the evolution of humanity and the diversity of the world's cultures, arts, and creativity.

ACCESS Goal: The Smithsonian will inspire audiences to explore the cultural and artistic heritages of diverse peoples.

UNITS primarily associated with this Grand Challenge:

- **Arthur M. Sackler/Freer Gallery of Art**
- **Center for Folklife and Cultural Heritage**
- **Cooper-Hewitt, National Design Museum**
- **Hirshhorn Museum and Sculpture Garden**
- **National Museum of African Art**

The President's Budget includes a separate, fully paid for \$56 billion Opportunity, Growth, and Security (OG&S) Initiative. This initiative provides additional discretionary investments in 2015 to spur economic progress, promote opportunity, and strengthen national security.

This initiative fully supports the Institution's Strategic Plan, specifically in the area of Excellent Research. A specific research program, Preserving Threatened Cultural Heritage, is key to the success of achieving the Smithsonian Institution's strategic goals and objectives. Details on this program are in a separate section of this budget submission (on page 243 behind the OG&S tab).

ARTHUR M. SACKLER GALLERY/FREER GALLERY OF ART

	APPLICATION OF OPERATING RESOURCES							
	FEDERAL APPROPRIATIONS		GENERAL TRUST		DONOR/SPONSOR DESIGNATED		GOV'T GRANTS & CONTRACTS	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2013 ENACTED	45	5,938	5	1,433	52	10,146	0	33
FY 2014 ENACTED	45	6,019	8	1,548	58	8,717	0	0
FY 2015 ESTIMATE	45	6,107	8	1,571	58	9,217	0	0

STRATEGIC GOALS: EXCELLENT RESEARCH; BROADENING ACCESS; REVITALIZING EDUCATION; STRENGTHENING COLLECTIONS; AND MISSION ENABLING

Federal Resource Summary by Performance Objective and Program Category

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Excellent Research						
<i>Research</i>						
Engage in research and discovery	6	1,429	6	1,429	0	0
Broadening Access						
<i>Digitization and Web Support</i>						
Provide improved digitization and Web support	0	20	0	20	0	0
Public Programs						
Provide reference services and information	3	265	3	265	0	0
Exhibitions						
Offer compelling, first-class exhibitions	16	2,054	16	2,142	0	88
Revitalizing Education						
<i>Education</i>						
Engage and inspire diverse audiences	5	425	5	425	0	0
Strengthening Collections						
<i>Collections</i>						
Improve the stewardship of the national collections	12	1,365	12	1,365	0	0
Mission Enabling						
<i>Information Technology</i>						
Modernize the Institution's information technology systems and infrastructure	0	35	0	35	0	0
Management Operations						
Ensure that the Smithsonian workforce is efficient, collaborative, committed, innovative, and diverse	1	143	1	143	0	0
Modernize the Institution's financial management and accounting operations	2	283	2	283	0	0
Total	45	6,019	45	6,107	0	88

BACKGROUND AND CONTEXT

The Freer Gallery of Art and the Arthur M. Sackler Gallery (F/S) celebrate the artistic traditions of Asia, and are widely regarded as among the most important collections of Asian art in the world. The Museums collect, study, exhibit, and preserve exemplary works of Asian art, as well as works by Whistler and other American artists of the “Aesthetic Movement” as represented in Charles Lang Freer’s original gift. The combined resources of the Museums are directed toward programs that advance the understanding of the arts of Asia and of the Museums’ collections.

In FY 2015, the Smithsonian will continue to build on the excitement generated from the 25th anniversary of the opening of the Arthur M. Sackler Gallery, with ambitious plans for reinvigorating the Sackler with innovative thematic exhibitions and a renewed focus on its growing permanent collection. A new programming effort for the International Gallery in the S. Dillon Ripley Center, managed jointly by F/S and the National Museum of African Art, enters its second year. This gallery, with links to both Museums, allows for more programmatic collaboration and provides new opportunities to achieve the Institution’s strategic goals of Broadening Access and Revitalizing Education. Additionally, the F/S will continue hosting international loan exhibitions and complementary public programs. The F/S will keep expanding the number and range of exhibitions and loans it offers to other museums throughout the nation and worldwide. The Museums will also further the goal of Broadening Access by continuing to add resources to improve the F/S website with a new search tool for online collections, and by enhancing the visitor experience. The F/S will also realign resources in FY 2015 to position itself as a world leader in digital collections management initiatives.

The F/S will achieve the strategic goal of Excellent Research by maintaining its impressive record of hosting research Fellows and scholarly visitors, through its publications, and by searching for new research funding sources.

In addition, the F/S will address the strategic goal of Mission Enabling by continually assessing and enhancing staff development and oversight of internal controls.

The budget request includes an increase of \$88,000 for necessary pay and other related salary costs for existing staff funded under this line item.

MEANS AND STRATEGY

To achieve the goal of Broadening Access, the F/S continues to direct resources to raise attendance and assert its pre-eminence in the field of Asian art by mounting and touring high-profile exhibitions. Planned exhibitions in 2015 will make strong connections to the Museums’ permanent collections and recent important gifts and bequests. An exhibition on *Travel* will draw from F/S collections to consider

changing global perceptions that arise from increasing human mobility. There will also be an exhibition drawn from the most important collection of legally excavated material from Ancient South Arabia, which was recently gifted to F/S. In 2015, F/S will send the highly successful *Roads of Arabia* exhibition to its fifth U.S. venue. This is the first significant exhibition in North America of the art and archaeology of the Arabian Peninsula and includes material never before shown in the United States. *Chigusa and the Art of Tea*, an exhibition focused on an important F/S acquisition, will travel to the Princeton University Art Museum. Other exhibitions drawn from F/S collections are intended for national travel in 2015. F/S continues to develop two major exhibition projects with international scholars and collaborating institutions in China. In 2015, the Sackler will host one of the most important exhibitions of holy Korans ever shown in the United States, an exhibition it has negotiated with the Ministry of Culture in Turkey.

Most importantly, in FY 2015, the permanent galleries of the Sackler will be entirely reconfigured and re-installed. This will be the first major overhaul since the collections were opened to the public in the late 1980s, and it will provide an opportunity for a very different approach to displaying the collections: one that is more provocative and engaging.

Also in FY 2015, an expansion of exhibitions and programming in the former International Gallery will allow F/S to finalize plans for long-term use of the space aligned with two of the Smithsonian's strategic goals — Broadening Access and Revitalizing Education — by expanding programmatic offerings to include digital exhibitions and immersive experiences which will engage audiences of all ages.

The F/S will further broaden access by reaching new and diverse audiences through its groundbreaking educational and scholarly programs on the arts of Asia. These activities include hosting a series of international conferences and workshops, and collaborating within the Smithsonian and with outside organizations such as the National Museum in Beijing, the Uffizi in Florence, Italy, and the British Museum in London.

Enabling the Museums to be the center for public engagement on the arts of Asia, the F/S website will undergo refinements to allow greater public access to our collections, which are due to be 100 percent digitized by the beginning of 2015. With the help of a major Getty Foundation grant, an online publication of the Pulverer Collection of Japanese books was recently launched. In addition, in the past several years the F/S has collaborated with Ritsumeikan University to digitize more than 100,000 images from Japanese books of art.

The F/S will achieve the Institution's strategic goal of Excellent Research by focusing efforts on coordinating its own collections more vigorously with researchers in universities in the Washington, DC area, as well as internationally, and ensuring that the F/S has appropriate print and online distribution of scholarly publications.

As part of its goal to advance Revitalizing Education initiatives, and to provide greater access to high-quality educational resources, the F/S will re-examine state, county, and municipal educational mandates to ensure that the Museums' programs support public schools' curricula. In addition, the F/S will devote more resources to develop long-lasting teaching materials based on the Museums' world-renowned collections, and to place more educational resources on the F/S website to make it the premier online resource in the United States for information on the arts of Asia. As a result of visitor surveys conducted in FY 2011, the F/S has appointed a Visitor Advisory Team to ensure that recommendations from these surveys are fully incorporated into future efforts to serve the public.

The F/S will achieve the strategic goal of Strengthening Collections by continuing to devote resources to its internationally renowned conservation department and laboratory. The department will be led by a new director, who is one of the most respected figures in the field. In FY 2015, curators and researchers will continue to study and publish new research on the collections, including ancient Chinese art from Dr. Paul Singer's collection. With a recent grant from the Andrew Mellon Foundation, the F/S is establishing an endowment for a mid-level position to encourage Chinese painting conservation, and, in collaboration with the Mellon Foundation, is building a network of institutions in the United States, China and Europe to ensure adequate succession planning in a field where all too many leading practitioners are due to retire within a few years of each other.

With a special allocation of funds to the Smithsonian, the F/S will continue its research into Nazi-era provenance issues, further strengthening international ties with other museums and cultural institutions developed in previous years.

To meet the strategic goal of Mission Enabling, the F/S will continue to improve its administrative efficiencies and reporting mechanisms, ensuring that its workforce is efficient and skilled, and to adopt best practices for safeguarding Smithsonian resources. The F/S will, in particular, dedicate training funds toward leadership and provide supervisory training to equip managers and supervisors with the information, skills, and tools they need to make sound decisions. The F/S will update its current strategic plan in FY 2015, aligning it with the Smithsonian's overall strategic plan in terms of both timing and goals. The F/S continues to track progress against its strategic plan by using the management tracking system commissioned from ManagePro, which enhances accountability by linking the Museums' strategic plans and goals directly to departmental activities and outputs.

NONAPPROPRIATED RESOURCES — General trust and donor/sponsor-designated funds are generated from memberships, Museum shop sales, special events, unrestricted and restricted gifts and grants, and endowment income. The Freer Gallery of Art and the Arthur M. Sackler Gallery are highly dependent on nonappropriated sources to fund the programs and operations necessary to provide the quality of exhibitions, programs, and publications expected by visitors and scholars, both online and on site.

CENTER FOR FOLKLIFE AND CULTURAL HERITAGE

	APPLICATION OF OPERATING RESOURCES							
	FEDERAL APPROPRIATIONS		GENERAL TRUST		DONOR/SPONSOR DESIGNATED		GOV'T GRANTS & CONTRACTS	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2013 ENACTED	17	2,364	7	1,502	1	639	4	1,145
FY 2014 ENACTED	17	2,490	11	1,633	7	1,390	0	1,582
FY 2015 ESTIMATE	17	2,525	11	1,633	5	1,000	0	1,000

STRATEGIC GOALS: BROADENING ACCESS; REVITALIZING EDUCATION; STRENGTHENING COLLECTIONS; AND MISSION ENABLING

Federal Resource Summary by Performance Objective and Program Category

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Broadening Access						
<i>Exhibitions</i>						
Offer compelling, first-class exhibitions	9	1,278	9	1,296	0	18
Revitalizing Education						
<i>Education</i>						
Engage and inspire diverse audiences	2	332	2	335	0	3
Strengthening Collections						
<i>Collections</i>						
Improve the stewardship of the national collections	2	220	2	230	0	10
Mission Enabling						
<i>Facilities</i>						
Improve the overall cleanliness and efficient operation of Smithsonian facilities	0	160	0	160	0	0
<i>Security and Safety</i>						
Provide world-class protection for Smithsonian facilities, collections, staff, visitors and volunteers	0	100	0	100	0	0
<i>Information Technology</i>						
Modernize the Institution's information technology systems and infrastructure	1	127	1	128	0	1
<i>Management Operations</i>						
Strengthen an institutional culture that is customer centered and results oriented	1	58	1	59	0	1
Modernize the Institution's financial management and accounting operations	2	215	2	217	0	2
Total	17	2,490	17	2,525	0	35

BACKGROUND AND CONTEXT

The Center for Folklife and Cultural Heritage (CFCH) is a research, collections, education, and public programming unit of the Smithsonian Institution with the mission of “promoting the understanding and sustainability of the world’s diverse traditional cultures.” It is the largest of a triumvirate of federal offices (with the Library of Congress’ American Folklife Center and National Endowment for the Arts’ Folk and Traditional Arts program) that supports traditional arts and culture in the United States and abroad. For more than four decades, the CFCH has accomplished this mission through research, documentation, preservation, presentation, education, social enterprise, and publication. It has collaborated with thousands of organizations, foundations, and governments in the United States and worldwide. The Smithsonian Folklife Festival and Smithsonian Folklife recordings are its most visible products, reaching many millions of people each year and earning major recognition, including one of the first Best Practice Citizen Diplomacy awards from the U.S. Center for Citizen Diplomacy, 22 Grammy Award nominations, seven Grammys, one Latin Grammy, and 21 Independent Music Awards.

The CFCH, with its highly qualified staff, one-quarter of whom hold doctoral degrees, and first-rate production capabilities for public events, also produces multi-media website features and publications, exhibitions, documentary films, symposia, print publications, educational materials, and more. Ethnographic research and documentation are fundamental to all of its products and anchor its active engagement in high-profile international cultural heritage policy forums. Its Ralph Rinzler Folklife Archives and Collections house, preserve, and provide access to its world-class collections. Professional training efforts offer opportunities for more than 100 interns each year and include hosting advanced study Fellows from countries around the world.

The budget estimate includes an increase of \$35,000 for necessary pay and other related salary costs for existing staff funded under this line item which is justified in the Fixed Costs section of this budget.

MEANS AND STRATEGY

Research, production capacity, and entrepreneurial resource leveraging are the keys to how CFCH accomplishes its core mission. Earned revenues are used to employ half of its staff, create its public products, and deliver them to a broad national and international public of tens of millions. Institutional collaboration and major public impact nationally and internationally are also key to fulfilling its mission. Institutional collaborations (more than 100 partnerships in the past four years), fund raising, and mission-driven business activities leverage the Center’s modest federal investment many times over to reach millions of people per year. CFCH achieves this through the Smithsonian Folklife Festival (one million visitors plus tens of millions via the media), Smithsonian Folklife

Recordings (more than 10 million listeners via recordings, radio programs, downloads, and audio streams), websites (4.5 million visits), and other products. The CFCH also periodically applies its event production capacity to put on other major, national cultural events consistent with its mission, such as the National World War II Reunion, the First Americans Festival for the opening of the National Museum of the American Indian, and programs for the Olympic Games and Presidential inaugurations.

In 2014 and 2015, the CFCH will collaborate with at least nine Smithsonian units, 15 nonprofit organizations, and three foreign countries to create and deliver programmatic content. The 2014 Festival will mount two major programs: *China: Tradition and the Art of Living*, and *Kenya: Mambo Poa*. The People's Republic of China is, more than any other nation, home to living treasures of world heritage, as declared by UNESCO. Kenya is a mosaic of more than 40 distinctive cultures and languages, looking to strengthen these traditions while forging a unified modern nation. The 2015 Festival will highlight the rich cultural diversity of Peru, where Iberian traditions have mixed for centuries with indigenous ways of life to produce one of the most vibrant and complex cultures in Latin America. Because the National Mall will be closed for renovation, the Festival will take place on the grounds of the National Museum of the American Indian, which will be opening a major exhibition on the Inca Road at the same time. Also in 2014 and 2015, the CFCH will further harness the power and reach of the Web to broaden access to Festival content far beyond Washington, DC, through programmatic features preceding, during, and following the 10-day Mall event. The CFCH will accomplish this by further increasing the interactivity of its websites, aggressively aiming to increase visits to all of its websites by two million in 2015, for a total of 7.5 million. The CFCH is also continuing its partnership with e-Pals, a social living platform that provides a course on cultural heritage developed by the Center and tied to the core curriculum, to one million teachers and 10 million students around the globe.

Smithsonian Folkways Recordings will release more than 100 productions in FY 2015, including 100 albums from the UNESCO Collection of Traditional Music from dozens of countries around the world. In 2014, it will produce a five-CD boxed set of Leadbelly's music. Folkways will continue its *African American Legacy* and *Tradiciones/Traditions* series of African American and Latino music, producing at least six albums of new material. In addition, Folkways will continue to extend its reach to millions more listeners, distributing its 3,000 album titles and 48,000 tracks of audio to teachers, students, scholars, and the general public. Digital distribution will expand further, opening new horizons for the creation and delivery of the Center's educational content via downloadable audio streams, "podcast" feeds, and multi-media video features. Folkways will also bolster its million-plus circulation of digital content from non-Smithsonian websites such as iTunes U, now available in more than 67 countries. It will expand its collaboration with a private partner to deliver the entire Folkways collection to more than 440 libraries throughout the continent and beyond. The

Musica del Pueblo virtual exhibition will expand its offerings of American and Latin American content by featuring even more video and audio recordings as well as text from and about Latino roots musical traditions. This mission-critical content will also generate additional revenues through online and retail sales.

Center curators and research staff will continue to publish books, articles, and Web features, and make professional presentations at gatherings of specialists. One special book, *Curatorial Conversations*, explores curatorial challenges, approaches, and highlights via the Smithsonian Folklife Festival. Similarly, a special issue of *Curator: The Museum Journal* will feature articles that highlight the participatory curation and presentations that are the hallmark of the Center, and present them as best practices for the larger field. The CFCH's Cultural Heritage Policy team will continue its vital participation in U.S. and UNESCO cultural heritage policy formulation through consultation with the U.S. Department of State, cooperative work with UNESCO, and collaborations with other national and international organizations. In 2015, it will launch and build upon a fresh cultural heritage policy section of the CFCH website.

The yield from ethnographic research and multi-media primary sources will add to the Ralph Rinzler Folklife Archives and Collections' strategically important holdings of music and cultural traditions from the United States and around the world. The Folklife Archives will tackle two principal challenges in 2015 — receiving a plethora of incoming ethnographic research, and assessing, cataloguing, preserving, and making available endangered, valuable, multi-media holdings through sharp prioritization of delicate and critical collections materials. Central funds from within the Institution will further support The Rinzler Archives digitization and dissemination efforts.

Through these activities, the CFCH will take major steps to fulfill the Smithsonian Grand Challenges of Understanding the American Experience and Valuing World Cultures. The CFCH will contribute to the Smithsonian's goals of Broadening Access and Mission Enabling by continuing to improve its information technology infrastructure and related project budgeting and planning.

NONAPPROPRIATED RESOURCES — General trust funds support salaries and benefits of approximately one-quarter of CFCH's personnel, and revenues from Folkways Recordings pay nearly half of staff salaries and expenses. Donor/sponsor-designated funds cover costs related to specific projects such as the Smithsonian Folklife Festival and several other educational programs. Work at the Rinzler Archives will continue to be supported by a grant from the Save America's Treasures program to digitize and preserve the entire Moses and Frances Asch collection of recordings and documentation, recognizing the national and international prominence of the Folkways collections. Income from sales of Smithsonian Folkways Recordings pays staff salaries and expenses. With the support of the Smithsonian National Campaign, the CFCH plans to increase its goals for raising private funds to support the mission of the Center.

COOPER-HEWITT, NATIONAL DESIGN MUSEUM

	APPLICATION OF OPERATING RESOURCES							
	FEDERAL APPROPRIATIONS		GENERAL TRUST		DONOR/SPONSOR DESIGNATED		GOV'T GRANTS & CONTRACTS	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2013 ENACTED	33	4,348	26	3,944	9	3,366	1	101
FY 2014 ENACTED	36	4,710	30	4,426	12	8,591	0	78
FY 2015 ESTIMATE	36	4,787	30	4,559	14	6,841	0	60

**STRATEGIC GOALS: EXCELLENT RESEARCH; BROADENING ACCESS;
REVITALIZING EDUCATION; STRENGTHENING COLLECTIONS; AND
MISSION ENABLING**

Federal Resource Summary by Performance Objective and Program Category

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Excellent Research						
<i>Research</i>						
Ensure the advancement of knowledge in the humanities	4	335	4	340	0	5
Broadening Access						
<i>Digitization and Web Support</i>						
Provide improved digitization and Web support	1	100	1	102	0	2
<i>Public Programs</i>						
Provide reference services and information	1	120	1	122	0	2
<i>Exhibitions</i>						
Offer compelling, first-class exhibitions	4	305	4	310	0	5
Revitalizing Education						
<i>Education</i>						
Engage and inspire diverse audiences	3	250	3	255	0	5
Strengthening Collections						
<i>Collections</i>						
Improve the stewardship of the national collections	7	1,890	7	1,930	0	40
Mission Enabling						
<i>Facilities</i>						
Improve the overall cleanliness and efficient operation of Smithsonian facilities	11	1,085	11	1,095	0	10
<i>Information Technology</i>						
Modernize the Institution's information technology systems and infrastructure	1	167	1	170	0	3

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
<i>Management Operations</i>						
Ensure that the Smithsonian workforce is efficient, collaborative, committed, innovative, and diverse	1	105	1	107	0	2
Modernize the Institution's financial management and accounting operations	2	268	2	270	0	2
Enhance the reputation of the Smithsonian by maintaining good relations with the news media and with federal, state, and local governments	1	85	1	86	0	1
Total	36	4,710	36	4,787	0	77

BACKGROUND AND CONTEXT

Cooper-Hewitt, National Design Museum (CHNDM), in New York City, is one of two Smithsonian museums located outside of Washington, DC. CHNDM is the only museum in the nation dedicated exclusively to historic and contemporary design. Its collection is international in scope and encompasses 217,000 objects representing 24 centuries of design, from China's Han Dynasty (200 B.C.) to the present. The Museum presents compelling perspectives on the impact of design on daily life through active educational programs, exhibitions, and publications.

As the design authority of the United States, CHNDM's programs and exhibitions demonstrate how design shapes culture and history — past, present, and future. To achieve the Institution's strategic goals of Broadening Access and Revitalizing Education, the Museum will continue its dynamic exhibition programming and active roster of educational and public programs, as well as expand the number of programs offered in venues outside the New York metropolitan area in 2015. Together, these programs will help CHNDM engage larger, more diverse audiences, and fulfill its mission to serve as a catalyst for design education throughout the nation and internationally.

The Museum devotes resources to ensure the advancement of knowledge in the humanities by fostering a greater understanding of the role of design in everyday life and its impact on shaping the built environment of the past, present, and future; and to encourage the "by-products" of design thinking — such as creative problem solving and teamwork — in other disciplines and areas of life, through interactive, engaging in-person and online experiences.

The budget estimate includes an increase of \$77,000. This increase includes \$56,000 for necessary pay and other related salary costs for existing staff funded under this line item, and \$21,000 to support rent costs, which is explained in the Fixed Costs section of this budget.

MEANS AND STRATEGY

In FY 2015, Cooper-Hewitt's 91st Street facility, located in the historic Carnegie mansion, will re-open to the public after a major renovation. The new Cooper-Hewitt will transform the museum visit from passive to participatory with multiple interactive components focusing on the design process. The Museum will present several exhibitions upon re-opening, among them *Tools: Extending our Reach* (which will include objects from 11 Smithsonian units displayed in the new third-floor gallery), *Making Design, Beautiful Users* and *Collection Selects: Maira Kalman*. The Museum will also be working on several publications to accompany these exhibitions — a collections handbook; a design book for children, written and illustrated by Maira Kalman; and a book on the Carnegie Mansion.

CHNDM resources will continue to support the strategic goal of Excellent Research, ensuring the advancement of knowledge in the humanities through exhibition-related scholarly research to create the most innovative and educational exhibitions for the public.

To achieve the goal of Strengthening Collections, the Museum is working toward digitizing the majority of the collection by the end of FY 2015. The Museum will also continue to support an on-site graduate program with the New School/Parsons on the history of decorative arts and design, which will enable students and scholars to access objects in CHNDM's collections.

CHNDM will achieve the goal of Revitalizing Education by continuing to engage and inspire diverse audiences through continual national outreach efforts. Cooper-Hewitt offers a wide variety of educational opportunities and programs, most of which are free. The goal across all of the programs is to engage K–12 students in the design process through active observation, critical discussion, creativity, and presentation. The programs foster collaboration among students, teaching them how to work in teams, and to define problems and find solutions, while improving their verbal and written communication skills. Cooper-Hewitt will continue to bring design workshops into classrooms across New York City, with the goal to launch these workshops nationally.

The Museum will also continue to offer an expanded Smithsonian Design Institute program nationally as well as in New York City. This program is geared to K–12 educators and draws a steadily increasing national and international audience each year.

CHNDM hopes to make its educational opportunities available to a broader audience in FY 2015 through greater use of the World Wide Web. In particular, the Museum plans to devote resources to increase the accessibility of educational programs through its website for K–12 teachers, (www.educatorresourcecenter.org), through expanded components of the *City of*

Neighborhoods educational programs and Smithsonian Design Institute educational programs to make program resources available to broader audiences. The Educators' Resource Center is a website that uses downloadable lesson plans aligned to national standards to show K–12 teachers how design-based learning works with diverse learning styles. These online tools provide educators with the resources they need to engage in the design process and use it effectively in their classrooms.

To further the Smithsonian's goal of Mission Enabling, CHNDM will enhance its reputation, and that of the Smithsonian, by continuing to secure significant media coverage across national and international print and digital platforms such as *The New York Times*, *The Washington Post*, and *The Wall Street Journal*, as well as general interest publications and those relating to all fields of design. Cooper-Hewitt will maintain and cultivate substantive relationships with the public, its existing membership community, state and local governments, children, educators, business leaders, and designers.

Mission Enabling support goals will be achieved through reviews of on-site and off-site storage, redesign of CHNDM's website to create a world-class online resource for design education, and streamlined financial systems to improve the efficiency of the procurement process. Additionally, the Museum is close to completing an ambitious two-phase renovation project.

Phase One (Townhouse) of the Museum's renovation was completed in 2011. The renovation provides a new public entrance on East 90th Street for direct access to a modernized National Design Library with two reading rooms and a rare book facility. The renovated space also includes curatorial and administrative offices and an additional classroom.

Phase Two, Museum (Carnegie Mansion) renovation, which began in FY 2012, will increase exhibition space with a spectacular new third-floor gallery. The open floor plan will provide additional room for Cooper-Hewitt to showcase objects it previously did not have the capacity to exhibit before. Along with expanded gallery space on the second floor, Cooper-Hewitt's exhibition space will increase by 60 percent, resulting in four entire floors dedicated to exhibitions and public programming.

The renovation will enable the Museum to play an important and vibrant role locally and globally. After the renovation, it is estimated that the Museum will experience 100 percent growth in the number of students participating in Cooper-Hewitt's programs, and surpass 350,000 visitors to the Museum per year. Only with renovated and improved facilities will Cooper-Hewitt be able to accommodate this growth and fulfill its mission as the nation's premier design education resource and authority for design enthusiasts of all ages.

NONAPPROPRIATED RESOURCES — Nonappropriated resources support 70 percent of the Museum’s operating budget. General trust funds are generated from memberships, Museum shop sales, admissions, special events, and unrestricted donations. General trust funds support salaries and benefits of administrative personnel, development and business activities, and other program-related costs. The Museum also raises funds from private sources to support research, exhibitions, public programs, and administrative functions. This includes securing donations for new exhibitions, educational initiatives, and public outreach. Donor/sponsor-designated funds are critical to support exhibitions and educational initiatives. In addition, significant endowment gifts support research, exhibitions, public programs and administrative functions. The Museum’s Board of Trustees contributes to the fundraising campaign, and both New York City and New York state are supporting CHNDM’s Capital Campaign.

HIRSHHORN MUSEUM AND SCULPTURE GARDEN

	APPLICATION OF OPERATING RESOURCES							
	FEDERAL APPROPRIATIONS		GENERAL TRUST		DONOR/SPONSOR DESIGNATED		GOV'T GRANTS & CONTRACTS	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2013 ENACTED	37	4,209	1	1,508	20	4,256	0	0
FY 2014 ENACTED	37	4,270	2	556	41	2,093	0	0
FY 2015 ESTIMATE	37	4,342	2	659	43	2,093	0	0

**STRATEGIC GOALS: EXCELLENT RESEARCH; BROADENING ACCESS;
REVITALIZING EDUCATION; STRENGTHENING COLLECTIONS; AND
MISSION ENABLING**

Federal Resource Summary by Performance Objective and Program Category

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Excellent Research						
<i>Research</i>						
Engage in research and discovery	2	294	2	294	0	0
Broadening Access						
<i>Digitization and Web Support</i>						
Provide improved digitization and Web support	1	117	1	117	0	0
<i>Public Programs</i>						
Provide reference services and information	2	284	2	284	0	0
<i>Exhibitions</i>						
Offer compelling, first-class exhibitions	12	1,456	12	1,492	0	36
Revitalizing Education						
<i>Education</i>						
Engage and inspire diverse audiences	4	453	4	453	0	0
Strengthening Collections						
<i>Collections</i>						
Improve the stewardship of the national collections	9	1,068	9	1,104	0	36
Mission Enabling						
<i>Facilities</i>						
Improve the overall cleanliness and efficient operation of Smithsonian facilities	1	92	1	92	0	0
<i>Security and Safety</i>						
Provide world-class protection for Smithsonian facilities, collections, staff, visitors, and volunteers	2	162	2	162	0	0

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Information Technology						
Modernize the Institution's information technology systems and infrastructure	1	75	1	75	0	0
Management Operations						
Strengthen an institutional culture that is customer centered and results oriented	2	203	2	203	0	0
Ensuring Financial Strength						
Secure financial resources required for the Institution's mission	1	66	1	66	0	0
Total	37	4,270	37	4,342	0	72

BACKGROUND AND CONTEXT

The Hirshhorn Museum and Sculpture Garden (HMSG) is a leading voice for contemporary art and culture, and provides a national platform for the art and artists of our time. The Museum seeks to share the transformative power of modern and contemporary art with audiences at all levels of awareness and understanding by creating meaningful, personal experiences in which art, artists, audiences, and ideas converge. The HMSG enhances public understanding and appreciation of contemporary art through acquisition, exhibitions, education and public programs, conservation, and research.

The Museum allocates resources to further the Institution's goals so that progress toward one goal supplements work toward the others. For instance, through its efforts to pursue the goal of Excellent Research, the HMSG has developed a deep expertise in the conservation of time-based media works that are at the forefront of contemporary art, and this knowledge enables the Museum to sustain these works under the strategic goal of Strengthening Collections, and to display these works in compelling exhibitions under the goal of Broadening Access.

The HMSG dedicates a significant portion of its resources to the Institution's goal of Broadening Access, primarily through its presentation of insightful, deeply researched exhibitions of modern and contemporary artists, many of them with novel thematic interpretations that win critical and public acclaim. The HMSG supplements these exhibitions with an active roster of public programs, critical essays, and carefully selected images in original catalogues, and through continued progress in digitizing images of every work in the collection and highlighting them on the Museum's re-designed website.

The Museum's extensive collection is central to its purpose, and, pursuant to the Institution's goal of Strengthening Collections, the HMSG dedicates another substantial portion of its resources to the preservation of its thousands of artworks. These artworks have been highlighted in several collection shows such as *Dark Matters*, *Over Under Next*, *Out of the Ordinary*, and *Fragments in Time and Space* and *Gravity's Edge* in FY 2012, FY 2013, and FY 2014. The strength

of this collection and the need to preserve it will be highlighted significantly as the Museum approaches its 40th anniversary in 2014. Moreover, the HMSG continues to make these artworks available to museums around the country with a very active loan program, and lends staff expertise on conservation matters to arts organizations around the globe.

The Museum contributes to the strategic goal of Revitalizing Education with Artlab+ and numerous educational programs, including a gallery interpretive guide project that is adapted to audience areas of interest and ongoing research from many fields of contemporary culture, and efforts to bring senior, non-museum education professionals into programs where they can expand on the HMSG's didactic approaches. Artlab+ is a digital media studio for local teenagers, giving them access to professional technology and art, and connecting them to artist mentors who build a community of young creators. Artlab+ has been a signature achievement of the Museum and has received critical acclaim from the broader educational community and from one of its primary funders, the MacArthur Foundation, as well as support from the Pearson Foundation and the Smithsonian Youth Access Grant. The Museum pursues the goal of Mission Enabling by constantly improving its financial and administrative management tools and procedures.

The budget request includes an increase of \$72,000 for necessary pay and other related salary costs for existing staff funded under this line item.

MEANS AND STRATEGY

In FY 2015, Excellent Research continues as the Museum develops a major public forum on the intersections of art, design, technology and education, featuring international subject-matter experts and an interactive online component effectively extending participation to audiences far beyond the walls of the Museum. Also, the Museum will expand its series of online and on-site programs dealing with the role of technology and new media in contemporary art, museum culture, and digital education.

FY 2015 exhibitions will remain at the forefront of the Hirshhorn Museum and Sculpture Garden's missions to broaden access to the arts and, specifically, to increase public understanding of and engagement in the transformative power of modern and contemporary art. The Museum will open the year with a major exhibition of its collection in the newly refurbished third floor, and also with *Days of Endless Time*, an exhibition that emphasizes escape, solitude, and the thrall of nature.

Other major events in FY 2015 will be a retrospective of the work of *Robert Irwin, Salvatore Scarpitta: Traveler*, the first solo exhibition of this artist's work in America for more than a decade, the re-installation of the Museum's lobby and bookstore, and exhibitions of *Rafael Lozano-Hemmer* and *Speculative*

Forms, an exhibition featuring much of the Museum's extensive sculpture holdings.

The Museum's distinctive *Directions* series will continue to feature work by important emerging national and international artists. A continuing series of moving-image artworks by emerging national and international artists will also be displayed in the Museum's dedicated Black Box gallery space. All exhibitions presented in FY 2015 will be complemented by a combination of public tours led by interpretive guides, docents, and invited specialists, lectures and other public programs, and brochures, catalogues, and online educational resources.

With a redesigned website, the Museum will further the goal of Broadening Access by engaging with local and remote audiences as they draw in information with individualized knowledge portals. HMSG will also refine its communication procedures to diffuse deep knowledge of contemporary art and culture, whether presented in the Museum or elsewhere, and not merely describe events in superficial terms. The Museum will still publish original catalogues to complement the viewing of its exhibitions, and produce other books which examine modern art, design, and cultural shifts of the early 21st century.

The Museum will support Revitalizing Education with a range of programs geared toward people with varying levels of art experience and cultural interests, and by expanding or revising the concept of a museum as a center of learning. As in previous years, one or more working artists will design and lead Artist at Work with Youth workshops for elementary school-aged children, with three sessions in both the fall and spring. Artists will also present their ideas and inspirations to people of all ages in the "Meet the Artist" programs and "In Conversation" interviews and panel discussions. The Museum will draw upon a wide pool of artists, researchers, and experts from unexpected fields to provide interpretive tours in Friday Gallery Talks. It will present Washington's most thought-provoking film series, portraying art and critical thought from independent artists and documentary film makers from around the world. In concert with major educational foundation sponsors, HMSG will expand the Artlab+ program into the lobby of the Museum to create a design studio where teenagers can attend workshops to learn about and explore digital media. The Museum will sustain its "Interpretive Guides" program, which brings advanced art students into the galleries to aid visitors' critical experience with art on display, and which develops the students' own education objectives and teaching skills.

In FY 2015, the Museum's main action to achieve the goal of Strengthening Collections will involve the planning and fundraising effort to reconfigure some office and storage space on the fourth floor. This will allow the Conservation Lab to be moved from the basement to the fourth floor, where natural light will greatly enhance the activities of the Conservation Lab. In addition, the HMSG will further develop itself as a center for research and preservation of time-based media (e.g., film, digital video and audio) artworks, by

presenting the symposium, “TechFocus II” with the Museum’s partner institution, the American Institute for Conservation of Historic and Artistic Works.

The Museum will seek to complete its efforts to photograph and catalogue the entire permanent collection, and bring ever more of the collection to the public via extensive search features on the HMSG public website.

Under the goal of Mission Enabling, the Museum will continue to pursue capital projects that merge the functional with the artistic through the inclusion of artists and designers with central Smithsonian engineering staff. The Museum will continue to refine its public spaces for visitors who apply mobile technology in every facet of life, and expect access to Web-based knowledge and social media platforms to enliven their interpretive experience as they explore Museum galleries. The HMSG administration will continue to institute long-range program planning reviews to improve resource allocation, funds management, and more effective cost sharing of major exhibitions and programs with outside organizations. By identifying and working with partners in the private sector, HMSG senior leaders will leverage the Museum’s federal appropriations to the maximum extent possible.

NONAPPROPRIATED RESOURCES — General trust funds support salaries and benefits of administrative and development personnel, as well as some programs and public relations staff, development activities, and exhibition and program-related costs. Donor/sponsor-designated funds support development, exhibitions, public programs, communications, and marketing.

NATIONAL MUSEUM OF AFRICAN ART

	APPLICATION OF OPERATING RESOURCES							
	FEDERAL APPROPRIATIONS		GENERAL TRUST		DONOR/SPONSOR DESIGNATED		GOV'T GRANTS & CONTRACTS	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2013 ENACTED	27	4,153	5	826	3	1,980	0	0
FY 2014 ENACTED	27	4,209	5	902	4	771	0	0
FY 2015 ESTIMATE	27	4,266	4	940	4	771	0	0

**STRATEGIC GOALS: EXCELLENT RESEARCH; BROADENING ACCESS;
REVITALIZING EDUCATION; STRENGTHENING COLLECTIONS; AND
MISSION ENABLING**

Federal Resource Summary by Performance Objective and Program Category

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Excellent Research						
Research						
Engage in research and discovery	3	650	3	656	0	6
Broadening Access						
Digitization and Web Support						
Provide improved digitization and Web support	1	94	1	96	0	2
Public Programs						
Provide reference services and information	4	480	4	488	0	8
Exhibitions						
Offer compelling, first-class exhibitions	8	1,050	8	1,067	0	17
Revitalizing Education						
Education						
Engage and inspire diverse audiences	3	550	3	556	0	6
Strengthening Collections						
Collections						
Improve the stewardship of the national collections	4	750	4	759	0	9
Mission Enabling						
Information Technology						
Modernize the Institution's information technology systems and infrastructure	1	160	1	162	0	2
Management Operations						
Strengthen an institutional culture that is customer centered and results oriented	3	475	3	482	0	7
Total	27	4,209	27	4,266	0	57

BACKGROUND AND CONTEXT

Africa — the cradle of humanity — is part of everyone’s heritage. The mission of the National Museum of African Art (NMAfA) is to inspire conversations about the beauty, power, and diversity of African arts and cultures worldwide. The Museum’s vision is to be the world’s leading center of scholarly and artistic excellence on the arts of Africa. The Museum accomplishes its mission and vision through effective use of its unparalleled collections, exhibitions, programs, publications, and educational initiatives, which are widely accessible and strengthened through collaborations with African, diasporic, and global arts communities. The Museum collects and exhibits ancient to contemporary works of art from the entire continent of Africa. NMAfA’s activities and programming support the Grand Challenges of the Smithsonian’s Strategic Plan, particularly in the areas of Valuing World Cultures and Understanding the American Experience.

To achieve the goal of Broadening Access, the NMAfA dedicates resources to the Web and to the Museum’s social media capabilities, integrates digital technology in exhibitions, provides online educational resources, and promotes public access to the Museum’s art and photographic collections. A key component of Museum operations is the creation of temporary and semi-permanent exhibitions of artworks from its own collection and from other museum and private collections. In FY 2015, the Museum will present two new temporary exhibitions, one that features contemporary African art, and another that features traditional and contemporary African art in connection with works of African American art, the latter from a private collection. Both include publications, and one will also include a family guide. In addition, one temporary exhibition that opened in FY 2014 will remain on view in FY 2015; an exhibition devoted to the historic photography of one of Nigeria’s premier photographers, Chief S.O. Alonge, photographer to the court of Benin.

The Museum will also develop programming, online exhibitions, and educational outreach in connection with the *Gems of the Indian Ocean* project. Throughout FY 2014 and into FY 2015, the Museum will revise its permanent collection exhibition, *African Mosaic*, rotating selected works of traditional, popular and contemporary arts into the gallery. It does not include a publication, other than a revised version of a “How to Look at African Art” brochure. Depending on the exhibition calendar and funding support, a possible late FY 2014 or early FY 2015 exhibition developed by the Museum in collaboration with the Smithsonian Institution Libraries will open and focus on African artists’ books. A publication is also planned for this project.

Early in FY 2015, the Museum will open *Conversations: African and African American Artworks in Dialogue*, which features traditional and contemporary works of art from the NMAfA in thematic conversation with works of African American art from a private collection. The publication will include

interviews, scholarly essays, and full-color plates. The new temporary exhibition, also opening in FY 2015, is a contemporary exhibition, *Divine Comedy*, organized by the Museum in collaboration with an independent curator, and will include a publication.

In FY 2015, the Museum will continue to develop future exhibitions, including a contemporary exhibition, slated for FY 2016, featuring the work of two African artists that is part of the *Artists in Dialogue* series. This will include a publication. The Museum will also pursue ongoing development of an exhibition and publication devoted to African women artists and one on Ethiopian devotional art, both slated for FY 2016 or FY 2017, funding permitting. NMAfA staff will continue to develop exhibition plans for gallery space on the Museum's third floor. The Museum will also begin to outline permanent collection publications in support of its traditional and contemporary collections, though publications, depending on the availability of staff.

The NMAfA will present new educational programs online, continue to catalogue objects and images from its collections for online access, and expand its outreach to local communities and underserved or new audiences, particularly African immigrant communities and young adult audiences. Expanded educational outreach to schools in the United States is planned via video-conferences. Outreach to eastern Africa's Swahili Coast and to Oman are planned in connection with the Museum's *Gems of the Indian Ocean* project. In keeping with the Smithsonian's Strategic Plan, the NMAfA will forge meaningful collaborations within and outside the Smithsonian, and strengthen its networking nationally and internationally — particularly on the continent of Africa.

The Museum will achieve its goal of Broadening Access through organizational excellence by continuing to improve information technology (IT) operations, staff performance, and media relations and marketing. A comprehensive IT plan will integrate all of the Museum's IT operations. A media and marketing strategy, renewed annually, will expand NMAfA's visibility and membership, and promote its programs locally, nationally, and internationally. A fundraising plan, renewed annually, will enhance the Museum's capacity to offer outstanding exhibitions, publications, programs, and outreach activities. Furthermore, the Museum will continue to assess its effectiveness in reaching out to educators, scholars, and the public through the use of visitor surveys and other performance evaluation tools.

As a way to establish the staff as stakeholders in the success of the NMAfA, the goals of the Museum's strategic plan and the Secretary's goals will continue to be integrated into the performance plans of all staff members. Emphasis will be on public visibility and customer-centered performance. At the same time, quality programming and ongoing research will continue to be the foundation for all NMAfA programs, including exhibitions.

The Museum will continue to increase its public visibility and fulfill its mission to various stakeholders, including students, teachers, cultural community organizations, the diplomatic corps, African immigrant groups, scholars, collectors, and volunteers located in the metropolitan Washington, DC area. An enhanced Web presence and social media capabilities will expand the Museum's visibility and impact nationally and internationally.

The budget estimate includes an increase of \$57,000 for necessary pay and other related salary costs for existing staff funded under this line item.

MEANS AND STRATEGY

The NMAfA will achieve the goals of Broadening Access and Revitalizing Education by directing resources to activities that will result in consistently high-quality programs and larger audiences. The Museum will provide greater Web and digital access to NMAfA collections through enhanced navigation features via eMuseum and multi-media applications, and by completing additional image and object catalogue records for the Museum's public access database. The Museum's website, revised in FY 2014, will be expanded in FY 2015 to include additional podcasts, blogs, Facebook and Twitter options, online educational resources, activities for younger audiences, and an expanded Web presence for the Eliot Elisofon Photographic Archives.

In addition, the NMAfA will continue to seek visitor feedback on exhibitions and programs, and implement performance assessments of its public programs. The Museum will continue to engage with its diverse audiences through programming and, in particular, through outreach with teachers of primary, secondary, and college students, as well as representatives from the Museum's African Immigrant Advisory Group and local community groups, to seek input for exhibitions and programs and activities. These efforts will result in more effective planning and development of programs and services which will enable the Museum to reach its target groups and expand its audience base. In addition, marketing strategies will be reviewed and tested to determine the most effective ways to engage and communicate with diverse audiences.

Ongoing educational programs will include "Africa in Motion" musical and dance performances, programs geared to younger visitors and family groups, such as "Let's Read About Africa," storytelling and art-making activities, exhibition-related teacher/student workshops and teleconferences, and an annual Community Day. The NMAfA will also use lectures, gallery tours, and film series based on the Museum's current exhibitions to attract mixed-generation audiences. For adult audiences, the Museum will continue to present African films and scholarly lectures, drawing on current exhibitions and featuring noted scholars and artists. In addition, the Museum will continue its successful Director's Series, featuring NMAfA's director in conversation with leading figures associated with Africa and its diasporas.

The Museum will continue its quarterly Conservation Clinics to educate the public about conservation and the important relationships linking science, technology, and art. Ongoing quarterly Curatorial Clinics will continue to provide opportunities for members of the public to learn about African art forms, styles, materials, and contexts of use as part of museum connoisseurship and object quality assessments. To educate casual and serious collectors of African art, the Museum's website will expand to include helpful tips on object identification, assessment, and care.

To achieve the goal of Strengthening Collections, the Museum will continue online cataloguing of its art and photographic collections; the NMAfA's priorities will be recent acquisitions, the Museum's collection of contemporary art, the Walt Disney-Tishman African Art Collection and the Eliot Elisofon Photographic Archives. Digital access to these materials will facilitate research and study by students, teachers, scholars, conservators, and the public. The Museum will continue to integrate contextual photographs from the Eliot Elisofon Archives with related objects in the collection.

The Museum's *Walt Disney-Tishman Highlights* exhibition will close in the second quarter of FY 2014 to prepare the gallery for a temporary exhibition, opening at the start of FY 2015, of photographs from the Eliot Elisofon Photographic Archives. This will also allow Museum conservators ample opportunity to examine works from the Disney-Tishman collection which have been on long-term view, and to prepare for an FY 2106 reinstallation of the gallery devoted to this important collection. Selected works from the Walt Disney-Tishman African Art collection will be on view throughout the Museum's gallery spaces, and a gallery guide/treasure hunt card will be developed to lead visitors to works from this collection. The exhibition *African Mosaic*, which features selected highlights from the Museum's acquisitions over the last decade, will continue into FY 2015, although plans will be developed to move this exhibition into a gallery devoted to the permanent collection but featuring changing cases and rotating themes.

The Museum will open two new temporary exhibitions in FY 2015, both developed by the NMAfA. *Conversations: African and African American Artworks in Dialogue* brings together traditional and contemporary African art from the Museum's collections in connection with African American artworks from a private collection. The scholarly publication will include interviews, essays, and full-color images. Also in FY 2015, the Museum will present a new and innovative exhibition, *Divine Comedy*, organized by the Museum in collaboration with a guest curator, which will open in FY 2015. During FY 2015, work will be under way for the FY 2016 exhibition, *Artists in Dialogue 3*, a contemporary exhibition with a publication organized by the Museum in collaboration with featured artists. This third exhibition in the Museum's series features the work of Kenyan-born artist Wengechi Mutu in conversation with one artist of her choosing.

Also during FY 2015, visitors will continue to enjoy the exhibition and publication of *Chief S. O. Alonge: Photographer to the Court of Benin, 1926–1989*, which celebrates the history of Nigerian photography with a special focus on the Museum's collection of photographs by one of that country's early premier photographers. As an official photographer for the Royal Court of the Benin Kingdom, Alonge documented the rituals, pageantry, and regalia of the court for more than a half century. The exhibition, drawn from the collection of the Eliot Elisofon Photographic Archives, features selected photographs and other materials which explore the history of photography in Nigeria, with a concentration on Alonge's work. The exhibition and accompanying publication, developed and authored by the Museum's supervisory archivist in collaboration with an NMAfA curator and an outside scholar, highlight works of art from the court of Benin in the Museum's permanent collection and rare photographs from the Museum's Eliot Elisofon Photographic Archives. Educational programs and outreach will be developed in support of the Museum's exhibitions throughout FY 2015.

The Museum will continue ongoing development of an exhibition and publication on Ethiopian devotional art, as part of an exhibition and publication proposed for FY 2016 or FY 2017.

The Museum will also devote staff resources to the planning of exhibitions in FY 2016 and beyond, including the reinstallation of 60 works from the Walt Disney-Tishman African Art Collection. Staff members will also devote considerable effort to planning the installation of a reconfigured gallery devoted to the Museum's permanent collection. This long-term display of selected works from the NMAfA's permanent collection will attract general audiences, collectors, and scholars, as well as local school groups that rely on consistently available works of art for their themed tours and curriculum projects. The Museum will continue to develop rotating exhibitions from the permanent collection for the small Point of View Gallery, when it is not in use for large contemporary exhibitions. Finally, the Museum will continue to plan for an exhibition focused on African women artists, as well as an exhibition on Ethiopian devotional arts, which are slated for FY 2016 or FY 2017.

To address the goal of Broadening Access, the NMAfA is focusing resources in several areas: IT operations, staff performance and accountability, and relations with the media. The Museum's IT plan has integrated information technology functions for administration, collections management, exhibitions, and public access. The IT plan will continue to be reviewed on an annual basis, with updates made as needed. Museum administrators will use the five-year strategic plan and feedback from visitor surveys to update the NMAfA's operational plan and ensure quality public programs and experiences for all audiences.

The Museum is becoming more accountable by integrating its strategic goals and operational plans with the Secretary's annual goals into the

performance plans for all NMAfA staff members. In addition, personnel and programmatic management responsibilities have been incorporated into the performance plans of all department heads to provide more effective review of programs, activities, and relevant projects which meet the expectations of the Museum's audiences. Educational brochures and special websites will increase the educational value of NMAfA exhibits. The Museum will continue to forge better relations with news media, corporations, foundations, community interest groups, and congressional representatives by expanding its contact base and distributing more information about NMAfA activities, events and programs.

NONAPPROPRIATED RESOURCES — General trust funds support staff salaries, benefits, and travel. Funds raised from individual and corporate donors support NMAfA's major exhibition efforts, including exhibition-related publications, educational programming, and outreach initiatives. Corporate and foundation sponsorships support the planning and development of exhibitions, including installation expenses and exhibition-related public programming, travel, and curatorial collaborations.

Introduction, *Understanding the American Experience*

America is an increasingly diverse society that shares a history, ideals, and an indomitable, innovative spirit. The Smithsonian will use its vast resources across disciplines to explore what it means to be an American and how the disparate experiences of individual groups strengthen the country as a whole, and to share our story with people of all nations.

RESEARCH Goal: The Smithsonian advances and synthesizes knowledge that contributes to understanding the American experience, particularly with regard to its history, art, and culture, as well as its connections to the rest of the world.

ACCESS Goal: The Smithsonian turns knowledge into awareness, action, and results, and encourages American cultural vitality.

UNITS primarily associated with this Grand Challenge:

- **Anacostia Community Museum**
- **Archives of American Art**
- **National Museum of African American History and Culture**
- **National Museum of American History, Behring Center**
- **National Museum of the American Indian**
- **National Portrait Gallery**
- **National Postal Museum**
- **Smithsonian American Art Museum**

The President's Budget includes a separate, fully paid for \$56 billion Opportunity, Growth, and Security (OG&S) Initiative. This initiative provides additional discretionary investments in 2015 to spur economic progress, promote opportunity, and strengthen national security.

This initiative fully supports the Institution's Strategic Plan, specifically in the area of Excellent Research. A specific research program, Curating History and Culture, is key to the success of achieving the Smithsonian Institution's strategic goals and objectives. Details on this program are in a separate section of this budget submission (on page 244 behind the OG&S tab).

ANACOSTIA COMMUNITY MUSEUM

	APPLICATION OF OPERATING RESOURCES							
	FEDERAL APPROPRIATIONS		GENERAL TRUST		DONOR/SPONSOR DESIGNATED		GOV'T GRANTS & CONTRACTS	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2013 ENACTED	18	2,044	2	547	0	159	0	23
FY 2014 ENACTED	18	2,079	3	565	0	375	0	25
FY 2015 ESTIMATE	18	2,112	3	565	0	375	0	25

STRATEGIC GOALS: EXCELLENT RESEARCH; BROADENING ACCESS; REVITALIZING EDUCATION; STRENGTHENING COLLECTIONS; AND MISSION ENABLING

Federal Resource Summary by Performance Objective and Program Category

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Excellent Research						
Research						
Engage in research and discovery	2	318	2	322	0	4
Ensure the advancement of knowledge in the humanities	1	131	1	135	0	4
Broadening Access						
Public Programs						
Provide reference services and information	3	395	3	400	0	5
Exhibitions						
Offer compelling, first-class exhibitions	3	395	3	400	0	5
Revitalizing Education						
Education						
Engage and inspire diverse audiences	1	70	1	72	0	2
Strengthening Collections						
Collections						
Improve the stewardship of the national collections	3	289	3	293	0	4
Mission Enabling						
Management Operations						
Strengthen an institutional culture that is customer centered and results oriented	2	218	2	220	0	2
Ensure that the Smithsonian workforce is efficient, collaborative, committed, innovative, and diverse	1	86	1	88	0	2
Modernize the Institution's financial management and accounting operations	1	89	1	91	0	2
Enhance the reputation of the Smithsonian by maintaining good relations with the news media and with federal, state, and local governments	1	88	1	91	0	3
Total	18	2,079	18	2,112	0	33

BACKGROUND AND CONTEXT

Founded on September 15, 1967 as the first federally funded, community-based museum, the Anacostia Community Museum (ACM) has developed into a valuable cultural resource for the region and the country, setting a groundbreaking direction in terms of expanding on traditional museological thought and practice. The mission of the Museum is to challenge perceptions, broaden perspectives, generate new knowledge, and deepen understanding about the ever-changing concepts and realities of “community.” The work of the Museum is steeped in the Smithsonian’s Grand Challenge initiative, Understanding the American Experience and expands into the Grand Challenge Valuing World Cultures.

Responding to audience input, the Museum quickly focused on community engagement and adapted its approach to museum practices. The predominantly African American local residents (97 percent) were concerned with the documentation, preservation, and interpretation of history and culture from a community-based perspective. Drawing on this background, ACM was the forerunner in developing collaborations with different sectors of its surrounding communities, including local historical sites, religious institutions, and arts, cultural, and civic organizations. Museum staff mobilized to provide technical assistance to help community entities organize, document, and preserve their cultural heritage through research, exhibitions, education, and training programs.

During the past decade, the Washington, DC area has seen subtle but dramatic shifts in local demographics. With input from a broad range of stakeholders, the focus of the Museum was revised. The current ACM mission moves from a specifically ethnic focus to one that examines issues impacting urban communities. The Museum is focused on the documentation and interpretation of the impact of historical and contemporary social and cultural issues on communities east of the Anacostia River and similar urban communities throughout the region, the country, and the world. Although the Museum’s new identity is a return to its original charter as a community museum, the new direction defines the term “community” in much broader terms and addresses issues such as the environment, housing, health, education, urban development, and other cross-sections of community life that go beyond ethnicity.

The budget estimate includes an increase of \$33,000 for necessary pay and other related salary costs for existing staff funded under this line item.

MEANS AND STRATEGY

ACM will continue to work toward accomplishing the Institution-wide goal of inspiring generations through knowledge and discovery. ACM also continues to embrace the Smithsonian Grand Challenges and use its resources, strengthened through collaborative efforts, in research, exhibitions, collections, and public and other education programs. Using resources which engage the

broad range of Smithsonian and external partners, ACM will draw upon specific things that bring groups of people together — social, ethnic, religious, geographic, and other commonalities. Specifically, the Museum will work with community partners to document and preserve local heritage, identify cultural materials at risk, document significant local cultural materials, and develop an interpretation and appreciation of them through regionally based educational activities, publications, and exhibitions. Through its website, the Museum will disseminate information on heritage and community preservation projects and provide access to its collections and research.

The Museum's current main gallery exhibition *Ubuhle Women: Beadwork and the Art of Independence* is on view through September 2015. There are 31 pieces of intricate bead art reflecting the situations and aspirations of a community of women in the rural South African province of KwaZulu-Natal. Ubuhle Beautiful Beads is an organization developed and established in 1999 by Bev Gibson and Ntombephi Ntombela, a master beader. The devastation caused by poverty, HIV/AIDS, and the abuse of women and children in rural KwaZulu-Natal was the catalyst for the establishment of Ubuhle. Gibson and Ntombela created the organization to help restore the dignity of victims of poverty and abuse by providing local women with the opportunity to empower themselves not only through achieving a level of economic stability, but also by giving them the freedom to develop their own artistic visions and train rural women in the traditional art of beading to ensure that this skill is not lost.

The correlation with women's issues in southeast Washington, DC, where HIV/AIDS and issues surrounding domestic violence are at epidemic proportions, is being punctuated with a series of public programs and complemented with a two-part exhibition of African American quilts from the Museum's permanent collection, entitled *Home Sewn: Quilts from the Lower Mississippi Valley*. Part I is on view from December 2013–June 2014, followed by Part II from June 2014–January 2015, in the ACM community gallery.

Also opening in FY 2015 are the exhibitions *How the Civil War Changed Washington*, which will be on view from October 2014–September 2015, and *The Plummer Family and Bladensburg Burial Society* based on Civil War-era holdings from the Museum's permanent collection, which will be on view from February–October 2015.

In addition, ACM's highly acclaimed exhibition *Word, Shout, Song: Lorenzo Dow Turner Connecting Communities through Language* has been traveling throughout the United States since October 2011. In FY 2014, ACM received funding from the U.S. Department of State to send the exhibition to four major cities in Brazil. The exhibition will premiere in Rio de Janeiro in June 2014 and then be shown in Bahia, Brasília, and Sao Paulo through May 2015.

Several research and collections access initiatives, facilitated by the ACM Community Documentation Initiative (CDI), are ongoing. From a partnership with

the American University Graduate School of Communication, students facilitate a project called Community Stories in which current and former residents of the city's 8th Ward provide video oral histories and participate in the CDI project to document their personal experiences and observations. The videos and other data collected from the CDI real-time documentation of community history (Washington, DC Wards 7 and 8) will be made accessible to scholars, students, and the public through Web-based media. Continued digitization of the ACM archival and material culture collections will increase public access to the Museum's holdings.

Recognizing ACM's unique responsibility to youth development within the southeast Washington, DC community and beyond, the Museum Academy Program (MAP) out-of-school-time component will continue for students in the third through fifth grades at the Savoy Elementary School. There will be a menu of programmatic activities, from cultural enrichment to educational enhancement and career training, which can be tailored to meet the specific needs of each collaborative community partner. In FY 2013, with support from the Smithsonian Women's Committee, ACM education staff partnered with the United Planning Organization (UPO), Youth Services Division, to implement a new Citizen Scientist Project. The project is an out-of-school-time, scientific inquiry-based enrichment program for at-risk high school students. It is designed to engage the citizens of the Anacostia watershed in project-based educational activities, resulting in increased environmental awareness and civic engagement. Research projects, field trips that emphasize science-based inquiry, and mass communication skill development constitute the foundation of project activities. The project is being continued in FY 2014 and ACM requests funding to continue the program in FY 2015 as well.

ACM maintains substantive relationships with state and local governments through the regional partnership process. Museum staff will offer training and technical assistance to strengthen local, regional, and national partners' abilities to preserve local heritage. In addition, the Museum will increase its public awareness efforts and expand access to its programs and collections via its website, social media, press outlets, and publications.

NONAPPROPRIATED RESOURCES — FY 2015 general trust and other non-designated trust funds support the salaries and benefits of the Museum director, director of advancement, and development officer. These trust funds also support donor cultivation and fundraising activities that assist efforts to reach the ACM's Smithsonian Campaign fundraising goal.

ARCHIVES OF AMERICAN ART

	APPLICATION OF OPERATING RESOURCES							
	FEDERAL APPROPRIATIONS		GENERAL TRUST		DONOR/SPONSOR DESIGNATED		GOV'T GRANTS & CONTRACTS	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2013 ENACTED	17	1,817	1	319	17	1,782	0	0
FY 2014 ENACTED	17	1,844	1	564	22	2,378	0	0
FY 2015 ESTIMATE	17	1,877	1	564	22	2,365	0	0

STRATEGIC GOALS: EXCELLENT RESEARCH; BROADENING ACCESS; REVITALIZING EDUCATION; STRENGTHENING COLLECTIONS; AND MISSION ENABLING

Federal Resource Summary by Performance Objective and Program Category

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Excellent Research						
<i>Research</i>						
Ensure the advancement of knowledge in the humanities	0	4	0	4	0	0
Broadening Access						
<i>Digitization and Web Support</i>						
Provide improved digitization and Web support	4	379	3	306	-1	-73
<i>Public Programs</i>						
Provide reference services and information	3	279	3	277	0	-2
<i>Exhibitions</i>						
Offer compelling, first-class exhibitions	1	79	1	81	0	2
Revitalizing Education						
<i>Education</i>						
Engage and inspire diverse audiences	0	4	0	4	0	0
Strengthening Collections						
<i>Collections</i>						
Improve the stewardship of the national collections	7	806	8	886	1	80
Mission Enabling						
<i>Management Operations</i>						
Strengthen an institutional culture that is customer centered and results oriented	2	293	2	319	0	26
Total	17	1,844	17	1,877	0	33

BACKGROUND AND CONTEXT

Founded in 1954, the Smithsonian's Archives of American Art (AAA) is the world's pre-eminent and most widely used resource for original papers and other primary records documenting the visual arts in the United States. By collecting, preserving and making available more than 20 million unique letters, diaries, photographs, financial records, sketchbooks, scrapbooks, and the like, AAA shares and exemplifies the Smithsonian's mission of "the increase and diffusion of knowledge."

To achieve the Institution's goal of Broadening Access, AAA continues its ambitious digitization program, begun in 2005, to provide online access to a significant portion of its extensive holdings. AAA's website will continue to improve delivery of unprecedented numbers of new digital files, the core of which represents AAA's innovative work to digitize entire archival collections, representing hundreds of linear feet, along with descriptive information, engaging content, online exhibitions, and robust search and reference services. AAA's Lawrence A. Fleischman Gallery in the Donald W. Reynolds Center (DWRC) continues to reach new and diverse audiences.

The strategic goal of Strengthening Collections will be achieved by continuing to implement preservation actions based upon results derived from comprehensive and systematic collection assessment surveys. Particular focus will be on decreasing the backlog of unprocessed collections and audiovisual and born-digital holdings.

AAA will accomplish the goal of Mission Enabling through organizational excellence by continually assessing and enhancing staff development and maintaining conscientious oversight of internal controls.

The budget estimate includes \$33,000 for necessary pay and other related salary costs for existing staff funded under this line item.

MEANS AND STRATEGY

AAA will achieve the Institution's goal of Broadening Access by continuing to direct resources to optimize its presence in the DWRC and specifically by mounting compelling exhibitions in its Lawrence A. Fleischman Gallery. The exhibitions planned for FY 2015 include *A Day in the Life: Diaries from the Archives of American Art*, followed by *Mail Art*, an exhibition focusing on an international network of artists who exchanged artworks through the U.S. Postal System.

In addition, AAA will reach new audiences through traveling exhibitions. In December 2014, the exhibition *Season's Greetings: Handmade Holiday Cards by 20th Century Artists* will be at the Morgan Library and Museum. The Archives will

continue its Archives of American Art Graduate Student Research Essay Prize funded by the Dedalus Foundation. Through public programs, professional presentations, online exhibitions, and loans to other museums and institutions worldwide, AAA will continue to widen its audience and provide a greater understanding of the history of visual arts in the United States.

The AAA website will continue to promote public engagement, through increased emphasis on social media, incorporating emerging trends and technologies, and efficient and effective reference services. Through its implementation of the Aeon patron management software that began in FY 2014, with support from the Smithsonian Women's Committee, AAA will continue to encourage public visits to its website by adding finding aids to processed collections; tens of thousands of images of digitized documents; transcripts and audio of interviews conducted for the Archives' Oral History Program; audio and video recordings; and online exhibitions.

In FY 2015, AAA will increase its development of the Terra Foundation Center for Digital Collections with at least an additional 60 linear feet of AAA's collections digitized in their entirety as part of the continuing support from the Terra Foundation for American Art through June 2016. This effort, in combination with digitization completed for reference requests, exhibitions, loans, and special projects, will add an estimated 150,000 digital image files and continue to bring increased public Web access to AAA collections. By supplementing federal funds with funding from the Terra Foundation for American Art, AAA will continue developing its internal digitization and Collection Information Systems application to ensure proper collections documentation and support increasingly complex workflows, including digitization on demand. These efforts will enable AAA to encompass the life cycle of the collections and oral histories from pre-acquisition to storage and access. AAA's investment in the digitization of its collections will be preserved by fully participating in the Smithsonian's Artesia Digital Asset Management System (DAMS), the Smithsonian Transcription Center, and other initiatives of the Smithsonian's digitization program.

In FY 2015, between 35 and 45 significant research collections, totaling about 800 to 900 linear feet, will be preserved and processed according to national standards and best practices, resulting in new, fully searchable finding aids added to AAA's website. This work will encompass minimal-level processing and preservation strategies begun in FY 2012, which were designed to efficiently and effectively diminish AAA's backlog of unprocessed collections and address new accessions within one year of acquisition.

AAA will continue to strengthen its collections stewardship through its ongoing, comprehensive collections assessment surveys, begun in 2004 for manuscript collections, and expanded since then to include at-risk audiovisual and born-digital holdings. Reports generated from this data provide valuable information about AAA's backlog and holdings so that the Archives' staff can

make informed decisions about the best way to prioritize and allocate our resources.

AAA will continue to provide researchers with access to its collections and microfilm in its Washington, DC and New York research centers, as well as affiliated research centers throughout the United States, by providing remote reference services through its Web-based form and interlibrary loan program.

The goal of Mission Enabling through organizational excellence will be addressed by continuing to implement the strategic goals of the Smithsonian, thereby ensuring that the AAA workforce is efficient and skilled, and by adopting best practices to safeguard and make the most cost-effective use of limited Smithsonian resources.

NONAPPROPRIATED RESOURCES — General trust funds support AAA's development office, including salaries and benefits. Donor-designated funds support specific programs and projects, including exhibitions, internships, production of oral history interviews, collections and media processing, and publication of the *Archives of American Art Journal*. In FY 2015, the Archives seek to re-position the *Journal* as the leading scholarly journal in the field of American art history, by establishing an advisory board, moving to a peer-review process, and investigating the viability of online publishing to incorporate new digital platforms and extend AAA's reach to a global audience.

FY 2015 grant funding from the Terra Foundation for American Art will support AAA's digitization program, new oral history interviews, and website development. The Terra Foundation project manager for online scholarly and educational initiatives will develop online learning initiatives to spark new discoveries and create a dialogue between AAA staff and the Archives' ever-expanding audience of Web visitors. A grant from the Mellon Foundation's Council of Library and Information Resources Hidden Collections grant program will increase online access to hidden and at-risk audiovisual media items. In addition, grants from the Smithsonian Women's Committee will support public website development and implementation of Aeon for managing reference services. AAA will continue to engage in fund raising as part of the Smithsonian Institution's National Campaign, seeking to raise money for general operating expenses.

NATIONAL MUSEUM OF AFRICAN AMERICAN HISTORY AND CULTURE

	APPLICATION OF OPERATING RESOURCES							
	FEDERAL APPROPRIATIONS		GENERAL TRUST		DONOR/SPONSOR DESIGNATED		GOV'T GRANTS & CONTRACTS	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2013 ENACTED	46	17,994	18	1,407	3	1,664	0	55
FY 2014 ENACTED	106	34,162	21	1,875	9	2,963	0	2
FY 2015 ESTIMATE	139	43,969	22	2,035	7	917	0	0

STRATEGIC GOALS: EXCELLENT RESEARCH; BROADENING ACCESS; REVITALIZING EDUCATION; STRENGTHENING COLLECTIONS; AND MISSION ENABLING

Federal Resource Summary by Performance Objective and Program Category

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Excellent Research						
Research						
Ensure the advancement of knowledge in the humanities	11	2,962	14	3,512	3	550
Broadening Access						
Digitization and Web Support						
Provide improved digitization and Web support	3	729	3	1,479	0	750
Public Programs						
Provide reference services and information	6	749	10	1,498	4	749
Exhibitions						
Offer compelling, first-class exhibitions	8	4,801	13	5,999	5	1,198
Revitalizing Education						
Education						
Engage and inspire diverse audiences	14	2,426	26	3,230	12	804
Strengthening Collections						
Collections						
Improve the stewardship of the national collections	26	6,597	28	8,281	2	1,684
Mission Enabling						
Facilities						
Improve the overall cleanliness and efficient operation of Smithsonian facilities	0	4,942	6	6,477	6	1,535

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
<i>Information Technology</i>						
Modernize the Institution's information technology systems and infrastructure	0	190	0	2,650	0	2,460
<i>Management Operations</i>						
Strengthen an institutional culture that is customer centered and results oriented	9	1,721	9	1,721	0	0
Ensure that the Smithsonian workforce is efficient, collaborative, committed, innovative, and diverse	1	123	1	123	0	0
Modernize the Institution's financial management and accounting operations	2	456	2	456	0	0
Enhance the reputation of the Smithsonian by maintaining good relations with the news media and with federal, state, and local governments	3	908	3	908	0	0
Modernize and streamline the Institution's acquisitions management operations	6	557	6	557	0	0
<i>Ensuring Financial Strength</i>						
Secure financial resources required for the Institution's mission	17	7,001	18	7,078	1	77
Total	106	34,162	139	43,969	33	9,807

BACKGROUND AND CONTEXT

The National Museum of African American History and Culture (NMAAHC) was established by Congress to document, collect, conserve, interpret, and display the historical and cultural experiences and achievements of Americans of African descent. When completed, the NMAAHC will provide a national meeting place for all to learn about the history and culture of African Americans and their contributions to every aspect of American life. This effort will encompass the period of slavery, the era of Reconstruction, the Harlem Renaissance, the civil rights movement, and other periods of the African American Diaspora. The mission of the NMAAHC is to help all Americans remember and, by remembering, stimulate a dialogue about race and help to foster a spirit of reconciliation and healing.

NMAAHC has strategically leveraged private and public support in the effort to open its doors to an eagerly awaiting public in FY 2016. Fully cognizant of the constrained economic environment of the last several years, the Museum has been conservative in its budgetary requests. Nevertheless, with a planned opening quickly approaching, the NMAAHC must continue to increase its programmatic and staffing resources to complete development of the Museum on schedule and within planned budget estimates.

The budget request includes an increase of 33 FTEs and \$9,807,000. The increase includes \$140,000 for necessary pay and other related salary costs for existing staff funded under this line item; \$547,000 for increased lease costs, which is further justified in the Fixed Costs section of this budget submission; and a programmatic increase of \$9,120,000 and 33 FTEs to strengthen and expand

the Museum's fundraising capacity; expand research in support of inaugural exhibitions; facilitate collections acquisitions and digitization; support editorial services for publications and educational materials; and plan events supporting the Museum's mission.

As authorized by Public Law 108-184, these funds are requested to remain available until expended.

MEANS AND STRATEGY

The focus of NMAAHC activities is to continue laying the groundwork required to design, build, and open the Museum on the National Mall in FY 2016. This includes the completion of designs for inaugural exhibitions; acquisition of most of the collections for installation in the inaugural exhibitions; and the commencement of the fabrication of the inaugural exhibitions required to open the Museum. This will be accomplished through temporary and permanent exhibitions, first-class scholarly research, comprehensive collections of African American history and culture, innovative public and educational programs, state-of-the-art technology and associated websites, publications, conferences, and enhanced fundraising efforts.

The NMAAHC has met the required benchmarks for design and construction of the Museum's building — selecting the building site, a gallery for temporary exhibits, an architect to design the facility, and an exhibition designer for its inaugural exhibitions. The Museum continues the major part of the NMAAHC's visibility campaign to navigate the regulatory environment and inform the public of its presence via an intensified marketing and strategic communications plan.

The Museum will continue its capital campaign to raise the required matching private funds for design and construction of the new building. A national membership campaign has been successfully included within the capital campaign.

In FY 2015, the NMAAHC will continue collaborative partnerships within the Smithsonian Institution, with African American peer organizations, with national organizations, and with regional and state organizations. These partnerships will enable the NMAAHC to generate support to build and develop the Museum, acquire collections, support the development of exhibitions, test interpretive methods and concepts, leverage resources, and disseminate and share information via various electronic media and websites.

The Museum will continue to work with other institutions, such as universities, libraries and archives, where research is being done on African American subjects to ensure that the information presented in the Museum is drawn from top scholars engaged in the field and from numerous national resources. The Museum is also developing long-term partnerships with national organizations such as the National Park Service, the National Archives, and the

Library of Congress to ensure that the work of the Museum is disseminated across the United States.

To build a national collection and offer compelling, first-class exhibitions, the Museum will continue its scholarly research in all areas of African American history and culture, as well as its acquisition of objects, books, papers, photographs, and other items. In FY 2014, the fourth phase of the exhibition design process will be complete and the Museum will begin its search for an exhibition firm for fabrication and gallery installation for its inaugural exhibitions. Temporary exhibitions are being created to inform the public about the new Museum and to test ideas and strategies for incorporation into permanent exhibitions.

In 2014, the NMAAHC will initiate the planning and development of a comprehensive Museum-Wide Mobile initiative to launch a Web-based interactive program connecting visitors to collection objects and topics of interest. The Web-based platform will disseminate information, provide outreach to wider audiences, preview exhibitions and public and educational programs, and serve as the principal platform of the Museum's national membership program.

To achieve the strategic goal of Excellent Research, the NMAAHC will use its resources to build on planned partnerships as follows:

- In May of 2014, the NMAAHC and the Library of Congress will complete their collaboration to support the preservation of personal stories and testimonials of people who participated in the civil rights movement during the 1950s and 1960s. Public Law 111-19, the Civil Rights History Project Act of 2009, mandated that the two institutions document and preserve the personal stories and eye-witness accounts of persons who were involved in the civil rights movement during the 1950s and 1960s. To date, the project has interviewed more than 130 individuals across the nation.
- In FY 2015, the Museum will begin design and development of the Center for African American Media Arts (CAAMA). It will be a place of research and scholarship relating to film, photography, and digital photography archives. As a media-rich entity, CAAMA will require support from the newly established information technology department to keep media stations running for researchers and the general public.
- The Museum is participating in two collaborative efforts to seek artifacts related to the transatlantic slave trade, as follows:
 - The Museum has become a core partner in the African Slave Wrecks Project (ASWP), along with George Washington University (GWU), the National Park Service, the National Association of Black Scuba Divers, the Southern African Heritage Resources Agency, and the Associated Museums of Cape Town, South Africa. The NMAAHC, along with the ASWP, has conducted an archival and archaeological survey of two

slave ship sites in southern Africa and off the coast of the Florida Keys. Preliminary archeological evidence of a sunken slaver has been discovered in one site and promising data continues to come in from the other site. The NMAAHC and the ASWP are continuing their capacity building efforts to train and mentor African and African American students in maritime archeology and archival research.

- The Museum is participating in a collaborative effort with Michigan State University's MATRIX: The Center for the Arts, Letters, and Social Sciences Online and the Institute Fondamental d'Afrique Noire (IFAN) at the University of Dakar, Senegal. The Gorée Island Archaeological Digital Repository project is an open-source digital repository intended specifically for cultural heritage materials. The digital repository will be housed at MATRIX and will provide completely open global accessibility to both scholars and the interested public. Select artifacts from this repository will be on display as part of the Museum's inaugural slavery and freedom exhibition, as well as digitally available to Museum visitors for more extensive and deeper access.

To achieve the strategic goal of Broadening Access, the NMAAHC will direct its resources as follows:

- **Digitization and Web Support**

- The Museum will continue to create searchable and accessible digital records for collection objects and digital surrogates. The NMAAHC expects to add several thousand records and images to the Smithsonian's Collection Search Center, and use metadata and images for the Museum's revamped website, the new Museum-Wide Mobile initiative, pre-building and inaugural exhibitions, and seven publications with e-book editions for the Museum's opening. The NMAAHC will develop content that uses the special nature of digital spaces to complement its physical spaces. Digitization efforts are key to supporting both the Museum's publications and the design and development of a Museum-Wide Mobile (MWM) platform.
- The NMAAHC will plan, pilot, and test a new Museum-Wide Mobile (MWM) platform to help connect its visitors to collection objects and topics of interest. The MWM will increase access to scholarship and information about the Museum's objects and help translate the inaugural exhibition content into engaging and personal experiences for visitors of all ages and knowledge levels.
- The NMAAHC will continue to build upon its website so that it acts as a full-service communications, engagement, experiential, educational, and outreach arm of the Museum. Website structure and navigation will be revamped to conform to the visitors' diverse needs and interests, and to

allow a range of possible user journeys through the Museum's collections as well as support for scholarship.

- The NMAAHC will continue to use social media technology to inform and transform its “virtual visitors,” and to create and develop a sense of shared community among users. The Museum will continue to make progress toward the goals of opening access to its data, collections, and research, as well as supporting new uses through collaborative structures, platforms and initiatives meant to foster the increase and diffusion of knowledge.

- **Public, Educator, and Classroom Programs**

- The NMAAHC will continue to produce signature educational public programs in multi-media formats (e.g., musical performances, literary works, staged-readings, dance programs, film series, poetry, food-ways, crafts, etc.). The Museum will conduct family days and programs that support all federally mandated heritage celebrations. Targeting a variety of audiences, NMAAHC programs will be collaborative in nature and begin to preview specific content of the inaugural exhibitions. Programs continue to support the scholarship of the Museum, as well as explore the richness and diversity of African American history and culture.
- The NMAAHC educator programs will provide unique experiences for classroom, home school, and online educators to connect them with the rich resources of the Museum and to have direct access to leading scholars and pedagogy specialists. The Museum will also provide a variety of classroom print and online materials.
- Early learning programs will be designed, piloted, and tested to ensure that NMAAHC plays a key role in the development of identity, self-expression and school readiness for young children.

- **Exhibitions**

- Exhibitions will document, examine, and display the history of African Americans from slavery to the present. Each exhibit will showcase the culture of African Americans, their ongoing struggles for freedom and equality, and their role in building the country and shaping its economic life.
- Design Development, the third design phase, was completed in mid-FY 2013. The fourth and final design phase will be completed in mid-FY 2014. Exhibition fabrication and gallery fit-out is scheduled to begin in mid-FY 2014.
- Exhibitions will reside in three principal areas: History, Culture, and Community:

- **History** will include three exhibitions: *Slavery and Freedom*; *Defending Freedom*, *Defining Freedom: Era of Segregation*; and *Beyond 1968*.
- **Culture** will include four exhibitions: *Cultural Expressions*; *Musical Crossroads*; *Taking the Stage: African Americans in Entertainment*; and *Visual Arts*.
- **Community** will include four exhibitions: *Power of Place*; *Sports*; *Military History*; and *Making a Way Out of No Way*.

The NMAAHC is organizing the following temporary exhibitions to be presented in the Museum's gallery at the National Museum of American History (NMAH):

- *Rising Up: Hale Woodruff's Murals* from Talladega College. A series of Woodruff's murals commissioned for Talladega College, Alabama. The six murals portray noteworthy events in the rise of blacks from slavery to freedom.
- *Through the African American Lens* (May 2015 – April 2016) will be the eighth and final temporary exhibition to be presented in the Museum's gallery in the NMAH. The exhibition will be a preview of objects in the Museum's collection and will include selections from the photography and film collections, works of art on paper, and the Black Fashion Museum Collection among others.

To achieve the strategic goal of Revitalizing Education, the NMAAHC will direct its resources as follows:

- The NMAAHC will ensure that its Virtual Field Trip program continues its reach beyond the four walls of the Museum. Educators connect with collection objects with students across the Country. Plans continue to migrate the Museum's website to enhance NMAAHC's Web presence, enable faster updates of content for visitors, and provide methods for them to share their experience with the Museum.
- The NMAAHC will develop concepts and designs for the CAAMA. The Center will be a place of research and scholarship relating to film photography and digital photography archives.

To achieve the strategic goal of Strengthening Collections, the NMAAHC will use its resources as follows:

- to identify, acquire, and process collections as the Museum prepares for the inaugural exhibitions that will accompany the opening of the building. To date, the Museum has collected more than 27,000 items. Most of the collections are being housed in the new Pennsy Drive facility in Maryland. This facility includes specialized office and training spaces, exhibit design and fabrication shops, conservation facilities, and climate-controlled space to house the Museum's collections. In 2014, Phase II of the construction of the Pennsy facility will provide a multi-use conservation lab and mount-making shop. In 2015, Phase III of the construction will provide cold-storage capacity for the Museum and the Smithsonian Institution Archives, as well as facilities for other necessary storage of furniture and equipment.

To achieve the strategic goal of Mission Enabling, the NMAAHC will use its resources to continue to develop its operating organizational structure and make organizational and staffing revisions as necessary to accomplish program goals. Staff will develop estimates of future personnel requirements, space and storage needs, and operating budgets and plans. This includes:

- **Information Technology**

- The Museum will create an information technology (IT) department to support its mission to be a leader in providing accessible digital records of collections, interactive exhibitions, education outreach and accessible scholarly research. The IT Department will provide technical expertise for research curatorial staff by providing them with tools to accomplish their tasks and facilitate the dissemination of scholarship.

- **Management Operations**

- The Museum will direct resources to efficiently administer and manage the expanded functions associated with increased staffing, purchasing and contracting, and budget and financial management, as well as implement and manage major new initiatives in IT and facilities management.

To achieve the strategic goal of Ensuring Financial Strength, the NMAAHC will continue to direct its resources to support an expanded national visibility campaign. The Museum's Public Affairs Department will engage and work with a strategic communications firm to design and implement an intensified marketing and public relations campaign, targeting the media and the general public in major cities across the country.

- **Ensuring Financial Strength**

- To secure the resources needed to build and develop the Museum, the NMAAHC continues to use its federal fundraising resources to support fundraising activities, expand its base of high-potential donors, and use

advanced fundraising techniques to identify and cultivate sources of new and larger donations. Specific initiatives include the expansion of the cultivation and solicitation of high-net-worth individuals, corporations, and foundations. Currently in its public phase and moving toward the Museum’s grand opening, the fundraising campaign is focused on outreach to potential donors at all levels, and to key African American organizations. Along with the request for more staff members, the NMAAHC also requests additional funds to support staff travel and cultivation activities of campaign donors. Additional, updated campaign materials also will be developed for this phase of the campaign.

- In preparation for the opening of the new building, the Museum launched a national membership campaign in 2009 to reach out to communities across the nation, build a wide base of supporters, and create a sense of ownership by the general public. Annual plans include three acquisition mailings to 2–3 million households, a robust renewal program for existing members, in-house appeals to current members, and an expanded online presence for membership. The membership program incorporates direct mail and online strategies to further engage members, and will produce a biannual newsletter and a regular series of online communications. The Museum currently has approximately 58,000 charter members.

EXPLANATION OF CHANGE

The budget request includes a net increase of 33 FTEs and \$9,807,000, as detailed in the following chart:

Program Category	\$000s
Excellent Research	550
Broadening Access	2,697
Revitalizing Education	804
Strengthening Collections	1,684
Mission Enabling	
○ Management Operations	1,535
○ Information Technology	2,460
○ Ensuring Financial Strength	77
Total	\$9,807

The requested increase includes \$140,000 for necessary pay and other related salary costs for existing staff funded under this line item; \$547,000 for increased lease costs which is further justified in the Fixed Costs section of this budget; and a programmatic increase of \$9,120,000 and 33 FTEs. The budget request also reflects the return of \$5,700,000 of FY 2014 funds used for one-time, facilities-related requirements.

EXCELLENT RESEARCH

- **(+\$550,000, +3 FTEs)** This increase will permit the Museum to expand research into the history and contributions of African Americans, and continue to support activities in oral history and genealogical research.

BROADENING ACCESS

- **(+\$750,000)** This increase will support various digital initiatives: digitization of collections, development of the Museum-Wide Mobile (MWM) platform, and continued development and enhancement of the Museum's website.
- **(+\$749,000, +4 FTEs)** This increase will support educational public programs in multi-media formats, including musical performances, literary works, staged-readings, dance programs, and film series; enable the production and distribution of publications and media products to accompany opening exhibitions; and provide photos for publications, public relations, educational materials, digital initiatives, and archives.
- **(+1,198,000, +5 FTEs)** The increase will support inaugural exhibition development and coordination of the exhibit-building process.

REVITALIZING EDUCATION

- **(+\$804,000, +12 FTEs)** This increase will support the training and coordination of staff in the Office of Visitor Services to act as the primary hospitality interface with the public. Visitor Services' staff will be strategically located throughout the Museum to provide general assistance, facilitate the movement and flow of large crowds, and conduct audience evaluation.

STRENGTHENING COLLECTIONS

- **(+\$1,684,000, +2 FTEs)** This increase will continue to support the acquisition, transporting, and processing of collections in preparation for the Museum's opening, and support the last phase of the outfitting of the storage and collections maintenance space located in Landover, Maryland.

MISSION ENABLING

- **(+\$588,000, +6 FTEs)** This increase will continue to support NMAAHC's growing operating organizational structure. Funding is necessary to support increased operations, staff and programs, including costs for equipment such as copiers, computers and printers, and other necessary office supplies, rentals, and equipment maintenance contracts.
- **(+\$547,000)** This increase will support additional leased space and fit-out requirements (\$500,000) to house an anticipated increase in staff who will

play an essential role in setting up the inaugural exhibitions; for programming and operations of the Museum; and for escalation costs (\$47,000) for existing leases.

- **(+\$2,460,000)** This increase will support the development of an IT Department to provide consolidated management for the Museum's digital and interactive infrastructure. The IT department will support the development and enhancement of the MWM platform that will connect visitors to collection objects and topics; provide technical expertise to research and curatorial staff; and support the Center for African American Media Arts (CAAMA) by ensuring that media stations are kept running for researchers and the general public.
- **(+\$77,000, +1 FTE)** This increase will support donor-stewardship activities (e.g., receptions, galas, and other special events) which are critical to major fundraising efforts.
- **One-time Activities (+\$6,100,000)** — This one-time increase will support the following activities:
 - **(+\$5,665,000)** to purchase furniture, fixtures, and equipment (FFE) for the new building in preparation for the moving in staff.
 - **(+\$435,000)** to purchase telephones, desktop computers, monitors, and laptops for the new Museum.
- **Non-recurring Activities (-\$5,700,000):**
 - **(-\$2,700,000)** Returns FY 2014 funds used for installation of compact and high-bay storage shelving, as well as the fit-out and equipment for a multi-use conservation lab.
 - **(-\$3,000,000)** Returns one-time FY 2014 funds for transportation and processing of collections, as well as furniture and equipment related to providing cold-storage for collections objects.

NONAPPROPRIATED RESOURCES — General trust funds support salary and benefit costs of the Museum director. Donor/sponsor-designated funds support staff, special events for exhibition openings, and costs related to specific programs and projects, including educational programs, donor-related special events, and outreach activities.

**NATIONAL MUSEUM OF AMERICAN HISTORY,
KENNETH E. BEHRING CENTER**

	APPLICATION OF OPERATING RESOURCES							
	FEDERAL APPROPRIATIONS		GENERAL TRUST		DONOR/SPONSOR DESIGNATED		GOV'T GRANTS & CONTRACTS	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2013 ENACTED	165	20,819	18	3,340	42	7,022	2	563
FY 2014 ENACTED	165	21,381	18	3,500	36	12,000	2	390
FY 2015 ESTIMATE	165	21,971	18	3,600	38	16,200	2	400

**STRATEGIC GOALS: EXCELLENT RESEARCH; BROADENING ACCESS;
REVITALIZING EDUCATION; STRENGTHENING COLLECTIONS; AND
MISSION ENABLING**

Federal Resource Summary by Performance Objective and Program Category

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Excellent Research						
<i>Research</i>						
Ensure the advancement of knowledge in the humanities	25	2,750	25	2,800	0	50
Broadening Access						
<i>Digitization and Web Support</i>						
Provide improved digitization and Web support	12	1,581	12	1,600	0	19
<i>Public Programs</i>						
Provide reference services and information	14	1,765	14	1,800	0	35
<i>Exhibitions</i>						
Offer compelling, first-class exhibitions	48	6,550	48	6,800	0	250
Revitalizing Education						
<i>Education</i>						
Engage and inspire diverse audiences	7	900	7	911	0	11
Strengthening Collections						
<i>Collections</i>						
Improve the stewardship of the national collections	39	5,100	39	5,250	0	150
Mission Enabling						
<i>Facilities</i>						
Improve the overall cleanliness and efficient operation of Smithsonian facilities	1	225	1	225	0	0
Execute an aggressive, long-range revitalization program and limited construction of new facilities	1	215	1	220	0	5
<i>Security and Safety</i>						
Provide a safe and healthy environment	1	120	1	125	0	5

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Information Technology						
Modernize the Institution's information technology systems and infrastructure	4	780	4	790	0	10
Management Operations						
Strengthen an institutional culture that is customer centered and results oriented	2	330	2	335	0	5
Ensure that the Smithsonian workforce is efficient, collaborative, committed, innovative, and diverse	3	310	3	315	0	5
Modernize the Institution's financial management and accounting operations	8	755	8	800	0	45
Total	165	21,381	165	21,971	0	590

BACKGROUND AND CONTEXT

The National Museum of American History (NMAH), Kenneth E. Behring Center, inspires a broader understanding of our nation and its people through research, exhibitions, collections activity, education, and public programs. The Museum's primary goal is to tell an overarching American story that is inclusive of and respectful and compassionate to all the peoples in America who were here, who came here, and who were brought here. Through incomparable collections, rigorous research, and dynamic public outreach, the Museum explores the infinite richness and complexity of American history; NMAH helps people understand the past in order to make sense of the present and shape a more humane future.

Almost five million people visit the Museum every year, in addition to the nearly annually 13 million people who visit the Museum online annually, making NMAH the most visited history museum in the world. We present our history as substantial and challenging, inviting and accessible, inspiring and wonderfully human. Together with the American people, we wrestle with the hardest issues that we have faced, and do so in an inspirational manner, aiming to make a difference in the current life of the nation.

The physical revitalization of the NMAH continues in 2014 with the renovation of the Museum's West Wing. The revitalization is a multi-phased effort that includes constructing new public spaces, redefining the visitor experience, modernizing and clarifying circulation, providing amenities, and bringing the Museum into compliance with current building code standards. The physical revitalization of the West Wing construction will be completed in 2014 and includes three public floors and a mechanical room located on the fourth floor, totaling approximately 120,000 square feet.

The Museum will revitalize and refresh its presentation of the American Experience with new exhibits in the renovated West Wing. Each of the three exhibit floors will be focused on an overarching and inclusive theme. The first floor will focus on the theme of American innovation and enterprise; the second floor will

focus on the essentials of America — the origins of the American people and the evolution of their democracy; and the third floor will provide an examination of American culture. Previously, the NMAH renovated the building's central core and created a new chamber for the Star-Spangled Banner at the heart of the Museum, which reopened to the public in 2008.

The Museum is actively fund raising for the West Wing exhibits and programs that will captivate visitors with compelling stories, invaluable objects, state-of-the-art media, public plazas and new exhibitions to make American History vital, fascinating, and central to understanding and embracing the American Experience. The Museum's private fundraising goal of roughly \$89 million for the West Wing exhibits and programs will leverage the federal investment in the building renovation.

The budget estimate includes an increase of \$590,000. The estimate includes an increase of \$390,000 for necessary pay and other related salary costs for existing staff funded under this line item and a program increase of \$200,000 for exhibit maintenance

MEANS AND STRATEGY

The NMAH is most closely aligned with the Smithsonian's Strategic Plan Grand Challenge of Understanding the American Experience. Through its research, scholarship, public programs, exhibitions and collaboration, the Museum shares with the public scholarly insights and historical views that illustrate the richness and depth of the American Experience. The Museum engages people in the telling of America's story — interweaving multiple stories of perseverance, triumph, and optimism with those of challenge and struggle.

The Museum recently completed and issued a new strategic plan, establishing a vision and strategic direction from the present through 2018. The plan sets four key priority goals for the NMAH:

1. Lead the nation in understanding the American Experience
2. Expand, strengthen and share our collections
3. Engage diverse national and international audiences
4. Strengthen our staff and Board, and revitalize our facilities

Goal: Lead the Nation in Understanding the American Experience

The NMAH places a priority on scholarship and quality research in American history. Research is the foundation for our exhibits and all of our programs, which portray significant eras and events from American history in the context of social, cultural, economic, political, scientific, and technological themes. The Museum experiments with innovative ways to think about and present American history as

an encompassing, multi-faceted story, drawing on many strands, and illuminating a multitude of people, ideas, and experiences in its stories.

For example, in partnership with the Maryland Historical Society, in 2014 the *Star-Spangled Banner* 200th exhibit will bring together, for the first time, the Francis Scott Key manuscript with the garrison flag that inspired Key's words "at dawn's early light." The Smithsonian has served as steward for the iconic *Star-Spangled Banner* for more than 100 years.

Visitors will have the unique opportunity, for three weeks starting on Flag Day, 2014, to see the original manuscript in Key's handwriting, with his edits and the original flag that inspired him. This uniting of flag and song for the first time will inspire our visitors to learn more about the origins of what became our national anthem in 1931, and to understand the events and objects that inspired Key on that early morning.

Complementing this summer exhibit, the Museum is planning extensive public programming focused on the national anthem and entitled *Raise it Up! Anthem for America*. Sung at American public gatherings from Little League baseball games to Olympic venues, the words penned by Key will come alive for our visitors and inspire a greater understanding of their history.

In 2014, the Museum will open a small exhibit about 19th century sound recording inventions from Alexander Graham Bell's Volta Laboratory in Washington, DC. The gallery will offer an opportunity for the Museum's visitors to see some of the laboratory notes and apparatus from the 1880s and hear some of the earliest sound recordings ever made. The Museum's ability to address the Volta Lab contributions in new ways is made possible by new sound recovery techniques developed by the Lawrence Berkeley Laboratory staff in partnership with the Library of Congress. Visitors will hear the content of some of the recordings in the Museum's collection, which until recently were considered unavailable. Recovering sound from the six Volta discs is the first step in an ongoing project to preserve and catalogue the Museum's early recording collection.

Several major new exhibits on the first floor will open in 2015 after the renovation of the Museum's West Wing is complete. Curators and staff are focused on research, object selection and design of these new exhibits, which highlight the theme of American innovation, business and enterprise. These include the following:

- The *American Enterprise* exhibit will examine the business and consumer history of the United States from the 1770s to the 2010s. Visitors will learn how the nation's economy has been shaped by the dynamic interplay between capitalism and democracy. They will see that innovation, opportunity, competition and the common good play integral roles in the nation's history and comprise the underlying themes of

America's business. The exhibition team has pioneered the use of a website to "learn in public" by sharing access to ongoing research, collections exploration, and nascent exhibition ideas with audiences around the world. The website, americanenterprise.si.edu, encourages Web users to interact with the staff in all these areas.

- A second exhibit, *Places of Invention*, features six American communities representing a surprising array of people, places, time periods, and technologies. The exhibition examines what can happen when the right mix of inventive people, ready resources, and inspiring surroundings come together to create "hot spots" for invention and innovation.
- *The Value of Money*, a third exhibit, will be a new permanent display to showcase objects from the *National Numismatic Collection*. The display will explore the many ways that money has been valuable to society throughout history: as a medium of exchange for goods and services; artifacts that document and communicate messages about the societies that produced them; and objects of intrinsic value and artistic expression. The Museum plans to mount the exhibit so that visitors to the gallery will experience the sensation of stepping into a jewel box of captivating treasures and surprising stories.

The NMAH contributes to the discussion of the American Experience through its ongoing scholarship and research. In 2014, Museum scholars will produce more than 20 new publications, including books, articles and musical recordings. Listed below are three examples:

- William L. Bird *Souvenir Nation: Relics, Keepsakes, and Curios from the Smithsonian's National Museum of American History*. New York; Princeton Architectural Press
- *Friends of Music CD*, "Schumann's Piano Quintet and Quartet," performed by the Smithsonian Chamber Players using Stradivarius instruments from the collection.
- *Friends of Music CD*, "Music from the Library of Thomas Jefferson: Arcangelo Corelli's Twelve Trio Sonatas, Op.3," performed by the Smithsonian Chamber Players.

Goal: Expand, Strengthen, and Share Our Collections

The NMAH is committed to sound collections stewardship through preservation, accountability, and increased digital access.

For FY 2014, the Museum will continue implementation of its collection stewardship plan by performing collections inventories of 30,000 objects held in the

Medicine and Science section (Room 5026) and Home and Community Life (Room 4413). The plan to address contamination and substandard storage of collections in Garber Building 15 will be completed, as will the construction of a temporary off-site storage building for those collections. The data for the approximately 5,000 objects in Building 15 will be converted from a standalone legacy database to the Museum's central Collections Information System. The Museum will export 7,000 collection records to the SI Collections Search Center to increase public access to information about our objects across the nation and around the world. As an initial step, in response to the recent Office of Inspector General (OIG) collections audit and to address strategic priorities, the Museum will hire a collections accountability specialist.

For FY 2015, the Museum will inventory 30,000 objects — and begin work in the Armed Forces History section (Room 4007/A), Biological Sciences section (Room 4005), Ceramics and Glass section (Rooms 4602, 4604, 4606), and Garber Building 15; continue work in Home and Community Life section (Room 4413), and complete work in Medicine and Science section (Room 5026). The Museum will implement the Garber Building 15 Project to account for, preserve and relocate objects as well as decontaminate lead, thereby addressing long-standing collections access issues, and staff health and safety concerns. Five thousand (5,000) collection records will be exported to the SI Collections Search Center to increase public access to information about our objects. Staff revitalization to meet OIG collections audit recommendations and NMAH strategic priorities will continue as a strategic priority.

Goal: Engage Diverse National and International Audiences

The Museum engages people on site and online, encouraging them to explore history through objects as well as ideas and facts. Using this approach, the NMAH will become the “go-to” place for American history by creating educational opportunities that spark curiosity and build historical thinking skills.

To encourage conversation and respectful dialogue about the past to help people make sense of things that matter today, the Museum collaborates with other partners to expand its reach and broaden the conversation about the complexities of American history. In FY 2014, the Museum organized and hosted a national webcast to schools and museums to recognize the 50th anniversary of Freedom Summer that reached thousands of students across the nation in all 50 states. The Museum also reaches tens of thousands of people annually through NMAH's award-winning Museum theater programs, food history programming and local and national performances of our two resident orchestras, the Smithsonian Jazz Masterworks Orchestra and Smithsonian Chamber Music Society.

The Museum nurtures communities of lifelong learners on site and online and via social media where people can contribute to and assess shared understandings of the past. In addition to its well-established Internet site, the NMAH uses social

media, such as blogs and Twitter, to reach out to new visitors with innovative and targeted content that encourages people to explore the American Experience by making history relevant, interesting and thought-provoking. Through various forms of electronic and online outreach, Museum staff expect to reach a total of more than 13 million people annually.

Also in FY 2014, the NMAH will support K–12 teachers and students, providing them with object-based resources, classroom materials, and unique skill-building opportunities that make exploring history accessible and participatory. *History Explorer*, the Museum’s award-winning website, provides tens of thousands of downloadable resources for teaching and learning American history that are aligned with National History Standards, Common Core State Standards, and 21st Century Skills. The website augments these resources with innovative activities such as an interactive video in which students judge John Brown’s legacy and an iPad game that lets them explore *cartes de visite*, small photographs that were a 19th- century form of social media.

To engage even more people and expand its audience, the Museum is developing an Education Center that will open in mid-2015. The new Center represents a major commitment to improving history education and helping the nation understand the American Experience. This lively hub will provide visitors with the opportunity to “do history” while developing a better understanding of the role they play in creating that story. It will become a location for energizing history teaching nationwide by offering object-centered resources and professional development training for teachers.

Goal: Revitalize and Expand Our Staff, Board, and Facilities

The Museum values every resource it has and is committed to making every expenditure and investment as productive as possible. The NMAH is pursuing this goal with an eye to the future through careful administrative reviews of expenditures and staffing, and by fostering a culture that rewards collaboration, inclusion and creative partnerships.

In November 2012, the Museum closed its West Wing to allow for the construction and upgrade of its HVAC and other utility systems as well as a much-needed renovation of the West Wing exhibit galleries. This construction is the next phase of the Museum’s master plan for renovation and improvement. Design and construction is being managed by the Smithsonian Office of Facilities Engineering and Operations. Construction of the West Wing is expected to be complete at the end of calendar year 2014, allowing for the fabrication of new exhibits and public spaces that will first reopen in 2015. While the renovation is occurring, NMAH curators are researching and developing major new exhibitions that explore the American Experience.

The NMAH is assessing the continued loss of key staff positions and how best to position scarce staff resources for the future. During the last 20 years, the Museum has lost 50 percent of its curatorial positions, which has reduced the scholarly talent and capability necessary to research and explain the broad sweep of American history to our nation. As one strategy, the Museum is committed to expanding and building relationships with other Smithsonian units and partnerships with outside organizations to increase available resources and leverage talents. For example, the Museum is collaborating with other Smithsonian units on a major research initiative on immigration to and migration from America which will result in a new exhibit at the NMAH. Furthermore, the NMAH has extremely active internship and Fellowship programs, hosting more than 168 interns and 14 Fellows in FY 2014. The Museum is committed to raising funds for endowed curator positions as part of its continuing fundraising efforts for exhibits and programs.

EXPLANATION OF CHANGE

For FY 2015, the budget estimate includes a net increase of \$590,000. The estimate includes an increase of \$390,000 for necessary pay and a program increase of \$200,000 for exhibit maintenance. Details are as follows:

- The budget request includes \$200,000 for improved maintenance of exhibits at the NMAH. The Museum is displaying 97,400 square feet of exhibits in FY 2014, and has limited resources to repair and maintain the sophisticated audiovisual technology, lighting, exhibit fabrication, signage, and overall conditions required to keep the exhibits fresh, inviting, and appealing to five million on-site visitors every year. The FY 2014 exhibit maintenance allowance will significantly help to address the Museum's exhibit maintenance backlog. A continued investment in FY 2015 will ensure that visitors to the Museum will have a positive experience.

NONAPPROPRIATED RESOURCES — General trust funds support salaries and benefits for 30 percent of NMAH staff — administrative, development, special events, actors, etc. — and other program-related costs. In addition to restricted gifts, grants, and endowments, trust revenue sources include donations from special events, revenue sharing from business operations, honoraria for speaking engagements, and tuition reimbursements. Donor/sponsor-designated funds are used to develop, install and promote new exhibitions, fund public programs and educational initiatives, and support research, travel and collection acquisitions. Donor-designated funds are vital to continuing the renovation of the public spaces in the Museum, including the design and fabrication of approximately 75,000 square feet of exhibit and program space in the ongoing West Wing renovation project.

NATIONAL MUSEUM OF THE AMERICAN INDIAN

	APPLICATION OF OPERATING RESOURCES							
	FEDERAL APPROPRIATIONS		GENERAL TRUST		DONOR/SPONSOR DESIGNATED		GOV'T GRANTS & CONTRACTS	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2013 ENACTED	246	30,877	2	910	18	3,937	0	81
FY 2014 ENACTED	246	31,293	3	1,524	24	4,453	0	174
FY 2015 ESTIMATE	246	31,745	3	1,206	24	5,518	0	1,447

STRATEGIC GOALS: EXCELLENT RESEARCH; BROADENING ACCESS; REVITALIZING EDUCATION; STRENGTHENING COLLECTIONS; AND MISSION ENABLING

Federal Resource Summary by Performance Objective and Program Category

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Excellent Research						
Research						
Ensure the advancement of knowledge in the humanities	15	2,175	15	2,215	0	40
Broadening Access						
Digitization and Web Support						
Provide improved digitization and Web support	8	1,229	8	1,238	0	9
Public Programs						
Provide reference services and information	30	3,631	30	3,686	0	55
Exhibitions						
Offer compelling, first-class exhibitions	35	5,973	35	6,040	0	67
Revitalizing Education						
Education						
Engage and inspire diverse audiences	47	4,872	47	4,952	0	80
Strengthening Collections						
Collections						
Improve the stewardship of the national collections	34	3,826	34	3,882	0	56
Mission Enabling						
Facilities						
Improve the overall cleanliness and efficient operation of Smithsonian facilities	15	1,895	15	1,913	0	18
Security and Safety						
Provide world-class protection for Smithsonian facilities, collections, staff, visitors, and volunteers	1	118	1	118	0	0

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
<i>Information Technology</i>						
Modernize the Institution's information technology systems and infrastructure	14	2,254	14	2,287	0	33
<i>Management Operations</i>						
Strengthen an institutional culture that is customer centered and results oriented	30	3,573	30	3,636	0	63
Ensure that the Smithsonian workforce is efficient, collaborative, committed, innovative, and diverse	2	177	2	180	0	3
Modernize the Institution's financial management and accounting operations	8	916	8	931	0	15
Enhance the reputation of the Smithsonian by maintaining good relations with the news media and with federal, state, and local governments	3	334	3	341	0	7
Modernize and streamline the Institution's acquisitions management operations	4	320	4	326	0	6
Total	246	31,293	246	31,745	0	452

BACKGROUND AND CONTEXT

The National Museum of the American Indian (NMAI) is committed to advancing knowledge and understanding of the Native cultures of the Western hemisphere — past, present, and future — through partnerships with Native peoples and others.

The NMAI administers one Museum in three locations: NMAI-DC on the National Mall, NMAI-NY in lower Manhattan, and the Cultural Resources Center in Suitland, Maryland. The NMAI will focus its resources to support research and exhibits concerning the cultures and histories of Native communities and to present contemporary works of art to the public. These exhibits, along with educational and cultural arts programming, attract two million visitors annually. The offering of diverse exhibitions, cultural demonstrations, tribal festivals, educational presentations, and scholarly symposia ensures a meaningful visitor experience. Web content based on these programs will reach distant “virtual visitors” to the Museum, who may not be able to come to the East Coast but who can still avail themselves of content developed at NMAI. Through its exhibitions and public programming, the Museum continues to present the contemporary voices of Native peoples to educate and inform the public while countering widespread stereotypes.

The NMAI will also focus on the stewardship of more than a million collection items entrusted to the Museum's care — honoring the histories and promoting the cultural legacies of hundreds of Native nations throughout the Western hemisphere.

The budget request includes an increase of \$452,000 for necessary pay and other related salary costs for existing staff funded under this line item.

MEANS AND STRATEGY

To achieve the goal of Broadening Access, the NMAI is directing its resources to: 1) activities that will result in increased visitation; 2) public programming and exhibits that will encompass information about the indigenous peoples of the Western hemisphere and Hawaii (as mandated in the NMAI legislation) and that will demonstrate the presence and cultural contributions of contemporary Native peoples today; 3) outreach to Native communities, tribes, and organizations through programming methodologies that include consultation, Web-based technologies, video conferences, internships, seminars, and symposia; and 4) expanding access to the NMAI collections online.

Public engagement efforts will continue to bring the Museum and its resources to audiences through both traditional and the Web media and via innovative outreach and training programs. These contacts will link external communities to public audiences through technology and involvement in planning and programming.

To achieve the strategic goal of Revitalizing Education, the Museum will continue to provide daily exhibit and educational programming about Native peoples of the Western hemisphere and Hawaii, thereby providing opportunities to correct stereotyping and expand public knowledge. The seven-day-a-week operation will include interpretive activities, film and video presentations, cultural arts performances, demonstrations, and resource materials about Native American history and cultural heritage. The NMAI will continue working with Native educators and cultural experts on the Museum's National Education Initiative, "Native Knowledge 360°," to create exemplary materials that reflect indigenous knowledge, and to develop model materials that schools across America can expand upon for their own purposes. To promote learning across generations, the ImagiNations Activity centers will introduce indigenous knowledge about Native peoples' understanding of the natural world and about American Indian civics to a growing audience of school children and Museum visitors. In September 2015, the NMAI will open an ImagiNations Activity Center in New York City. Various tribal educational resources, including curricula enhancement materials, will be made available to teachers.

In addition, as part of the Excellent Research strategic goal to advance knowledge in the humanities, the NMAI will continue to hire and retain the highest quality research staff and collaborate with leading institutions of learning and community-based scholars. NMAI staff will make research for film, video, audio, and photographic content developed for exhibitions available at the Museum and to Native American communities and public audiences through the Web, printed materials, and collaborative activities with other groups and organizations.

NMAI staff will continue to oversee group and school tour programs, and volunteers, and will also direct presentations in galleries and all public spaces and program areas to ensure maximum use of all the educational resources available to enhance the visitor experience.

Through its ongoing dialogue with Native communities and cultural experts, NMAI's collection stewards and scholars will also continue to advance the strategic goal of Strengthening Collections through judicious acquisition, documentation, digitization, inventory, preservation, research, security, storage renewal and enhancements, as well as increased Web access.

The strategic goal of Mission Enabling will be addressed by efficiently and economically designating resources to meet the mission of the Museum, implementing the goals of the Smithsonian Institution, and enhancing the collections by acquiring works that document Native experiences and expressive cultures, including the representation of modern and contemporary arts.

NONAPPROPRIATED RESOURCES — General trust funds support salary and benefit costs for the Museum director and other program-related costs. Donor/sponsor-designated funds support salaries and benefits for development staff; costs associated with reaching NMAI's National Campaign fundraising goals; publications and special events for exhibition openings; costs related to specific programs and projects, including educational programs, advertising, production of fundraising proposals, and member- and donor-related special events; and outreach activities.

NATIONAL PORTRAIT GALLERY

	APPLICATION OF OPERATING RESOURCES							
	FEDERAL APPROPRIATIONS		GENERAL TRUST		DONOR/SPONSOR DESIGNATED		GOV'T GRANTS & CONTRACTS	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2013 ENACTED	55	5,856	2	931	3	1,697	0	0
FY 2014 ENACTED	55	5,943	3	1,037	9	2,001	0	0
FY 2015 ESTIMATE	55	6,051	3	1,048	9	2,001	0	0

STRATEGIC GOALS: EXCELLENT RESEARCH; BROADENING ACCESS; REVITALIZING EDUCATION; STRENGTHENING COLLECTIONS; AND MISSION ENABLING

Federal Resource Summary by Performance Objective and Program Category

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Excellent Research						
<i>Research</i>						
Ensure the advancement of knowledge in the humanities	3	347	3	355	0	8
Broadening Access						
<i>Digitization and Web Support</i>						
Provide improved digitization and Web support	2	255	2	271	0	16
<i>Public Programs</i>						
Provide reference services and information	5	569	5	574	0	5
<i>Exhibitions</i>						
Offer compelling, first-class exhibitions	18	1,732	18	1,766	0	34
Revitalizing Education						
<i>Education</i>						
Engage and inspire diverse audiences	7	682	7	703	0	21
Strengthening Collections						
<i>Collections</i>						
Improve the stewardship of the national collections	14	1,591	14	1,607	0	16
Mission Enabling						
<i>Information Technology</i>						
Modernize the Institution's information technology systems and infrastructure	1	155	1	157	0	2

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Management Operations						
Strengthen an institutional culture that is customer centered and results oriented	2	218	2	220	0	2
Ensure that the Smithsonian workforce is efficient, collaborative, committed, innovative, and diverse	1	114	1	115	0	1
Modernize the Institution's financial management and accounting operations	1	167	1	169	0	2
Modernize and streamline the Institution's acquisitions management operations	1	113	1	114	0	1
Total	55	5,943	55	6,051	0	108

BACKGROUND AND CONTEXT

The Smithsonian National Portrait Gallery (NPG) inspires visitors from around the world by illuminating the American experience through powerful images that connect people and their stories.

The NPG strives to bring visitors face to face, literally and figuratively, with exceptional Americans and their remarkable stories across time, place, and circumstance. The Museum uses diverse approaches in visual biography to focus on changing notions of American identity, and to track evolving ideas about who is significant and has an impact on American culture. The NPG aspires to be widely known as the place that sparks thought and conversation, and includes the audience as an active participant in defining American identity through portraiture and biography.

NPG devotes a major portion of its resources to Broadening Access, thereby increasing the availability and accessibility of the Museum's collections through exhibitions, public programs, and publications. More of the collections have been digitized, including 16,000 records with searchable biographic keywords and more than 12,000 images available to the public via the Web, and efforts continue to make the collection more accessible to the public and researchers. The exhibitions explore themes in history, biography, and art in a way that brings out new meaning and understanding of the American experience. Highlights of special exhibitions planned for the remainder of FY 2014 include:

- *Dancing the Dream*: This exhibition showcases the generations of performers and choreographers who harnessed the country's diversity and dynamism into styles that reverberated with the American experience. The exhibition's artworks, drawn mainly from the Museum's permanent collection, are complemented by live dance performances in the galleries as well as film and video clips.
- *American Cool*: "Cool" is an original American sensibility that grew into a global obsession. *American Cool* uses 100 photographic works to illustrate

those who have contributed an original artistic vision to American culture, symbolic of a given historical moment.

- *Face Value: Portraiture in the Age of Abstraction*: This scholarly exhibition will celebrate the reinvention of portraiture at the very moment the art world considered it hopelessly out of fashion. Mid-20th century artists challenged the homogenous stereotype of American life by reassessing the individual.
- *One Life: Grant and Lee, 1864–65*: This special installation of the Museum’s “One Life” series considers the rivalry between generals Ulysses S. Grant and Robert E. Lee. Each stands alone as genuine world historical individual in his impact on America, but each is also the product of his relationship to the other.
- *Portraiture Now: Staging the Self*: The eighth installment in the “Portraiture Now” series, this exhibition will explore the art of portrayal as seen through the eyes of six Latino and Latina artists. They render visible the frictions of everyday cultural negotiations that define the self and his/her relation to the world. Plans are under way to tour this exhibition to two or three additional venues.

The Museum uses the Web and social media to build its virtual audience around the globe. The NPG websites receive about 4.5 million visits annually, with new content added regularly. The Museum will add further timely posts to its Face to Face blog, viewed by 140,000 regular readers. Since the Museum began distributing its educational films and videos on iTunes, iTunesU, YouTube, and ArtBabble, there have been approximately 2.3 million downloads by viewers, or about one million per year. More content will be added and it’s all free. The Google Art Project continues to bring highlights of the Gallery’s collection to a vast worldwide audience, and additional Google-based programs are planned for 2014-15. The NPG has launched a mobile website and all new content is being developed for viewing on multiple platforms. The Museum also continues its partnership with Oxford University Press by supplying about 300 images to its online edition of the *American National Biography*. This is updated twice yearly with approximately 150 images added with each release.

In FY 2014, the Museum will maintain its award-winning publications program by producing the catalogue to accompany the popular exhibition *American Cool* and a scholarly publication to complement the *Face Value* exhibition.

The NPG will continue to expand its audience reach by developing a third prong to its Youth Programming; specifically, by launching a Museum Studies pilot program for teenagers. The Museum will reach more educators by offering two multi-day teacher workshops, with classroom-ready lessons and activities for

teaching American history. The NPG will also partner with the Smithsonian Office of Accessibility to add training for floor staff and volunteer programs.

The Museum also dedicates a significant portion of its resources to Strengthening Collections, which is fundamental to the purpose of NPG. The Museum continually collects a diverse array of artworks that document the historic and ongoing accomplishments and creativity of the American people. The Museum has uploaded about 5,400 high-resolution images of collection objects to the Smithsonian Digital Asset Management System (DAMS), which is almost a 100 percent increase from the previous year, and the NPG is a leader in the Institution for fully leveraging the capabilities of the DAMS. To increase the breadth and depth of digitized collection information, past conservation reports and photographs are also being uploaded to make this information more assessable to the Smithsonian research community. Staff will also pursue a major project to digitize the 5,500 glass plate negatives from the Meserve Collection, with an ultimate goal of creating a public website of the images and engaging the public in an effort to identify these unknown individuals shown in the photographic plates.

Budgetary resources are also used for Mission Enabling activities such as Museum administration and operations. The NPG strives to understand the distinct and evolving needs of the public, communities, and stakeholders the Museum serves, and then support the program delivery to meet these needs by honing its abilities in information technology, procurement, human resources and financial management, business activities, and strategic planning.

The budget estimate includes an increase of \$108,000 for necessary pay and other related salary costs for existing staff funded under this line item.

MEANS AND STRATEGY

In FY 2015, the Museum will continue to concentrate its efforts and resources on exhibitions, developing and maintaining its collection, expanding public education offerings, and pursuing new research directions.

The NPG will pursue the strategic goal of Broadening Access by making its exhibitions more inclusive in subject and content, more accessible through translated texts, and more broadly available through development of traveling exhibitions. The Museum's exhibition schedule in FY 2015 will feature the following:

- *Portraits by Elaine de Kooning*: Elaine de Kooning (1918–1989) made both abstract and figurative paintings and drawings during the height of Abstract Expressionism in New York City. Her gestural portraits included poets Frank O'Hara and Allen Ginsberg, critic Harold Rosenberg, President John F. Kennedy, and her husband, painter Willem de Kooning.

This exhibition will examine the gender dynamics surrounding her career, and will offer a new look at her work, which has been understudied.

- *Americans Now*: Drawn from the Portrait Gallery's permanent collection, this exhibition will feature portraits of individuals who are outstanding in the realms of science, business, government, sports, and the performing and visual arts. The wide range of sitters includes political figures Condoleezza Rice and Barney Frank, scientists Harold Varmus and Maxine Singer, entertainers Oprah Winfrey, Renée Fleming, and Katy Perry, and athletes Kelly Slater and Venus and Serena Williams. This exhibit will also feature the inaugural installation of the portrait of Google founders Sergey Brin and Larry Page.
- *One Life: Dolores Huerta*: The mid-1960s saw the rise of the first successful farm workers' movement in U.S. history. Led by Cesar Chavez (1927–1993) and Dolores Huerta (born 1930), farm workers from California organized to make their plight known across the country. This exhibition will focus on the years 1962–1975, bringing to the forefront Huerta's particular contributions on behalf of the farm workers, and her uncompromising ways as the first woman in U.S. history to negotiate contracts with growers.
- *Alexander Gardner*: The author of the first American photographic book and a leading contributor of photographic views to the illustrated press, Gardner was an important pioneer in his field. The exhibition will encompass his earliest photographs, taken while employed with Mathew Brady, to those created in his own studio in Washington, DC and on to his work in the American West. Particular focus will be given to his Civil War photographs and his special relationship with President Lincoln.

The Museum will also develop exhibition catalogues and organize shows into FY 2018, with a focus on the NPG's 50th anniversary celebration.

The NPG will pursue multiple initiatives in order to advance the goal of Broadening Access to the Museum's collections, exhibitions, and programs. Not only have iconic portraits from the Museum's permanent collection been made available for download on Flickr, but the NPG will further extend "open-access" policies, providing digital images free of charge and within 24 hours of receipt of a request. This open access will be fully-realized with the launch of a redesigned website — with all public-domain images fully downloadable. For temporary exhibitions, multi-lingual components — including cell-phone-accessible tours and interviews in Spanish and translated wall texts posted to the Museum's website — will be incorporated from the earliest stages of concept development. The Museum will develop a Massive Open Online Course (MOOC) for teachers entitled "Learning to Look," a four-week professional development opportunity that will be freely available via the World Wide Web. The NPG will also continue

to work with the latest Google applications, including Google Open Gallery for online exhibitions, and Google Hangouts, to enable curators and historians to have interactive conversations with their counterparts in other museums worldwide. The NPG will also begin evaluating what is required to develop a mobile device application, or kiosk application, that lists birthplaces of sitters and artists represented in the collection, along with an image or other identifier of that person: when online viewers could type in their hometown or place of interest, and the apps would retrieve the names of individuals who are in the collection and were born in that location.

Also contributing to the progress on this goal, the Museum's publication projects in FY 2015 will include an updated version of its popular book on collection highlights, and the catalogue to accompany its exhibition on Elaine de Kooning.

The Museum will upgrade its Collections Information System, working toward a robust Web-based system that meets the needs of the staff and the public. NPG's research archives, the Catalog of American Portraits, will receive further upgrades to its storage conditions to both preserve this resource for the long term and maintain its notable accessibility, for a physical library, to outside researchers.

The Museum will continue Strengthening Collections, with efforts to enhance NPG's collection with the acquisition of rare and unique pre-1825 portraits of individuals, portraits of under-represented minorities, and likenesses of significant contemporary figures. Also, the Museum will sustain efforts for the ongoing conservation of works on paper and photographs, of all media types, in the permanent collection. Using the latest scanning equipment and software, the NPG will digitize detailed images of another 300 of its paintings for the DAMS and other online applications.

NPG efforts in Revitalizing Education in FY 2015 will develop and present new programs for different age groups and audiences. Expanding teen programs will revolve around themes of identity. Members of vision- and hearing-impaired audiences will be served by custom-designed tours and programs. For teachers and educators, NPG will design and conduct challenge-based professional development workshops, with an emphasis on multi-day and multi-disciplinary workshops. The Museum will continue to present its other popular educational programming, including the Teen Ambassadors Program, offering teen's access to museum professions, theater and art making, as well as the popular Family Days events. The NPG will also continue presenting author talks and interviews with historians and artists in the galleries and in the McEvoy Auditorium.

The NPG will work on the Mission Enabling goal by creating+ a professional development program for its entry and mid-grade staff, who represent the future of the Museum and the Smithsonian. The Museum will also

incorporate new technologies to reduce operational costs and enhance the visitor experience in the galleries.

NONAPPROPRIATED RESOURCES — General trust funds support critical positions and help defray costs of special events for exhibition openings, loan exhibition development, outreach, fund raising, management, and research. The NPG must support exhibitions, publications, public lectures and gallery programs, symposia, and some collection acquisitions with donor/sponsor-designated funds. Private donations are thus critical to the Museum’s planning, programming, and ability to deliver on its public mission. It is through a public-private partnership that the National Portrait Gallery achieves its goals.

NATIONAL POSTAL MUSEUM

	APPLICATION OF OPERATING RESOURCES							
	FEDERAL APPROPRIATIONS		GENERAL TRUST		DONOR/SPONSOR DESIGNATED		GOV'T GRANTS & CONTRACTS	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2013 ENACTED	6	1,038	8	964	4	1,269	18	2,963
FY 2014 ENACTED	6	1,052	7	710	2	1,456	18	3,665
FY 2015 ESTIMATE	6	1,080	5	650	2	875	18	3,345

STRATEGIC GOALS: BROADENING ACCESS; STRENGTHENING COLLECTIONS; AND MISSION ENABLING

Federal Resource Summary by Performance Objective and Program Category

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Broadening Access						
<i>Digitization and Web Support</i>						
Provide improved digitization and Web support	1	85	1	87	0	2
<i>Exhibitions</i>						
Offer compelling, first-class exhibitions	1	157	1	158	0	1
Strengthening Collections						
<i>Collections</i>						
Improve the stewardship of the national collections	4	510	4	510	0	0
Mission Enabling						
<i>Facilities</i>						
Execute an aggressive, long-range revitalization program and limited construction of new facilities	0	300	0	315	0	15
<i>Information Technology</i>						
Modernize the Institution's information technology systems and infrastructure	0	0	0	10	0	10
Total	6	1,052	6	1,080	0	28

BACKGROUND AND CONTEXT

The National Postal Museum (NPM), with the world's largest museum collection of stamps and postal artifacts, is dedicated to creating visitor experiences that educate, excite, entertain and inspire. With more than six million objects, the Museum is responsible for the Smithsonian's second-largest collection. The Museum dedicates its resources to developing new and innovative ways to explore the vital role of the postal system in American life, and to make its

vast philatelic and postal collections available to all visitors — both in person and online. The NPM uses its collections in exhibits and programs which educate the public on the history of America, transportation, economics, and commerce.

In addition to the many activities and programs completed throughout the year, the NPM is focused on several major initiatives aimed at increasing visitation to both the Museum and its website. These initiatives include the design and fabrication of new history galleries; continued enhancements to the increasingly popular, Web-based, collection information system; and new rotating exhibitions in the recently completed *William H. Gross Stamp Gallery*.

The budget estimate includes an increase of \$28,000. The request includes \$13,000 for necessary pay and other related salary costs for existing staff funded under this line item, and \$15,000 for increased lease costs of existing space, which are both justified in the Fixed Costs section of this budget.

MEANS AND STRATEGY

The National Postal Museum's primary activities are aimed at meeting the Smithsonian's Grand Challenges of Valuing World Cultures and Understanding the American Experience through the prism of postal communications and philately. These challenges will be met by Broadening Access to the Museum's collections, programs and exhibitions; Revitalizing Education through the creation of new models and methods of innovative educational programs; Strengthening Collections through improved preservation, storage, and enhanced digital imaging; and Mission Enabling by working with other Smithsonian units and external partners to improve the operation of the Museum.

In FY 2015, the Museum's Education Center, part of the *William H. Gross Stamp Gallery*, will enter its second year of programming. Focusing on six target audience groups and several newly developed programs, the center's two education spaces provide enhanced learning opportunities that incorporate the newest media tools. NPM's signature EdLab provides innovative training programs for educators and is designed to support the inclusion of digital media and project-based programming, using classroom teaching and field trips. The space is also used for Institution-wide Smithsonian meetings and provides other Smithsonian units with the opportunity to test new ideas for visitor participation using the latest technologies. The second educational space supports the Museum's on-site school tours, community engagement activities, and family programming such as NPM's traditional programs, including Stamp Stampede and the Mail Art Workshops.

In FY 2015, the Museum will open a temporary exhibition that will tell the story of the African American experience from the perspective of stamps and mail. Tentatively titled *Freedom Just Around the Corner: Civil War to Civil Rights*, the new exhibition commemorates the 150th anniversary of the abolition of

slavery in the United States and is envisioned as a celebration of the opening of the new National Museum of African American History and Culture. Major exhibition themes include the role of mail in the abolition movement; the effect of segregation on the Post Office Department; and the civil rights era as seen through the mail. The exhibit will include many rare and unique items from the national philatelic collection, as well as original artwork from the Postmaster General's Collection.

The NPM's federal resources are primarily dedicated to improving the stewardship of the national collections for present and future generations. In FY 2015, the Museum will continue to process new acquisitions, which includes digitizing and cataloguing collection items using the automated collections information system (CIS). Enhanced cataloguing and digital records created for the African American exhibition will be placed online for ready access by the public.

A major initiative to improve accessibility to off-site collections will remain a Museum priority. In FY 2015, the Museum will coordinate with the staff of the National Museum of American History (NMAH) to begin the process of decontaminating NPM collection objects stored in Garber building number 15 in Suitland, Maryland. This project will result in the removal of hazardous lead from NPM collections that have been stored for many years in a building that also houses lead-based printing equipment from the NMAH collection. The project will eliminate a potential safety hazard for staff and make previously inaccessible collection items available for cataloguing and imaging. These collection items will subsequently be made available to the general public in exhibitions and online through the Museum's collections website.

In FY 2015, the Museum will continue to catalogue, image, and conserve the Postmaster General's collection of original stamp art. The Postmaster General's collection, transferred to the Museum from the United States Postal Service in FY 2012, represents one of the most important philatelic collections in the world. It includes the original artwork, as well as rejected designs and preliminary sketches, commissioned for more than 3,000 U.S. postage stamps between 1942 and the present. The NPM will continue to re-house and conserve the collection, and make it available to the public through online exhibitions and through the Museum's loan program to other museums across the country.

Also, in FY 2015, the Museum will continue to refine the national philatelic collection. Collections frequently requested by researchers will continue to be reorganized and re-housed to improve public access and long-term preservation. Collection items previously deaccessioned from the national philatelic collection will be donated to other museums or sold for the benefit of the national collection. Deaccessioned collection items include duplicate revenue stamps and various postal items which fall outside the scope of the collection or which have deteriorated beyond use.

Finally, the NPM will continue to direct resources toward maintaining the Museum's information technology (IT) systems and infrastructure requirements to meet the strategic goal of Mission Enabling. The Museum will continue to replace network hardware and software to meet requirements which support programmatic and exhibition needs, and to modernize its IT systems.

NONAPPROPRIATED RESOURCES — The United States Postal Service provides the NPM with an annual grant, which supports nearly 75 percent of the Museum's core functions and operational costs. These costs include salaries and benefits, utilities, facility maintenance, exhibitions, education, and collection management programs. Fundraising initiatives continue to generate increased support from the private sector to develop and support new exhibitions, research opportunities, educational initiatives, and special events.

SMITHSONIAN AMERICAN ART MUSEUM

	APPLICATION OF OPERATING RESOURCES							
	FEDERAL APPROPRIATIONS		GENERAL TRUST		DONOR/SPONSOR DESIGNATED		GOV'T GRANTS & CONTRACTS	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2013 ENACTED	88	9,019	6	1,458	32	8,071	1	159
FY 2014 ENACTED	88	9,391	8	1,535	32	8,340	2	91
FY 2015 ESTIMATE	88	9,562	8	1,453	31	10,656	2	92

STRATEGIC GOALS: EXCELLENT RESEARCH; BROADENING ACCESS; REVITALIZING EDUCATION; STRENGTHENING COLLECTIONS; AND MISSION ENABLING

Federal Resource Summary by Performance Objective and Program Category

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Excellent Research						
<i>Research</i>						
Ensure the advancement of knowledge in the humanities	6	660	6	672	0	12
Broadening Access						
<i>Digitization and Web Support</i>						
Provide improved digitization and Web support	7	661	7	674	0	13
<i>Public Programs</i>						
Provide reference services and information	13	1,391	13	1,417	0	26
<i>Exhibitions</i>						
Offer compelling, first-class exhibitions	24	2,511	24	2,557	0	46
Revitalizing Education						
<i>Education</i>						
Engage and inspire diverse audiences	3	364	3	370	0	6
Strengthening Collections						
<i>Collections</i>						
Improve the stewardship of the national collections	19	2,161	19	2,200	0	39
Mission Enabling						
<i>Security and Safety</i>						
Provide a safe and healthy environment	1	73	1	74	0	1
<i>Information Technology</i>						
Modernize the Institution's information technology systems and infrastructure	2	219	2	223	0	4

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
<i>Management Operations</i>						
Strengthen an institutional culture that is customer centered and results oriented	13	1,351	13	1,375	0	24
Total	88	9,391	88	9,562	0	171

BACKGROUND AND CONTEXT

The Smithsonian American Art Museum (American Art) is the nation's Museum dedicated to the arts and artists of the United States from colonial times to the present. It is the home of the largest and most inclusive collection of American art in the world, and its holdings of more than 42,000 works, spanning three centuries of the nation's cultural development, tell the story of America through the visual arts. The Museum's programs make the collection available to national audiences and beyond, as well as to those who visit its two historic landmark buildings in Washington, DC: the Donald W. Reynolds Center (DWRC) for American Art and Portraiture (shared by American Art and the National Portrait Gallery) and the Renwick Gallery, dedicated to American crafts and decorative arts.

To achieve the goal of Excellent Research, American Art curators and research Fellows-in-residence use the collection and other resources to develop new insights into America's cultural and artistic legacy. The resulting knowledge informs collections development and serves as the basis for exhibitions, associated award-winning catalogues and scholarly publications, and material for online content and educational programs. The Museum's peer-reviewed journal, *American Art*, serves as an additional venue for scholarship in the field. The Museum hosts international symposia on topics of relevance in the field of American art.

Broadening Access is achieved through a web of activities. The Museum is taking full advantage of the latest technologies (e.g., audio, multi-media, podcast tours, smart phones, tablets, and applications) as well as social media to engage audiences both online and on site. Three videoconference centers deliver the Museum's programs around the world. Digitization of the collection continues apace, allowing the Museum to add new content and features to its online resources.

An ambitious schedule of exhibitions developed in-house and complemented by shows obtained from other organizations attracts new visitors and encourages repeat visits. Large exhibition spaces, shops, and a restaurant greet visitors with a broad range of activities to maintain their interest. The Lunder Conservation Center provides a window on preservation of the nation's collections, and the Luce Foundation Center for American Art displays 3,500 collection objects in an inviting visible storage center. The Renwick Gallery has

additional space for exhibitions, public programs, and rotating displays of its permanent collection of American crafts. Multiple traveling exhibitions organized by the Museum are shared with museums throughout the United States, giving the public broad, direct access to the nation's artistic and cultural heritage.

Public programs complement Museum exhibitions and collections through courtyard concerts, family days, heritage month programs, tours and gallery talks, scavenger hunts, and craft and sketching workshops.

Diverse activities advance the goal of Revitalizing Education. National education programs directly reach K–12 teachers and students. These include adoption of the latest technologies where most effective, as well as incorporation of art into core curricula. Resident teacher institutes are supplemented by online/on-demand courses for the K–12 community. The Museum regularly collaborates with private and public organizations to provide teachers with new tools and resources. Students are brought into the Museum as often as possible to provide that unique direct experience with great art. The MacMillan Education Center, located in the galleries, benefits students in classrooms across the nation and U.S. military bases worldwide, as well as school groups touring the Museum, conservators, research Fellows, and educators.

The goal of Strengthening Collections is achieved through multiple activities. Scholarship and research help set acquisition objectives. Gifts of art and private funds raised through development activities pay for additions to the national collection. Conservators obtain new tools and training to preserve the artwork. The Lunder Conservation Center is an important locus for conservation training and colloquia of interest to the conservation community and the public. Conservation Fellowships ensure that experience and knowledge are shared within the larger community of conservation practitioners.

Mission Enabling encompasses many activities. A proactive safety program ensures a safe and healthy environment for Museum staff and visitors. Information technology staff implement and maintain the information framework on which so many other efforts depend. This includes the exhibition space screens, kiosks, and optimizing online information for mobile devices. Managers carefully plan, promote, protect and conserve the Museum's resources.

The budget estimate includes an increase of \$171,000 for necessary pay for existing staff funded under this line item.

MEANS AND STRATEGY

Research on the collections and related topics by curatorial staff continues in support of exhibitions and the permanent collection, including four new exhibition catalogues scheduled for publication in FY 2015. New endowments and multi-year private support have allowed the Museum to hire curators with

specialties in sculpture, photography, and contemporary crafts. The Museum's award-winning, peer-reviewed journal, *American Art*, will publish three issues of new scholarship. *American Art* hosts approximately 20 research Fellows from throughout the country, thereby increasing the number of scholars using the collections. The resulting discoveries and interpretations by staff and Fellows help Americans understand and appreciate their rich cultural heritage as well as advance scholarship in American art. Research also will feed into educational programs as well as the Web and new media.

Two-thirds of *American Art*'s collection already is online and the Museum continues to digitize and post new images and content. The Museum makes images and content available through online image- and video-sharing sites and collaborative initiatives with other organizations. *American Art* will expand its online presence via social media (e.g., Facebook, Twitter, and YouTube) and hosts the art blog, *Eye Level*. More podcasts and videos will be added to the Museum's online library. All these assets are accessible regardless of the device used. Video capture and editing technology enables the Museum to expand its audience by webcasting events and hosting online discussions via instant messaging and blogs. Interactive exhibition components are added whenever appropriate to provide a richer, customized cultural experience.

Five exhibitions are planned for FY 2015 at *American Art*. Major exhibitions at the DWRC include: *Richard Estes' Realism*, *The Artistic Journey of Yasuo Kuniyoshi*, *The World of James Castle*, *The Minging Mike Collection*, and *The Singing and the Silence: Birds in Contemporary Art*. The Renwick Gallery will be closed in FY 2015 as it nears the completion of a much-needed renovation. Staff are busy preparing for its reopening in 2016 with a full slate of exhibitions. The well-received rotating exhibit *Watch This!* will showcase video and new media art from the Museum's permanent collection.

As part of its ongoing efforts to make as much material as possible accessible to the public, the Museum regularly rotates artworks in the permanent collection galleries to show the many facets of American art and culture, as well as to encourage return visits. In FY 2014, the Museum completed the reinstallation of its second-floor permanent collection galleries as well as the folk art galleries on the first floor. The Luce Foundation Center for American Art displays an additional 3,500 collection objects in densely installed glass cases.

National outreach includes touring exhibitions with *The Art of Video Games*; *Annie Leibovitz: Pilgrimage*; *African American Art: Harlem Renaissance, Civil Rights Era, and Beyond*; and *George Catlin's American Buffalo*, which will end its tour after seven venues. *Our America: The Latino Presence in American Art* begins a tour schedule that has it crisscrossing the continent. Interactive exhibition components continue evolving to keep pace with proliferating information conduits. In addition, whenever possible, *American Art* honors requests by other museums for loans from the national collection.

American Art engages a diverse audience through a range of public programs and online resources. The Museum will continue its popular tours, gallery talks, demonstrations and workshops. Individuals may bring in objects and talk with conservators about the proper care and handling of family heirlooms. Family Days and heritage month programs continue to create and sustain new relationships between the public and their cultural history. Our Chinese New Year celebration, held in conjunction with the Chinese Embassy, has quickly become a visitor favorite. Public programs in the galleries, McEvoy Auditorium and Kogod Courtyard will be supplemented by new Web content, as well as by making such content accessible regardless of the device being used to access it.

Education initiatives will expand as the Museum takes advantage of new online tools and assets. American Art continues to develop its highly successful distance-learning program that reaches classrooms worldwide. A third videoconference center, within the MacMillan Education Center, now enables American Art to serve more students than ever before. Partnerships with Government agencies such as the National Park Service and National Archives and Records Administration expand the Museum's reach to more diverse audiences. The intern program, hosting approximately 50 students (this past year, from 17 states, Washington, DC, Japan, France, Canada, Great Britain, Greece, Turkey and Israel), will prepare the next generation of museum professionals. The Museum, as part of its educational initiative, will again host two institutes for nearly 60 teachers (last year representing 24 states, Washington, DC, Canada, China, Ghana, and South Korea).

The safe storage and display of collection objects remains a top priority. American Art continues to develop public interest in and awareness of preservation issues through the Luce Foundation Center and the Lunder Conservation Center and their many public programs. The acquisition of new tools and instrumentation will allow more complete monitoring of the collection and application of leading-edge conservation techniques to preserve the collection. Artworks will be acquired to fill gaps in the collection identified through the Museum's collections plan. Time-based media (i.e., works which exhibit a changing observable state, such as videos or light-emitting diodes [LEDs]) will continue to receive special attention.

The Museum has been a lead partner, with the Department of Energy, in developing LED technology for use by museums, which will save the Institution thousands of dollars in energy costs. The renovation of the Renwick Gallery will make it the first all LED Museum in the United States. Information technology and administrative procedures will be strengthened through close monitoring of resources and processes, especially as lean budgets continue. Strong partnerships with Smithsonian central offices enable American Art to provide an end-user perspective on policy changes. Use of the Museum's Wiki and SharePoint websites keeps staff current on the ever-changing procedural and

regulatory environment. Continual review of work processes and conditions will be followed by proactive implementation and use of safer techniques and materials for both staff and the Museum environment.

NONAPPROPRIATED RESOURCES — Nearly all of American Art's non-personnel costs, including those for exhibitions, educational and public programs, and additions to the national collection, are paid with funds provided by individuals, foundations, and corporations. Donor/sponsor-designated funds support specific programs and projects. American Art's National Campaign is putting special emphasis on obtaining endowments to provide secure funding for these ongoing projects and activities. For example, in FYs 2012 and 2013, the Museum added new curatorial, Fellowship, acquisition, and exhibition endowments to support its programs. Additionally, trust funds support salaries and benefits for about one-third of staff, as well as all fundraising activities and related costs.

The Renwick Gallery's major building systems are past their life expectancy after more than 40 years of use. Most of the renovations started in 2014 will be completed in FY 2015 and preparations will be made for reinstallation of the permanent collection and opening new exhibitions in FY 2016. The Museum is committed to raising 50 percent of the funds needed for the renovation from the private sector.

Introduction, *Mission Enabling*

The backbone of the Smithsonian must remain a dedicated workforce of employees and volunteers with 21st century skills and perspectives. Strong, responsive support services — such as collections stewardship, facilities management, Web and new media, audience research, marketing, and financial management — are essential to accomplish the Smithsonian's mission and vision. Finally, we need to generate revenue in new ways to ensure that we can fund our vision for the future.

UNITS primarily associated with Mission Enabling:

- **Outreach**
- **Communications**
- **Institution-wide Programs**
- **Office of Exhibits Central**
- **Museum Support Center**
- **Museum Conservation Institute**
- **Smithsonian Institution Archives**
- **Smithsonian Institution Libraries**
- **Office of the Chief Information Officer**
- **Administration**
- **Office of the Inspector General**
- **Facilities Maintenance**
- **Facilities Operations, Security, and Support**

OUTREACH

	APPLICATION OF OPERATING RESOURCES							
	FEDERAL APPROPRIATIONS		GENERAL TRUST		DONOR/SPONSOR DESIGNATED		GOV'T GRANTS & CONTRACTS	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2013 ENACTED	62	9,006	37	6,009	6	4,216	11	7,080
FY 2014 ENACTED	65	9,121	43	5,862	4	4,847	12	8,542
FY 2015 ESTIMATE	88	19,238	42	5,643	4	3,526	12	3,093

STRATEGIC GOALS: EXCELLENT RESEARCH; BROADENING ACCESS; REVITALIZING EDUCATION; AND MISSION ENABLING

Federal Resource Summary by Performance Objective and Program Category

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Excellent Research						
Research						
Engage in research and discovery	3	1,306	3	1,310	0	4
Ensure the advancement of knowledge in the humanities	2	999	2	1,003	0	4
Broadening Access						
Digitization and Web Support						
Provide improved digitization and Web support	2	227	2	231	0	4
Public Programs						
Provide reference services and information	3	423	3	431	0	8
Exhibitions						
Offer compelling, first-class exhibitions	40	4,663	40	4,735	0	72
Revitalizing Education						
Education						
Engage and inspire diverse audiences	10	1,066	33	11,086	23	10,020
Mission Enabling						
Management Operations						
Strengthen an institutional culture that is customer centered and results oriented	5	437	5	442	0	5
Total	65	9,121	88	19,238	23	10,117

BACKGROUND AND CONTEXT

Broadening Access is a key component of the Smithsonian's Strategic Plan. All of the Institution's outreach activities link the Smithsonian's national collections,

research, and educational resources with Americans from coast to coast. Its aims are to 1) broaden the audiences who share in the nation's rich cultural heritage; 2) enhance widespread research-based knowledge of science, history, and art; and 3) provide opportunities for educators and scholars to further increase and diffuse knowledge.

Smithsonian outreach programs serve millions of Americans, thousands of communities, and hundreds of institutions in all 50 states, through loans of objects, traveling exhibitions, and sharing of educational resources via publications, lectures and presentations, training programs, and websites. Smithsonian outreach programs work in close cooperation with Smithsonian museums and research centers, as well as with 184 affiliated institutions and others across the nation.

This line item includes the programs that provide the critical mass of Smithsonian Across America outreach activity: the Smithsonian Institution Traveling Exhibition Service (SITES); Smithsonian Affiliations; the Smithsonian Center for Learning and Digital Access (SCLDA); the Office of Fellowships and Internships (OFI); and the Smithsonian Institution Scholarly Press (SISP). A new addition to Outreach in FY 2015 is the Science, Technology, Engineering, and Mathematics (STEM) initiative. The Smithsonian Associates and the Smithsonian Science Education Center, which receive no direct federal funding, are also part of this national outreach effort.

The budget request includes an increase of \$10,117,000. This increase includes \$117,000 for necessary pay and other related salary costs for existing staff funded under this line item and a programmatic increase of \$10,000,000 and 23 FTEs to improve the STEM engagement program.

BACKGROUND AND CONTENT — STEM ENGAGEMENT

Since its creation in 2010, the Smithsonian's Office of the Assistant Secretary for Education and Access has been charged with the Institution-wide effort of Revitalizing Education, Broadening Access, Supporting Evaluation, and Creating a Learning Community for 19 museums and nine research centers. In implementing the Institution's effort to **Revitalize Education**, more than 300 museum educators, information technology (IT) staff, and public programmers have been creating content that specifically addresses the articulated needs of teachers; identifying, evaluating, and organizing assets that can be integrated into, or used to supplement curriculum; tagging content that aligns with state and national standards; and supporting active learning that includes inquiry-based science learning in rich and immersive settings. **Broadening Access** involves the Smithsonian's development of educational assets for a national audience, many of which will be delivered via a Web-based Participant Access System (PAS) that facilitates our ability to share collections, images, lessons, and citizen-scholar activities. We are also strengthening our partnerships and sharing and exchanging resources with more than 184 Smithsonian Museum Affiliates across the country, colleagues from federal agencies and the private sector. We are

Supporting Evaluation by training our staff and our peers, working with internal and external evaluators, and, when completed, our PAS will provide us with metrics and key information about our users and their interaction with our content. The Institution's efforts to **Create a Learning Community** are linked to our strategies for *knowledge transfer*. In an Institution with more than 24 education departments, knowledge-transfer mechanisms enable us to better coordinate our collective assets, identify and solve common problems, broker collaborations, realize economies of scale, avoid redundancies, and learn from our successes and challenges.

MEANS AND STRATEGY

Smithsonian Institution Traveling Exhibition Service (40 FTEs and \$4,735,000) — For 63 years SITES has devoted its mission to sharing Smithsonian exhibitions and educational resources with people and places all across the country. More than 500 communities in all 50 states annually host SITES shows in formats ranging from large-scale interactive exhibits for mainstream art, history, and natural history museums to portfolio and poster sets tailored to school classrooms. Encompassing subjects that parlay the Smithsonian's vast collection and research pursuits, SITES' FY 2015 offerings will address such topics as artistic creativity, scientific exploration, and the mosaic of diverse cultures that have made America what it is today.

SITES is a national leader in exhibitions that honor and celebrate the cultural heritages of African Americans, Latinos, Asian Pacific Americans, Native Americans, and the many other peoples who give our nation its unique vitality. FY 2015 resources will continue to be dedicated to this focus, generating cross-cultural public engagement through such exhibition topics as migrant labor; a celebration of Asian American Pacific achievement; ethnic foodways; African American art; and cross-cultural ties between African American and Native American communities.

SITES' landmark Museum on Main Street (MoMS) initiative will continue to enrich, in tangible ways, the underserved populations of rural America, whose access to national cultural programs is limited. Community enthusiasm joins with local merchants and regional educators when small-town USA opens its doors to the Smithsonian. SITES' newest MoMS exhibit on hometown teams focuses on the central role of sports in sustaining community identity and local pride.

Although the tangible experience is key to what SITES provides to visitors, the organization also focuses on ways to extend and engage audiences far beyond museum walls via multiple forms of technology, from mobile interactive applications (apps) to educator resources.

While Americans may know the Smithsonian from one-time school trips or family visits, the presence of the Institution's resources in their hometowns has a deeper resonance. SITES exhibitions represent the valuable public impact of the federal dollar. They are a source of immense local pride, bringing together people

from diverse ethnic, age, and socio-economic groups to celebrate a shared national heritage.

Smithsonian Affiliations (2 FTEs and \$309,000) — The mission of Smithsonian Affiliations is to build a strong, national network of affiliated museums, educational, and cultural organizations that will facilitate the display of Smithsonian artifacts and dissemination of the Institution’s expertise in communities across America. By working with both emerging and well-established museums of diverse sizes, subject areas, audience bases, and scholarly disciplines, Smithsonian Affiliations creates the framework through which visitors unable to come to Smithsonian facilities can still experience the Smithsonian in their own communities. In addition, the Smithsonian is working closely with affiliated organizations to increase their audiences, expand their professional capabilities, and gain greater recognition in their local communities. There are currently 184 affiliate organizations in 43 states, Puerto Rico, and Panama.

These strategies have resulted in the display of more than 8,000 Smithsonian artifacts in Affiliate locations, including such historic and topical items as U.S. spacecraft, First Ladies’ gowns, Civil War arms and uniforms, outdoor sculptures, scientifically significant collections, and many more. Smithsonian scholars have participated in science literacy, American history, and art education programs at Affiliate locations. Professional development workshops, internships, and visiting professional residencies have given Affiliate staff the opportunity to increase their knowledge and skills in areas such as collections management, exhibition planning, and museum administration. The Smithsonian Affiliations’ annual conference creates a forum for networking, information sharing, and future planning. New videoconferencing capabilities have also extended the reach of Smithsonian Affiliations. Current Affiliate projects build on and amplify the “Grand Challenges” outlined in the Smithsonian’s Strategic Plan.

Smithsonian Center for Learning and Digital Access (SCLDA) (13 FTEs and \$1,439,000) — Smithsonian educators work with Smithsonian content experts to produce products and services that strengthen American education and enhance our ability to compete globally. The Smithsonian serves as a laboratory that creates methods and models of innovative informal education linked to our nation’s formal education system. SCLDA venues use a wide range of interactive, Web-based technologies; our programs encourage continual exploration by learners of all ages. To guide these educational efforts across the Smithsonian, SCLDA has created an Institution-wide approach for education that leverages resources, strengthens communications, coordinates programming, and rewards innovative thinking and collaboration.

Office of Fellowships and Internships (OFI) (6 FTEs and \$1,972,000) — The OFI has the central management and administrative responsibility for the Institution’s programs of research, Fellowships, and other scholarly appointments. One of its primary objectives is to facilitate the Smithsonian’s academic interactions

with students and scholars at universities, museums, and other research institutions around the world. The Office administers Institution-wide research support programs, and encourages and assists other Smithsonian museums, research centers and offices with diversifying and developing additional Fellowships and visiting appointments.

The Smithsonian Institution offers Fellowships to provide opportunities for graduate students, pre-doctoral students, and postdoctoral and senior investigators to conduct independent research in association with members of the Smithsonian professional research staff, and to more effectively use the resources of the Institution.

To achieve the goal of Excellent Research and maintain the Smithsonian's level of expertise in the research community, the Institution must continue attracting the best scholars. OFI is increasing Fellowship stipends to provide awards comparable to other prestigious programs so the Smithsonian can maintain a competitive edge. Since funding for stipends has remained flat, the Smithsonian has increased the value of each award, but has decreased the number of Fellowships awarded. The Smithsonian is trying to raise private funding for the Institution's Fellowships and Scholarly Studies Program so that the Institution has the resources necessary to help today's young scientists become the next generation's top researchers. In addition, OFI continues to provide current staff with the financial support needed to develop new research initiatives, collaborate with other scholars, and determine the scope and feasibility of projects.

Smithsonian Institution Scholarly Press (SISP) (4 FTEs and \$783,000) — Through the Smithsonian Contributions Series program, continually published since 1875, SISP publishes and disseminates research conducted by Smithsonian staff and their collaborators. The federal funds support the production of first-class science results and widespread public distribution to libraries, universities, other organizations, and the public. The program publishes, in both print and electronic formats, monograph series in subject areas ranging from art, anthropology, botany, and marine sciences to paleobiology, zoology, museum conservation, and history and technology, as well as edited collections of interdisciplinary research and symposia proceedings. Furthermore, federal resources underpin the publishing of scholarly books written by Smithsonian staff or books closely related to Smithsonian collections as well as increased public access to peer-reviewed scholarly publications. This advances the Institution's strategic goal of Broadening Access to scientific research and the national collections.

MEANS AND STRATEGY — STEM ENGAGEMENT (23 FTEs and \$10,000,000)

The reach of the Smithsonian — nationally and internationally — and its ability to motivate and inspire students and educators exceeds 100 million people annually.

The Institution's digital education assets are managed by the Smithsonian Center for Learning and Digital Access (SCLDA), which aligns content with national and state education standards, pilots and coordinates Institution-wide initiatives, provides training opportunities for educators, and conducts evaluations. The Smithsonian Science Education Center (SSEC) (formerly the National Science Resources Center) provides school districts with tools and resources for initiating and sustaining effective science education programs. Using the SSEC model for science education reform, these school districts produce research- and standards-based science instructional materials, provide professional development for their teachers, and continually assess student progress. They also develop a system-wide support structure that provides science materials to the classroom and builds support from school district administrations and communities nationwide. These programs have led to significant, documented improvement in student achievement. Research-based STEM programs are also offered at the National Zoological Park (NZP), the Smithsonian Environmental Research Center (SERC), the Smithsonian Tropical Research Institute (STRI), the Smithsonian Astrophysical Observatory (SAO), the National Air and Space Museum (NASM), the National Museum of Natural History (NMNH), the National Museum of American History (NMAH) — specifically, with regard to the history of science and American Life, the Smithsonian Gardens (SG), and the Cooper Hewitt, National Design Museum (CHNDM) — which offers design and technology education.

EXPLANATION OF CHANGE — STEM (+23 FTEs, and +\$10,000,000)

The Smithsonian requests **+\$10 million** to provide authentic and inspiring STEM experiences for teachers and students by drawing on the scientific and the engineering assets of the federal Government — including scientists, labs, satellites, museums and research centers. The Smithsonian will serve as a conduit between federal mission agencies, other non-profits — including the Smithsonian's 184 Affiliate museums. The Institution will grow and support learning communities that include educators in schools and informal learning settings; assist with the identification of curriculum in a variety of modalities; and work with partners to identify, develop and disseminate STEM engagement materials and experiences. The STEM initiative will also advance professional development opportunities that take into consideration the Next Generation Science Standards and align with state education standards.

The Smithsonian will work collaboratively with federal agencies offering STEM programs so that we may identify and disseminate content that takes advantage of each agency's unique assets, create complementary materials and avoid duplication of effort, and share a centralized portal for the broad dissemination of our engagement offerings.

The Smithsonian will manage these endeavors by creating discipline- and subject-based committees that coordinate the efforts of STEM engagement providers, including Smithsonian units, mission agencies, and other non-profit collaborators. The Institution will also increase the capacity of Smithsonian units to offer more programs, experiences

and services in the creation, dissemination, and evaluation of STEM education content. The following chart details the requested STEM engagement increase:

Items	(\$000s)	FTEs
SERVICES		
Develop Infrastructure to Deliver Content	4,353	7
CREATING COMMUNITY		
Teachers and Students	4,574	11
EVALUATION		
Learning and Evolving	1,073	5
TOTAL	\$10,000	23

Developing and Maintaining an Infrastructure to Deliver Content (+\$4,353,000, +7 FTEs) — The Smithsonian is piloting MySI, an online Participant Access System (PAS) that will enable the Institution to centralize its many education assets and maintain interactive relationships with its users. MySI will be used to tag, manage and disseminate standards-aligned STEM content from partners working in the public and nonprofit sectors. Staff will align all content with state standards, create finder tools so that the content can be cross-referenced, and develop a surveying capacity, content management tools, and a portal for the collection and management of citizen-science data. This system will also generate daily metrics so that all content creators and stakeholders are aware of access and usage on a day-to-day basis. The Smithsonian will work with Co-STEM partners and evaluators to clearly define “evidence based” engagement, and will develop shared protocols for measuring the effectiveness of different types of informal education programs. The Institution requests funds to further develop the system and assess resources to be shared and the needs of mission-agency participants, educators and students; develop interactive tools; continue ongoing upgrades and improvements; links to databases; and obtain contractual services. The Smithsonian requests funding support for a Web architect, programmers and designers to further develop and maintain a website that will be shared with the partners. The Institution will also require support for equipment, supplies, travel, and systems maintenance.

Creating Community/Teachers and Students (+\$4,574,000, +11 FTEs) — The Smithsonian’s research with educators from a diverse range of grade levels, regions, and socioeconomic levels, and its partnerships with organizations that serve and connect educators and students (including the Council of Chief State School Officers and the Learning Registry) indicate that in order to have the most impact on student progress, content producers such as the Smithsonian and the federal agencies must support a community and opportunities for engagement around learning resources. The Smithsonian requests funds for program implementation for the Digital Learning Laboratory Initiative, a vibrant digital space accessed through the Participant Access System. This involves locating resources (specifically, all Smithsonian and other federal agency digitized collections, videos, podcasts, learning resources, and more), reviewing and selecting them, sequencing and editing them, layering them with instructional activities, linking them to appropriate state and national standards, and

sharing them with their students and colleagues. For educators, the lab replicates and enhances the process they use in preparing for teaching. Accordingly, programmatic support will go to:

- collaborating to develop the learning platform, based on continual research;
- providing adaptive digital tools and experiences;
- evaluating outcomes with educators and students;
- fostering community and increasing skills; and
- scaling resources and sharing them across educational organizations of all kinds.

Evaluation: Learning and Evolving (+\$1,073,000, +5 FTEs) — The Smithsonian embraces evaluation as a tool for STEM learning and engagement in both formal and informal learning settings. Our approaches to evaluation include the use of logic models as tools for planning, front-end evaluation, rapid-prototyping, random control studies, longitudinal and retrospective cohort studies, and the development of STEM assessment tools. The Smithsonian Astrophysical Observatory has provided research, development, and evaluation services that leverage STEM engagement efforts at federal agencies, thereby helping to ensure that federal efforts lead to learning outcomes that are rigorous, meaningful and substantive. Our researchers have developed valid and reliable assessments that measure changes in student's interest in STEM careers and STEM content knowledge. Dozens of education and National Science Foundation math/science partnerships use Smithsonian instruments to measure increases in teacher's subject-matter proficiency and pedagogical content knowledge, and to track changes that result in students' classroom gains. The Institution requests funds to support evaluation training and develop a variety of methods for assessment. Program support will go to:

- collaborating with evaluation staff, and providing consultations to Smithsonian and federal agency programs concerning evaluation design and implementation;
- developing new STEM content test and survey instruments to align with appropriate state and national standards;
- providing online and paper-and-pencil survey and assessment administration, scoring, and statistical analysis;
- supporting publication of pan-agency research findings in peer-reviewed journals;
- providing postdoctoral research opportunities for STEM evaluators, statisticians and researchers; and
- offering professional development workshops and Webinars for STEM evaluators to share new approaches and best practices.

NONAPPROPRIATED RESOURCES — General trust funds defray the costs of staff salaries and benefits, fund raising, exhibition design and production, publications, materials, outside specialists, and contractual services. Donor/sponsor-designated funds cover costs related to specific projects and programs.

COMMUNICATIONS

	APPLICATION OF OPERATING RESOURCES							
	FEDERAL APPROPRIATIONS		GENERAL TRUST		DONOR/SPONSOR DESIGNATED		GOV'T GRANTS & CONTRACTS	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2013 ENACTED	22	2,660	30	4,053	0	271	0	0
FY 2014 ENACTED	22	2,556	31	3,765	0	25	0	0
FY 2015 ESTIMATE	22	2,593	31	3,765	0	0	0	0

STRATEGIC GOALS: BROADENING ACCESS AND MISSION ENABLING

Federal Resource Summary by Performance Objective and Program Category

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Broadening Access						
<i>Public Programs</i>						
Provide reference services and information	8	524	8	532	0	8
Mission Enabling						
<i>Management Operations</i>						
Strengthen an institutional culture that is customer centered and results oriented	1	115	1	117	0	2
Enhance the reputation of the Smithsonian by maintaining good relations with the news media and with federal, state, and local governments	10	1,258	10	1,279	0	21
Ensure that the Smithsonian workforce is efficient, collaborative, committed, innovative, and diverse	3	659	3	665	0	6
Total	22	2,556	22	2,593	0	37

BACKGROUND AND CONTEXT

The Office of Communications and External Affairs (OCEA) consists of four departments: the Office of Public Affairs (OPA), the Office of Government Relations (OGR), the Office of Visitor Services (OVS), and the Office of Special Events and Protocol (OSEP).

OCEA manages the Smithsonian brand strategy, coordinates brand marketing and oversees internal communications. The Office resources support the Strategic Plan by training staff about the Institution's priorities and objectives, and informing them about important initiatives, thereby enabling the Institution to better execute its mission. OCEA is responsible for implementing the

Smithsonian brand strategy, both internally and externally, so that the Smithsonian reaches and engages more people with its mission. By improving internal communications to more effectively and efficiently inform staff of Institution-wide policies, initiatives and events, OCEA encourages cross-unit collaboration.

OPA coordinates public relations and communications with museums, research centers and offices to present a consistent and positive image of the Institution. The Office supports the Strategic Plan by strategically advancing the Institution's objectives, connecting people with Smithsonian experts, research, exhibitions, and public programs, and by working with conventional media outlets and social media. OPA connects to online audiences by overseeing content such as Visitor Information, Events, Exhibits, and *Encyclopedia Smithsonian* on the central website. The Office also administers content on Newsdesk, the Smithsonian's online newsroom, and on the central Smithsonian social media accounts. In addition, OPA works with units throughout the Institution to establish and maintain professional communications guidelines and standards.

OGR is the liaison between the Smithsonian Institution and the federal Government. This includes members and staff of the U.S. House of Representatives and Senate appropriations and oversight committees and other congressional offices, the White House, the Office of Management and Budget, and various federal agencies. The Office supports the Institution's overall Strategic Plan by explaining the accomplishments, relevance, and wealth of Smithsonian's offerings to the Congress and the Administration. OGR also works with other Smithsonian offices, informing them of federal-sector activities, tracking legislation pertinent to them, showcasing their exhibits, programs and discoveries for interested congressional offices, and managing their requests for high-ranking Government officials to participate in official Institution events.

OVS is the principal Office dedicated to designing, orchestrating, and improving visitors' experiences across the Smithsonian. The Office enables the Smithsonian's mission through its activities as the primary point of contact for Smithsonian visitors and volunteers. The Office resources support the Strategic Plan by administering products and services that broaden visitor access to Smithsonian public programs and services.

OSEP contributes to the advancement of the Institution by taking a leadership role in the planning and execution of a wide variety of special events and conferences. The Office supports the Strategic Plan by developing events to help the Institution engage in strategic decision making and achieve its goals and objectives.

The budget estimate includes \$37,000 for necessary pay and other related salary costs for existing staff funded under this line item.

MEANS AND STRATEGY

OPA allocates resources for national and international media publicity and to expand minority relationships through targeted media outlets. As the Smithsonian Office with primary responsibility for extending the Institution's communications message to online audiences, OPA manages content on the central website, Newsdesk, and on the central Smithsonian social media accounts. OPA works with units throughout the Institution to establish and maintain professional communications guidelines and standards. OPA also produces *Smithsonian Science*, an online blog devoted to scientific research.

In addition, OPA initiates and responds to all media inquiries in a timely manner with accurate, concise information, and generates story ideas for the media featuring Smithsonian experts, exhibitions, research, and programs. In terms of new initiatives, OPA also has a leading role in coordinating the Smithsonian's "Seriously Amazing" national branding campaign to educate the public about the Institution's mission and many programs, as well as appeals for private support.

OVS formats and edits information for Smithsonian visitor-based websites, a central events calendar, a central exhibitions database, and selected publications. Staffers oversee the Smithsonian-wide visitor orientation information signs. Through the general Smithsonian email address, central telephone number, and the Smithsonian Information Center, personnel promote visitor education and direct Smithsonian stakeholders to appropriate Smithsonian staff offices. OVS docents educate visitors about the history of the Smithsonian Institution Building. Staff implements strategies for volunteer recruitment, training, placement, and scheduling to support the Smithsonian's mission.

NONAPPROPRIATED RESOURCES — General trust funds support salaries and benefits of personnel and other related costs. In addition, these funds support information dissemination, outreach, publications, and general operations.

INSTITUTION-WIDE PROGRAMS

	APPLICATION OF OPERATING RESOURCES							
	FEDERAL APPROPRIATIONS		GENERAL TRUST		DONOR/SPONSOR DESIGNATED		GOV'T GRANTS & CONTRACTS	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2013 ENACTED	0	6,357	0	0	0	0	0	0
FY 2014 ENACTED	0	7,778	0	0	0	0	0	0
FY 2015 ESTIMATE	0	11,305	0	0	0	0	0	0

STRATEGIC GOALS: EXCELLENT RESEARCH; BROADENING ACCESS; STRENGTHENING COLLECTIONS; AND MISSION ENABLING

Federal Resource Summary by Performance Objective and Program Category

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Excellent Research						
<i>Research</i>						
Engage in research and discovery	0	733	0	1,200	0	467
Broadening Access						
<i>Public Programs</i>						
Provide reference services and information	0	661	0	1,121	0	460
Strengthening Collections						
<i>Collections</i>						
Improve the stewardship of the national collections	0	3,597	0	5,997	0	2,400
Mission Enabling						
<i>Information Technology</i>						
Modernize the Institution's information technology systems and infrastructure	0	2,787	0	2,987	0	200
Total	0	7,778	0	11,305	0	3,527

BACKGROUND AND CONTEXT

Beginning in 1993, Congress has approved the creation of the following four Institution-wide funding programs:

- Research Equipment Pool
- Latino Initiatives Pool
- Collections Care and Preservation Fund
- Information Resources Management Pool

In 1993, Congress approved the Smithsonian's reallocation of funds to create two Institution-wide funding programs: the Research Equipment Pool to support the units' needs for state-of-the-art research equipment, and the Information Resources Management (IRM) Pool to systematically address information technology (IT) needs throughout the Institution. The Institution first received funds in FY 1995 to support the development of a third Institution-wide program, this one for Latino initiatives, including research, exhibitions, and educational programming. In FY 1998, Congress approved a \$960,000 increase to the IRM Pool specifically dedicated to collections information systems (CIS) needs. The FY 2006 appropriation included an increase of \$1 million to establish the Collections Care and Preservation Fund (CCPF). The CCPF provides resources for the highest priority collections management needs throughout the Institution to improve the overall stewardship of Smithsonian collections.

The budget request includes an increase of \$3,527,000 for the Institution-wide programs. The budget request also includes an increase of \$700,000 for collections needs for the National Zoological Park (NZIP), which is justified here to strategically address collections care needs, but is included in the NZIP line item of this budget submission.

ADDITIONAL BACKGROUND AND CONTEXT — COLLECTIONS CARE INITIATIVE

Collections stewardship is a key component and core priority of the Smithsonian's Strategic Plan. Assembled over 168 years, Smithsonian collections are fundamental to carrying out the Institution's mission and Grand Challenges, serving as the intellectual base for scholarship, discovery, exhibition, and education. As recognized by the America COMPETES Act reauthorization, the proper management, documentation, preservation, and accessibility of collections are important to the nation's research and education infrastructure, enabling researchers to address such significant challenges facing society as the effects of global change, the spread of invasive species, and the loss of biological diversity and its impact on the global ecosystem. The Institution must substantially improve collections care and digitization to ensure that Smithsonian collections remain available for current and future use. The volume, characteristics, complexity, and age of Smithsonian collections, as well as the variety of discipline-specific standards that apply to their care, make their management, preservation, and digitization as unprecedented, challenging, and complex as the collections themselves.

Currently, Smithsonian collections total 137 million objects and specimens; 164,000 cubic feet of archives; and 1.8 million library volumes and materials, including rare books. Among the vast collections are irreplaceable national icons, examples of everyday life, and scientific material for the study of the world's scientific and cultural heritage, covering subjects from aeronautics to zoology. Through its collections, the Smithsonian presents the astonishing record of American and international artistic, historical, cultural, and scientific achievement,

with a scope and depth that no other institution in the world can match. As the steward of the national collections, the Smithsonian has the unique responsibility and historic tradition of preserving and making accessible its collections that are held in trust for the public.

Collections stewardship — the systematic development, documentation, management, preservation, and use of collections — is not a single process or procedure but a series of components which are interwoven, interdependent, and ongoing. The condition of facilities housing collections, the quality of storage and preservation, and the ability to document collections in manual and digital formats directly affect the Smithsonian's ability to make collections available to scholars and the general public worldwide. Because collections stewardship is fundamental to the Smithsonian's mission, there is a need for resources to accomplish collections management activities for accountability, preservation, storage, digitization, and accessibility of the collections.

Collections care and digitization represent a continuum of activities which support the Smithsonian's strategic goals to strengthen collections, broaden access and revitalize education. Digitization is required for significant collection holdings of film and audiovisual recordings that are currently at high risk of permanent physical and content loss due to technology and equipment obsolescence, fragility, and rapid deterioration. Such materials need to be re-housed and migrated to a stable digital format according to current preservation and digitization standards. Digitization also advances collections care by strengthening electronic inventory control, as well as by providing visual documentation of collections. Availability of high-quality digital images minimizes the handling of collections, and therefore reduces deterioration and prolongs the life of these treasures. By providing the basic building blocks for the digital Smithsonian, digitization broadens access to collections for audiences who are unable to visit the Institution in person, and extends that access beyond exhibition galleries into our collections storage facilities. With only a fraction of Smithsonian collections on exhibit at any given time, digitization maximizes the impact of the collections, and makes their content available to students, scientists, researchers, policy makers, and virtual visitors around the globe.

Federal scientific collections are essential to supporting agency missions and are thus vital to supporting the global research enterprise. Smithsonian scientific collections serve an important role in public health and safety, national security, trade and economic development, medical research, and environmental monitoring. In addition, Smithsonian cryo-collections support the use of new technologies in emerging Institution-wide and national research initiatives.

Improved care of collections is a national priority. In early 2009, the Interagency Working Group on Scientific Collections (IWGSC), established by the Committee on Science of the National Science and Technology Council and co-chaired by the Smithsonian, issued a report on the current state of federal

scientific collections and provided recommendations for their management and use. The Smithsonian has made excellent progress at raising the level of collections care and accessibility with improved collections care funding in recent years, and is now a leader in the federal community. The Smithsonian's collections care initiative and the FY 2015 requested increase directly support the recommendations of the IWGSC report, *Scientific Collections: Mission-Critical Infrastructure for Federal Science Agencies*, the Organization for Economic Cooperation and Development Global Science Forum's "Scientific Collections International (SciColl)", and the America COMPETES Act reauthorization, by taking a systematic approach to safeguarding collections for current and future generations of researchers and scientists.

MEANS AND STRATEGY — RESEARCH EQUIPMENT POOL

The Smithsonian's ambitious research agenda requires appropriate equipment to achieve its goal of Excellent Research. This basic equipment infrastructure requires regular maintenance, upgrades, and routine replacement. With the current allocation, the Institution will continue striving to prioritize and address the many research needs throughout the Smithsonian community. Research Equipment Pool funds have enabled Smithsonian museums and research centers to undertake groundbreaking research in numerous areas. As an example, genomics is offering new opportunities for exploring biodiversity. To be successful, biodiversity genomics requires a set of cutting-edge genetic technologies like the transformational tools of next generation sequencing (NGS). Similarly, the Institution's efforts in materials conservation have been greatly enhanced by using highly specialized equipment that has enabled conservators to achieve refinements in identifying the age and provenance of artifacts as well as improvements in the preservation of fragile materials. Investing in equipment and maintenance contracts will allow the Smithsonian to leverage its collections and expertise in these important areas of research.

MEANS AND STRATEGY — LATINO INITIATIVES POOL

To achieve the goal of Broadening Access through research, exhibitions, collections, performing arts, and educational initiatives, the Latino Initiatives Pool provides annual funding for Smithsonian programs that focus on U.S.-Latino experiences and contributions to science, history, art, music, and society. Pool funds enhance the Smithsonian's ability to provide relevant programming through the support of exhibits, collections management, public programs, education, research, and community/public outreach and the acquisition of Latino art and artifacts. Projects are selected on a competitive basis from proposals that demonstrate cost-effective deployment of the pool funds, other Smithsonian resources, and external funding.

MEANS AND STRATEGY — COLLECTIONS CARE INITIATIVE

To achieve the strategic goals of Strengthening Collections and Broadening Access, resources will be applied to address these collections areas:

- Collections care and preservation; and
- Collections digitization and information systems

The collections care and preservation resources will enable the Smithsonian to implement an Institution-wide collections assessment program, properly preserve collections, and store them in better conditions for use; the collections digitization and information systems resources will further the digitization of collections information and images, and provide improved public access to the national collections through the World Wide Web and mobile applications.

The Smithsonian has made significant progress at raising the level of collections care, storage, and digitization — thereby improving collections accessibility — with targeted funding for collections stewardship. Through collections-level assessments, long-term planning, and prioritization, the Smithsonian is Strengthening Collections and Broadening Access in a pragmatic, strategic, and integrated manner. Integrating collections care, moves, and digitization into a holistic strategy capitalizes on economies of scale, and enables comprehensive improvements that benefit the greatest number of collection items and stakeholders in an efficient, practical, and cost-effective way. To support this integrated approach, the National Collections Program (NCP) and the Digitization Program Office (DPO) have combined their assessment surveys into a single Institution-wide database, providing useful information to help set priorities, guide comprehensive and unit-level collections planning, measure progress toward meeting standard levels of care, broaden access to collections, and improve physical and digital collections stewardship.

Smithsonian management acknowledges that an effective strategy for addressing collections challenges depends on a coordinated, Institution-wide approach. Therefore, the following initiatives inform our strategies, budget request, and allocation of resources throughout the Smithsonian community.

- **Collections Care and Preservation**

In FY 2010, the Smithsonian conducted an Institution-wide collections physical condition assessment. As part of the assessment, Smithsonian collecting units grouped and evaluated their collections holdings by defined pragmatic subunits, based on their management and use, and characterized the quality of collections storage equipment, objects housing materials, preservation, physical accessibility, and collections space. In FY 2012, the category of collections significance was added to the

collections assessment methodology. Based on the collections' physical condition assessment results, the Smithsonian has used the CCPF to achieve targeted improvements in the preservation, storage and accessibility of collections, ranging from national icons to biomaterials, in an efficient and cost-effective manner.

The NCP has strategically provided resources to specific collections to improve substandard aspects of collections care to an acceptable level and meet professional standards; correct specific collections management deficiencies identified in the Smithsonian's Inspector General audit recommendations; facilitate collections move from substandard facilities; and address the Institution's highest priority collections management needs, including Institution-wide initiatives for the management and preservation of cryo-materials, digital art, and time-based media.

During FY 2011, the Smithsonian launched an Institution-wide collections space planning initiative to document, analyze, and plan for addressing current and future collections space needs in a pragmatic, strategic, and integrated manner. With these goals in mind, the Smithsonian established an interdisciplinary Collections Space Steering Committee, led by the National Collections Program, to assess current collections space conditions and needs, and develop a plan with near, intermediate, and long-term recommendations for addressing current and projected collections space requirements.

As part of this planning initiative, the Smithsonian completed a survey of existing collections space — representing more than 2.1 million square feet of space, or 18 percent of total Smithsonian building space. The survey provided a snapshot of collections space conditions across the Institution and characterized the quality of collections space, equipment, accessibility, environmental conditions, security, and fire safety.

To address near-term space requirements, based on the collections space survey and collections physical condition assessment, the Smithsonian requests capital funding to continue addressing the most severe collections space deficiencies at the Garber Facility in Suitland, Maryland. Constructed in the 1950s and 1960s, the Butler-style buildings were originally designed as temporary structures and have long passed their useful lifespan. They are structurally compromised or failing, dilapidated, or have been rendered inadequate for housing collections. The Garber Facility's environmental conditions are hazardous for collections, have asbestos and lead-containing dust contamination, and overcrowding issues which severely restrict physical access to as well as preservation and use of the collections. The Facilities Capital request supports the decontamination, accountability, stabilization, crating, and move of National Museum of American History (NMAH) and National Postal

Museum (NPM) collections in Building 15 to a soon-to-be-constructed temporary swing space. Completion of this remediation project and the continued move of National Air and Space Museum collections to the Udvar-Hazy Center are the first steps in a phased redevelopment plan for the Garber Facility.

The Collections Care and Preservation Fund provides resources to ensure the Institution meets its collections stewardship responsibilities and makes progress toward addressing the Smithsonian's collections care needs. Collections care funding provides resources for the Smithsonian to implement the Institution-wide collections assessment program, address the Smithsonian Inspector General's collections-related audit recommendations, and improve the preservation, storage, and accessibility of collections currently at risk of loss or damage.

The Smithsonian will strategically correct collections care deficiencies identified in the Institution-wide collections assessment that serves as a model for use by museums and federal agencies in the management and preservation of collections. Stewardship of collections is a key component of the Smithsonian's mission and a core priority of the Smithsonian's Strategic Plan, as well as a vital part of the country's research infrastructure. Collections care funding directly supports the Smithsonian's overarching goal of strengthening the preservation and accessibility of collections for current and future scholarly research, education, and the nation's scientific enterprise.

In FY 2015, the Smithsonian will continue to build on these initiatives and follow an action plan for strategically addressing the preservation and storage needs of collections, based on the results of the Institution-wide collections physical condition assessment and collections space survey.

- **Collections Digitization and Information Systems**

The DPO leads the implementation of the first-ever Institution-wide digitization strategic plan. The DPO has implemented a framework of digitization policies; made assessments to account for the state and progress of digitization; and set Institution-wide digitization priorities to guide resource allocation and planning. The FY 2012 Digitization Assessment showed that the Smithsonian needs to create 17 million digital inventory records and 53 million digital images for its museum, archival, and library collections holdings to successfully digitize high-priority collections. Executing on Smithsonian Directive (SD) 610, Digitization and Digital Asset Management Policy, Smithsonian units have articulated their implementation of Institution-wide priorities in unit digitization plans (UDPs) and created foundational digital asset management plans (DAMPs) to ensure that the Smithsonian can

effectively manage the digital content created as part of digitization activities as well as for scientific studies.

The DPO has strategically invested in rapid digitization prototype projects which showcase a replicable, cost-effective, high-throughput, high-quality process for addressing the Smithsonian digitization challenge. Open-house prototypes visited by more than 200 staff and senior management leaders have established a model that can be scaled up to capture entire collections as additional funding becomes available. In addition, the launch of the Smithsonian X 3D pilot project has established the Smithsonian as an international leader in 3D digitization of museum collections. The effort provides compelling evidence that 3D data enhances the effectiveness of curators, educators, scientists, and conservators in fulfilling the Smithsonian's mission, and has captured the imagination of educators, learners, and policy makers around the nation by providing access to 3D printable data of collection objects.

The DPO budget request, described in the Office of the Chief Information Officer section, supports strategic and cost-effective digitization by building on the proven track record of the successful rapid capture prototypes and the Smithsonian X 3D pilot project. The new rapid capture workflows and techniques will become the foundation for executing on unit digitization plan priorities, thereby increasing the quality and quantity of digital records and images at specific collecting units, and supporting Smithsonian units in their continued implementation of SD 610.

Smithsonian collections information systems (CIS) serve as a foundation for accountability, public education, and research of the Institution's collections. Digitizing collections information supports the strategic goals of Strengthening Collections and Broadening Access by improving accountability and accessibility of the national collections via the Web and mobile applications. CIS resources directly support the Institution's mission and Grand Challenges by building and maintaining core collections information systems; funding the continued digitization of collections; and improving access to digital collections information for scientific inquiry and public engagement.

MEANS AND STRATEGY — INFORMATION RESOURCES MANAGEMENT POOL

Digitization funding directly supports the Smithsonian's ambition to serve a national and international audience online, offering access to important collections that are not currently on exhibit, and fulfilling the need to document collections for improved inventory control. Creating a portfolio of rapid capture prototypes to address some of the Smithsonian's most commonly held collection materials will establish an infrastructure for standardized high-throughput

digitization that brings the Smithsonian one step closer to sharing its vast collections with the world.

IRM Pool funds support network operations and server administration. Specifically, funds are used for:

- Upgrades and enhancements to the Smithsonian’s IT infrastructure
- Contractor support in the Network Operations Center
- Provision of Active Directory and desktop migration technicians
- Network hardware/software maintenance
- Digitization of collections information and images
- Public delivery of Smithsonian digital assets

EXPLANATION OF CHANGE

The FY 2015 budget estimate for Institution-wide programs includes an increase of \$3,527,000. This includes an increase in the Collections Care and Preservation Fund (+\$2,400,000); Research Equipment Pool (+\$467,000); and the Latino Initiative Pool (+\$460,000); and the IRM — Collections Information System (+\$200,000). As background, the Smithsonian’s FY 2013 operating plan realigned pool funds from the above accounts to museums/units to assist in covering payroll and operating costs to ensure that the Institution would not have to furlough staff during FY 2013. Now that the Smithsonian has received the FY 2014 appropriation, the Institution requests the Pool funds be restored in FY 2015 to close to the pre-sequestration levels (see table below). These Institution-wide programs support the Smithsonian’s Strategic Plan.

Program (\$000s)	FY 2013 Pre-Sequestration Base	FY 2014 Base	FY 2015 Increase	FY 2015 Total
Collections Care and Preservation Fund	5,449	3,597	+2,400	5,997
Research Equipment Pool	1,298	733	+467	1,200
Latino Initiatives Pool	1,117	661	+460	1,121
Collections Information Systems Pool	806	566	+200	766
Totals	8,670	5,557	+3,527	9,084

The CCPF directly supports the Smithsonian’s Strategic Plan to continually improve the quality of collections preservation, storage space, management, information content, and physical and electronic access while leveraging resources to support Institution-wide initiatives that strategically address Smithsonian collections care. Collections care funding directly supports the Smithsonian’s overarching goal of improving the preservation of and accessibility to the collections that are relevant to current and future scholarly research, education, and the nation’s scientific enterprise.

The increase requested will assist in achieving the strategic goal of Strengthening Collections by improving collections management, mitigating collections deterioration, and supporting Smithsonian-wide initiatives that strategically address the Institution's collections care needs.

- **Collections Care and Preservation Fund (+\$2,400,000)**

This budget increase provides resources to meet professional standards of collections care. These funds will support and maintain an integrated, strategic and Institution-wide approach to collections care by prioritizing and systematically addressing collections care needs based on current collection care methodologies, sound assessment data, economies of scale, and project-driven activities, including collections moves. The increases are as follows:

- (+\$800,000) to address the Smithsonian's Inspector General audit recommendations regarding specific deficiencies in collections management. The funding increase will strengthen inventory controls, documentation, preservation, and storage, thereby improving collections accountability and accessibility.
- (+\$450,000) to stabilize, conserve, re-house, catalogue, and digitize collections for long-term preservation and accessibility. Collections, by their nature and use, are subject to deterioration. The increase will improve the preservation, management, and accessibility of collections identified as being at risk based on findings of the collections physical condition assessment.
- (+\$700,000) to purchase storage units and drawers to replace storage cabinetry identified during the collections physical condition assessment and collections space survey as obsolete and substandard, particularly at the NMAH and NMNH, and to re-house and store the National Air and Space Museum collections moving to the Udvar-Hazy Center from the Garber Facility. Providing sufficient, secure, and appropriate storage equipment is the most cost-effective and efficient way to minimize physical and security risks to the collections and to improve overall accessibility. The purchase of such cabinetry is a lasting investment in the long-term preservation of Smithsonian collections.
- (+\$250,000) to support the management and preservation of the Smithsonian's cryo-collections held by the NZP, the NMNH, and the Smithsonian Tropical Research Institute. The cryo-collections total nearly one million samples of frozen tissue products, germ-plasma, embryos, DNA, and animal and plant products from more than 16,000 species. This increase will leverage the shared expertise and resources dispersed across the Institution to support an integrated and efficient approach to curation and data sharing of these frozen

collections to ensure their accessibility for scientific research worldwide.

- (+\$200,000) to provide care for and support collections of digital art and time-based media throughout the Institution, implementing interdisciplinary best practices in the acquisition, documentation, and long-term preservation of these growing and fragile collection materials. This increase will position the Smithsonian as a leader in the acquisition, care, and exhibition of digital art and time-based media in the professional museum community.

- **Unit-Based Collections Care and Preservation (+\$700,000)**

This budget increase provides the NZP with resources to upgrade the equipment for the animal collection. Excellence in animal care is paramount for maintaining the Zoo's accreditation by the Association of Zoos and Aquariums (AZA), as well as for maintaining compliance with the Animal Welfare Act. Accordingly, the NZP requests \$500,000 for yearly equipment needs and an increase of \$200,000 to support animal nutrition that will cover increasing commissary costs as well as necessary supplies, operational, enrichment, and transportation costs needed to care for the animal collection. Additional details are provided in the NZP unit narrative of this budget submission.

In FY 2015, the Smithsonian will continue to take an integrated, strategic, and Institution-wide approach to collections care and digitization by prioritizing and systematically addressing requirements, based on current collections care methodologies, sound assessment data, economies of scale, and project-driven activities, including collections moves.

This budget request provides resources to continue to build on important planning initiatives and follow an action plan for strategically addressing the collections preservation, storage, and digitization needs, based on the Institution-wide collections physical condition assessment, collections space survey, and digitization assessment. With this increase, the Smithsonian will continue to address the Inspector General's collections-related audit recommendations; improve the preservation, storage, digitization, and accessibility of collections currently at risk of loss or damage; build on public/private partnerships in 3D digitization; and improve collections management in a way that strategically addresses the Smithsonian's collections care needs. These funds represent an investment in the future of our nation's priceless treasures.

OFFICE OF EXHIBITS CENTRAL

	APPLICATION OF OPERATING RESOURCES							
	FEDERAL APPROPRIATIONS		GENERAL TRUST		DONOR/SPONSOR DESIGNATED		GOV'T GRANTS & CONTRACTS	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2013 ENACTED	28	2,909	4	334	0	3	0	0
FY 2014 ENACTED	28	2,950	5	307	1	111	0	0
FY 2015 ESTIMATE	28	3,002	5	307	1	111	0	0

STRATEGIC GOALS: BROADENING ACCESS AND MISSION ENABLING

Federal Resource Summary by Performance Objective and Program Category

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Broadening Access						
<i>Exhibitions</i>						
Offer compelling, first-class exhibitions	24	2,508	24	2,556	0	48
Mission Enabling						
<i>Management Operations</i>						
Ensure that the Smithsonian workforce is efficient, collaborative, committed, innovative, and diverse	4	442	4	446	0	4
Total	28	2,950	28	3,002	0	52

BACKGROUND AND CONTEXT

The mission of the Office of Exhibits Central (OEC) is to be a full-service design, editing, and production shop supporting Smithsonian public exhibitions; serving units within the Smithsonian that have no design, editing or production capabilities; providing the entire Smithsonian exhibition community with specialized skills and equipment; and supporting resource-sharing among units.

To achieve the strategic goal of Broadening Access, the OEC will continue to focus on its core mission of designing and producing exhibitions for the Institution. Clients with limited or no design or production capabilities can use the OEC for full exhibition services, including design, editing, graphics production, cabinetry, model making, and crating. The OEC fosters collaboration among units by providing consultations, especially in the early stages of an exhibition. With their broad array of skills, the OEC team of experts can network across the entire Smithsonian, resulting in more compelling exhibits that connect the American people to their history and cultural and scientific heritages. For clients who need specialized services, the OEC

will continue to develop its expertise in computer-controlled production and automated modeling technologies, such as 3D scanning and printing. In addition, the OEC will provide opportunities for Smithsonian colleagues to take advantage of its state-of-the-art facility, allowing trained staff to work with its specialized equipment. The OEC's Object Storage Facility (OSF) offers secure, climate-controlled storage for artifacts during production. As part of its work to advance the strategic goal of Broadening Access to Smithsonian Collections, the OEC will continue supporting exhibitions in the S. Dillon Ripley Center concourse, as well as in the Commons, Schermer, and Great Hall galleries in the Smithsonian Castle.

The budget estimate includes an increase of \$52,000 for necessary pay and other related salary costs for existing staff funded under this line item.

MEANS AND STRATEGY

As the most comprehensive producer of exhibits, the OEC is dedicated to providing its Smithsonian clients with first-class exhibition design, editing, production, and installation services. Each year, the OEC designs and produces approximately 100 projects, large and small, for almost every office and museum in the Smithsonian.

In FY 2015, most OEC resources will stay focused on achieving the goals of Broadening Access and Mission Enabling by improving the quality of exhibition design and production at the Smithsonian. This will be done by:

- improving the quality of exhibition design, consultation, production, and installation services
- increasing and maintaining staff knowledge and expertise in state-of-the-art technology, techniques, and advances in the exhibition field, and upgrading equipment to support emerging trends
- cross-training staff within the OEC to share their expertise and maximize efficiencies
- providing demonstrations of new exhibition design technologies to Smithsonian units
- playing a lead role in promoting exhibition excellence, unit sharing of resources, and advancement of exhibitions as an interpretive medium across the Smithsonian Institution.

The OEC will accomplish these objectives by focusing exclusively on exhibit-related work, freeing up OEC staff with specialized experience to concentrate on the OEC's core mission: the design and production of exhibits. Building on well-established, collaborative relationships with other Smithsonian design and production units, the OEC will continue to play a stronger role in sharing its expertise with other Smithsonian units. These initiatives should result in a more informed and expert staff that can do more to promote collaboration in the museum community, and make the Smithsonian a leader in the exhibition field.

MUSEUM SUPPORT CENTER

	APPLICATION OF OPERATING RESOURCES							
	FEDERAL APPROPRIATIONS		GENERAL TRUST		DONOR/SPONSOR DESIGNATED		GOV'T GRANTS & CONTRACTS	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2013 ENACTED	23	1,810	0	0	0	0	0	0
FY 2014 ENACTED	23	1,836	0	0	0	0	0	0
FY 2015 ESTIMATE	23	1,866	0	0	0	0	0	0

STRATEGIC GOAL: STRENGTHENING COLLECTIONS

Federal Resource Summary by Performance Objective and Program Category

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Strengthening Collections						
<i>Collections</i>						
Improve the stewardship of the national collections	23	1,836	23	1,866	0	30
Total	23	1,836	23	1,866	0	30

BACKGROUND AND CONTEXT

The Museum Support Center (MSC) is the Smithsonian's principal off-site collections preservation and research facility. Located in Suitland, Maryland, this facility houses more than 55 million objects, or 40 percent of the Institution's irreplaceable national collections, primarily from the National Museum of Natural History (NMNH). Other Smithsonian museums that use MSC are the National Museum of American History, the Hirshhorn Museum and Sculpture Garden, the Freer and Sackler Galleries, the National Museum of African Art, the National Postal Museum, the Smithsonian Environmental Research Center, and the National Zoological Park.

Pod 3 (collection storage facility) of the MSC, which was recently renovated, was awarded LEED (Leadership in Energy and Environmental Design) Silver certification. The MSC accommodates collections in a variety of state-of-the-art equipment: collections in cabinets; mobile shelving for biological specimens preserved in alcohol; meteorites in nitrogen atmosphere, and tissues and film in mechanical and nitrogen vapor freezers; high-bay storage for very

large objects such as totem poles, boats, and large mounted mammals; and large mobile racks for storing art.

The facility also houses laboratories for molecular systematics, conservation, and other specialized research. The MSC supports contracted maintenance services and required calibration for much of the specialty collections preservation and laboratory equipment, such as environmental chambers, freezers, nitrogen systems, fume hoods, reverse osmosis water systems, and oxygen detection systems. The MSC staff provides disaster response and management services, including a hazardous response team; construction coordination and logistics support; safety and pest control; collections relocation; administrative, shipping and receiving services; and computer support services for administrative, research, and collections data management needs.

The budget estimate includes an increase of \$30,000 for necessary pay and other related salary costs for existing staff funded under this line item.

MEANS AND STRATEGY

To support the Smithsonian strategic goal of Strengthening Collections, the FY 2015 funding will be used to further enhance pest management, improve storage of hazardous collection materials, and assist museum staff in improving storage of collections at MSC. Staff will also continue working to recover from the earthquake of August 2011, taking necessary steps to allow contractors to repair structural damage, and stabilizing broken and unsecured collection objects to protect them and prevent future damage.

In FY 2015, MSC staff will continue to support maintenance of the collections and the research equipment needed to protect staff and collections. In addition, the MSC will prepare for the multi-phased master plan renovations at the Center, which will improve and update support systems and laboratory spaces at the facility. Staff will also assist in the feasibility study for the addition of Pod 6 and improvements to+ other Institution-wide collection facilities.

MUSEUM CONSERVATION INSTITUTE

	APPLICATION OF OPERATING RESOURCES							
	FEDERAL APPROPRIATIONS		GENERAL TRUST		DONOR/SPONSOR DESIGNATED		GOV'T GRANTS & CONTRACTS	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2013 ENACTED	22	3,177	0	23	1	187	0	125
FY 2014 ENACTED	22	3,222	0	20	1	272	0	92
FY 2015 ESTIMATE	22	3,275	0	20	1	183	0	0

**STRATEGIC GOALS: EXCELLENT RESEARCH; BROADENING ACCESS;
REVITALIZING EDUCATION; STRENGTHENING COLLECTIONS; AND
MISSION ENABLING**

Federal Resource Summary by Performance Objective and Program Category

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Excellent Research						
<i>Research</i>						
Engage in research and discovery	7	1,190	7	1,210	0	20
Broadening Access						
<i>Digitization and Web Support</i>						
Provide improved digitization and Web support	1	96	1	101	0	5
<i>Public Programs</i>						
Provide reference services and information	1	128	1	132	0	4
Revitalizing Education						
<i>Education</i>						
Engage and inspire diverse audiences	1	158	1	160	0	2
Strengthening Collections						
<i>Collections</i>						
Improve the stewardship of the national collections	7	816	7	816	0	0
Mission Enabling						
<i>Management Operations</i>						
Strengthen an institutional culture that is customer centered and results oriented	4	725	4	745	0	20
Modernize the Institution's financial management and accounting operations	1	109	1	111	0	2
Total	22	3,222	22	3,275	0	53

BACKGROUND AND CONTEXT

The Smithsonian's Museum Conservation Institute (MCI), located in Suitland, Maryland, is the center for specialized technical collections research and conservation for all Smithsonian museums and collections. The MCI combines knowledge of materials and the history of technology with state-of-the-art instrumentation and scientific techniques to provide technical research studies and interpretation of artistic, anthropological, biological, and historical objects. Through its *Healthy Environments, Healthy Practices, Healthy Collections* initiative and the training program "Preventing Illicit Trafficking — Protecting Cultural Heritage," the MCI responds to the threats affecting cultural heritage in multiple and complex ways, including developing less invasive and damaging storage, display, and conservation techniques, and by supporting U.S. agencies and the museum community in understanding and identifying illicitly trafficked cultural heritage artifacts and objects.

The MCI, as the only Smithsonian resource for technical studies and scientific analyses for most of the Smithsonian's collections, brings unique analytical capabilities to Smithsonian researchers, including a central mass spectroscopy instrument core and advanced technological capabilities. These services are available to Smithsonian units at no charge. In addition to requests for consultations from within the Smithsonian, the MCI responds to requests from affiliates and outside organizations, such as the White House, U.S. Congress, U.S. Department of Homeland Security — Immigration and Customs Enforcement, U.S. Department of State, and other federal, museum, and academic organizations.

The budget estimate includes an increase of \$53,000 for necessary pay and other related salary costs for existing staff funded under this line item.

MEANS AND STRATEGY

To achieve the strategic goal of Excellent Research, the MCI will provide increased technical and research assistance to the museums and scientific research centers. The MCI will initiate, facilitate, and support collaborative research projects on biological isotopes and proteomics (i.e., the large-scale study of proteins; particularly, their structures and functions), nanoscale analysis of museum materials, modern museum and collection materials such as plastics, the mechanisms of degradation and biodeterioration, and historical and archaeological technologies. The MCI will also use its website, publications, hosted symposia, presentations, invited seminars, and lectures to disseminate the results of its research programs.

The MCI's technology transfer initiatives (digital and spectroscopic imaging, proteomics, modern materials, and biodeterioration) will cross all of the boundaries between Smithsonian units and support all of the Institution's Grand

Challenges and consortia. The MCI's exploration of new technologies in spectroscopic imaging and proteomics will support the Grand Challenges of Unlocking the Mysteries of the Universe and Understanding and Sustaining a Biodiverse Planet, respectively. MCI's exploration of materials science related to modern materials will support the Grand Challenge of Understanding the American Experience and its signature project on Living in the Anthropocene. Biodeterioration research will use technology from the Understanding and Sustaining a Biodiverse Planet to support the Grand Challenge of Valuing World Cultures. The MCI's investigations of historical and archaeological materials and technologies will also support Valuing World Cultures.

To achieve the strategic goal of Broadening Access, the MCI's technical information office will continue serving the museum and cultural heritage management communities, museum studies students, and the public. The technical information office answers direct inquiries and distributes general guidelines in printed and electronic formats, handling more than 800 information requests annually. MCI's website is being enhanced to increase the impact of the Institute's research and outreach programs. In addition, the MCI is contributing to the Smithsonian's initiative in digitization and new media by developing new digital imaging capabilities appropriate for Facebook, Twitter, YouTube, Flickr, blogs, mobile applications, and virtual reality in ways that broaden public access to collections, exhibitions, and outreach programs.

The MCI will achieve the goal of Revitalizing Education by continuing to promote career development for Smithsonian conservators and other collections care providers through Grand Challenge consortia participation, colloquia, symposia, and workshops, as well as distance-learning opportunities. The MCI, in collaboration with Smithsonian museums and affiliates, will offer public programs to present the results of MCI research, heighten awareness of the problems of preserving cultural heritage, and gain information about the nature and scope of problems that the Institute's clients encounter. The MCI will also collaborate with Smithsonian museums and affiliates to offer media events, printed and Internet materials, presentations, workshops, and demonstrations to reach new audiences, especially those that will be targeted by the Institution's newest museums. The MCI will continue to offer internships for students pursuing careers in conservation and conservation science.

To achieve the goal of Strengthening Collections, the MCI will support Smithsonian museums and research centers in their efforts to care for the national collections and disseminate that information to the larger museum community and the public. The MCI will continue its study of the assessment and remediation of collection hazards. In addition, the MCI will focus on developing and using less invasive and less damaging materials and procedures for collection conservation, reflecting the importance of incorporating energy-efficient and "green" materials and practices into the Institute's work. The MCI will pursue collaborative conservation treatment projects with other Smithsonian units to

provide conservation guidance and art history technical consultations to the art and history museums for their more challenging and unique objects. Through continuing communication and interaction with museum conservators, the MCI will identify special training needs and research projects, and will develop research and symposia to address the most urgent collections preservation needs, such as museum environments (involving light, temperature, and humidity), museum hazards (such as pests and pesticides), and collections storage.

The MCI's umbrella theme, *Healthy Environments, Healthy Practices, Healthy Collections*, directly supports the Smithsonian's Strategic Plan priorities in all four Grand Challenge areas, although its primary impact will be in Understanding the American Experience and Valuing World Cultures.

To achieve the goal of Mission Enabling, the MCI will use the Smithsonian's Strategic Plan and its own strategic plan to properly allocate its budgetary and human resources, and to secure additional financial resources for its high-priority programs. Resource allocations will be tracked against performance metrics in each of the strategic areas, and against the needs and goals of the Smithsonian's museums and research centers. The MCI will encourage staff to participate in budget-performance integration, succession management, and leadership development programs. In addition, the MCI will continue to implement and communicate efficient, rational, and creative operational and administrative practices which enable staff to advance the Smithsonian mission while ensuring that resources are wisely managed in a manner that reflects transparency and the Smithsonian's status as a public trust. The MCI will maintain an efficient, collaborative, committed, innovative, and accountable workforce through leadership, development, evaluation, and support of staff and the recruitment, selection, and development of diverse, highly skilled employees. The MCI will promote diversity in all aspects of working with the Institution's operations, employees, Fellows, interns, volunteers, and vendors. Finally, the MCI will continue to improve communications with internal and external stakeholders.

NONAPPROPRIATED RESOURCES — Annually, the MCI receives non-appropriated resources from gifts and endowments, grants and contracts, discretionary income, and business ventures. These sources provide funds for specific programs and projects in research, education, and outreach designated by the donor/sponsor and for general activities at the discretion of the director. The Andrew W. Mellon Foundation challenge grant provides a restricted endowment of \$5 million, with an annual payout of approximately \$250,000. The funds generated by the endowment will remain in the MCI budget for strengthening conservation science research.

SMITHSONIAN INSTITUTION ARCHIVES

	APPLICATION OF OPERATING RESOURCES							
	FEDERAL APPROPRIATIONS		GENERAL TRUST		DONOR/SPONSOR DESIGNATED		GOV'T GRANTS & CONTRACTS	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2013 ENACTED	20	2,118	5	417	0	11	1	53
FY 2014 ENACTED	20	2,149	4	385	0	0	0	0
FY 2015 ESTIMATE	20	2,187	4	382	0	0	0	0

STRATEGIC GOALS: EXCELLENT RESEARCH; BROADENING ACCESS; STRENGTHENING COLLECTIONS; AND MISSION ENABLING

Federal Resource Summary by Performance Objective and Program Category

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Excellent Research						
<i>Research</i>						
Ensure the advancement of knowledge in the humanities	2	215	2	220	0	5
Broadening Access						
<i>Digitization and Web Support</i>						
Provide improved digitization and Web support	2	158	2	164	0	6
<i>Public Programs</i>						
Provide reference services and information	3	290	3	296	0	6
Strengthening Collections						
<i>Collections</i>						
Improve the stewardship of the national collections	10	1,096	10	1,109	0	13
Mission Enabling						
<i>Management Operations</i>						
Strengthen an institutional culture that is customer centered and results oriented	3	390	3	398	0	8
Total	20	2,149	20	2,187	0	38

BACKGROUND AND CONTEXT

The Smithsonian Institution Archives (SIA) serves as the institutional memory of a unique cultural organization. The history of the Smithsonian, in many ways, is the history of scientific enterprise in America, particularly in the 19th century. SIA supports the Smithsonian community, scholars, and the public by acquiring, evaluating, and preserving the records of the Institution and related

documentary materials, as well as by making them accessible online and on site. SIA manages the care, storage, packing, and retrieval services for most of the Institution's records. The permanent records are safeguarded and preserved in leased facilities in Washington, DC and Iron Mountain in Boyers, Pennsylvania. Electronic records are supported on SIA-owned computer servers and at the Institution's data center in Herndon, Virginia. In addition, SIA develops policies and provides guidance for managing and preserving the Institution's vast archival collections, offers a range of reference, research, and record-keeping services, and creates products that promote understanding of the Smithsonian and its history and mission.

The budget estimate includes an increase of \$38,000 for necessary pay and other related salary costs for existing staff funded under this line item.

MEANS AND STRATEGY

In FY 2015, SIA will continue to focus on capturing, preserving, and providing access to research materials on Smithsonian history. SIA will continue to support the needs of thousands of researchers seeking information from the Archives; provide online access to ever more information from or about the holdings via its robust website; collaborate fully with Smithsonian units serving broad external audiences (such as The Smithsonian Associates and the Smithsonian Affiliations Program); set archival collections-management standards; and assist all Smithsonian units with the proper disposition of their records.

An ongoing challenge remains with the care and preservation of the historical photographic collection that documents the visual history of the Institution. Currently, this collection is in an aging, cold storage vault located in the basement of the National Museum of American History. SIA is working to secure funding to complete a build out of a new cold storage vault, which will provide Institution-wide collections storage. SIA will re-house, stabilize, and move its nearly three million negatives and color transparencies to this new cold storage vault to ensure the continued preservation of the Institution's photographic collection.

NONAPPROPRIATED RESOURCES — General trust funds support SIA's basic operational costs, such as office, archival, and conservation supplies; software licenses; and maintenance of high-end equipment. Trust funds also support the salaries and benefits of archivists and conservators, their work to manage and preserve the collections of the Institution, and their efforts to provide professional conservation expertise throughout the Smithsonian, to other institutions, and to the public. Additionally, general trust funds support SIA's Web and new media outreach program that seeks to expand the awareness, use, and accessibility of SIA's collections and resources. Greater knowledge about these collections and other resources will illuminate the Smithsonian's catalytic role in American history, world cultures, scientific research, and the arts.

SMITHSONIAN INSTITUTION LIBRARIES

	APPLICATION OF OPERATING RESOURCES							
	FEDERAL APPROPRIATIONS		GENERAL TRUST		DONOR/SPONSOR DESIGNATED		GOV'T GRANTS & CONTRACTS	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2013 ENACTED	86	9,804	10	1,574	5	1,081	0	0
FY 2014 ENACTED	86	10,337	11	1,621	6	1,140	0	0
FY 2015 ESTIMATE	86	10,493	10	1,615	5	1,114	0	0

STRATEGIC GOALS: EXCELLENT RESEARCH; BROADENING ACCESS; STRENGTHENING COLLECTIONS; AND MISSION ENABLING

Federal Resource Summary by Performance Objective and Program Category

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Excellent Research						
<i>Research</i>						
Engage in research and discovery	22	3,242	20	3,042	-2	-200
Ensure the advancement of knowledge in the humanities	21	2,384	21	2,542	0	158
Broadening Access						
<i>Digitization and Web Support</i>						
Provide improved digitization and Web support	8	900	9	948	1	48
<i>Public Programs</i>						
Provide reference services and information	0	71	0	73	0	2
<i>Exhibitions</i>						
Offer compelling, first-class exhibitions	1	71	1	73	0	2
Strengthening Collections						
<i>Collections</i>						
Improve the stewardship of the national collections	23	2,221	25	2,369	2	148
Mission Enabling						
<i>Management Operations</i>						
Ensure that the Smithsonian workforce is efficient, collaborative, committed, innovative, and diverse	10	1,353	9	1,330	-1	-23
Strengthen an institutional culture that is customer centered and results oriented	1	95	1	116	0	21
Total	86	10,337	86	10,493	0	156

BACKGROUND AND CONTEXT

As the largest and most diverse museum library in the world, the Smithsonian Institution Libraries (SIL) leads the Smithsonian in taking advantage of the opportunities of the digital society. SIL provides authoritative information and innovative services for Smithsonian Institution researchers, scholars, visiting Fellows, and the general public, to further their quest for knowledge. Through paper preservation and digital technologies, SIL ensures broad and enduring access to the Libraries' collections for all users.

The budget request includes an increase of \$156,000 for necessary pay and other related salary costs for existing staff funded under this line item.

MEANS AND STRATEGY

SIL's strategic plan for 2014–2018, *A Focus on Service*, demonstrates the Libraries' dedication to providing information and creating innovative services and programs for the Institution and general public. SIL offers a wide variety of information resources, unique collections, and discovery tools to improve research productivity in support of the four Grand Challenges and Smithsonian Strategic Plan priorities. In FY 2015, SIL will continue to broaden interactive engagement with users — through experimentation, trial projects, and Web-based communities — making SIL collections and other Web content available to millions of scholars, students, teachers, researchers, and interested users worldwide. SIL will expand its use of social media by making more information available on mobile and tablet devices and by using blogs, Facebook, Twitter, and other emerging social media tools to promote services and broaden access to collections.

SIL will achieve the strategic goal of Broadening Access by offering more useful collections information on networked resources. Initiatives include implementing Web-based management tools for electronic collections and resources management and continuing to add new information to the Smithsonian Institution Research and Information System (SIRIS). For example, through the Smithsonian Collections Search Center, SIL provides access to research collections covering more than 460,000 pieces of trade literature and commercial catalogues, representing more than 27,000 manufacturers, corporations, and companies. The Collections Search Center also provides access to 1,700 National Postal Museum (NPM) design files; now, when searching for the stamp “\$2.40 *Raising the Flag on Lunar Surface, July 20, 1969* Design Files,” one will see the history of that specific design in the NPM library as well as the stamp in the Museum. In addition, SIL provides metadata guidance and incorporates, as appropriate, emerging national metadata standards on an Institution-wide basis for SIL and Smithsonian digital publications and products.

SIL collaborates with other Smithsonian units and external organizations in many ways. The Libraries creates and publishes digital research products to give scholars the documentation they need for their research in all fields. These products include republication of significant out-of-print books and articles, original diaries and manuscripts, collections of archival literature, illustrations, topical exhibitions, and bibliographic guides and databases. With private funding, SIL hosts the Secretariat for the Biodiversity Heritage Library, an international project to improve the research process by digitizing and making easily available the literature of biodiversity, involving partners in the United States, China, Egypt, the European Union, Australia, Brazil, Singapore and sub-Saharan Africa. SIL supports these efforts by continuing to digitize its own biodiversity literature to contribute to this global digital library. In FY 2015, SIL will increase digitization projects in history, arts, and culture as part of the Smithsonian Libraries initiative, the Cultural Heritage Library. As a member of the Global Philatelic Library project, SIL's National Postal Museum branch library will make its unique collections available to audiences worldwide.

SIL partners with the Smithsonian Scholarly Press to produce the electronic *SI Contributions* series and other publications, including conference proceedings, and also hosts and maintains the Scholarly Press's website. SIL maintains the Smithsonian Research Online (SRO) database (<http://research.si.edu/>), comprising the Smithsonian Digital Repository (SDR) and the Smithsonian Research Bibliography (SRB) to preserve and provide permanent access to the published results of the Institution's scholarly research. Data from the SRO are used as Smithsonian key performance indicators. As part of its collaborative operations, SIL will continue working with the Institution's art and history museums to expand the content of the SRO system, with the goal of eventually providing a complete record of Smithsonian research productivity.

Furthermore, SIL continues to supply scholarly, often rare, material. This involves acquiring, preserving, cataloguing, and managing print and digital collections; with particular attention to Smithsonian research centers and areas of interdisciplinary research. SIL's Book Conservation Laboratory staff preserves and stabilizes damaged volumes to ensure their availability for exhibition and future use. As part of its regular services, through interlibrary lending, SIL also provides information directly to individual researchers and members of the public in every state and many foreign countries.

As a resource for learners everywhere, SIL responds to staff and on-site visitor needs by redesigning facilities to retain tightly focused, local collections integrated with collaborative space, while relieving overcrowded libraries by providing environmentally sound off-site shelving and housing at the Pennsy Drive facility.

In FYs 2014–2015, renovations will continue in the libraries in the National Museum of American History (NMAH), the Smithsonian Environmental Research

Center, and the Museum Support Center, as well as at the National Zoological Park's Smithsonian Conservation Biology Institute at Front Royal, Virginia. In addition, SIL partners with the National Museum of African American History and Culture in planning for its library space needs.

By helping to advance the strategic goals of Broadening Access and Excellent Research, the SIL Resident Scholar Program builds collaborative partnerships worldwide with scholarly programs and individuals who find the Libraries' collections vital to their research. An active internship program amplifies work experiences for emerging professionals and exposes them to the research library environment.

SIL informs the nation about its collections and creates interest in them through its exhibition program, which shows the intrinsic beauty of books as artifacts and cultural icons, as well as their value for the information they provide as documentation of art, science, and artifact collections. In FY 2015, SIL will continue to provide programming to augment an FY 2014 exhibition — *Once There Were Billions* — about “Martha,” the last passenger pigeon, whose death 100 years ago marked the extinction of the species. Most of the Libraries' exhibitions have an online component to reach a larger audience and keep the exhibitions updated for future learning. In FY 2015, the Libraries will open *Fantastic Worlds* in its NMAH public gallery. The exhibition looks at the intersection of science and fiction, innovation and invention.

NONAPPROPRIATED RESOURCES — General trust funds help defray the costs of providing information services to Smithsonian units, and support publications, public programs, and fundraising efforts. In FY 2015, SIL will continue its efforts to raise funds through the Smithsonian's comprehensive national fundraising campaign. The Libraries intend to focus on established priorities: acquisitions, conservation, digitization, Fellowships, and exhibitions.

OFFICE OF THE CHIEF INFORMATION OFFICER

	APPLICATION OF OPERATING RESOURCES							
	FEDERAL APPROPRIATIONS		GENERAL TRUST		DONOR/SPONSOR DESIGNATED		GOV'T GRANTS & CONTRACTS	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2013 ENACTED	91	44,896	16	2,882	0	74	0	0
FY 2014 ENACTED	93	47,856	16	2,922	0	0	0	0
FY 2015 ESTIMATE	93	50,464	16	2,951	0	0	0	0

STRATEGIC GOALS: BROADENING ACCESS AND MISSION ENABLING

Federal Resource Summary by Performance Objective and Program Category

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Broadening Access						
<i>Digitization and Web Support</i>						
Provide improved digitization and Web support	9	1,605	9	3,415	0	1,810
Mission Enabling						
<i>Information Technology</i>						
Modernize the Institution's information technology systems and infrastructure	84	46,251	84	47,049	0	798
Total	93	47,856	93	50,464	0	2,608

BACKGROUND AND CONTEXT

The Office of the Chief Information Officer (OCIO) provides vision, leadership, policy, and oversight associated with managing and operating the information technology (IT) for the Institution's many museums and research centers.

The budget request includes an increase of \$2,608,000. The increase includes \$268,000 for necessary pay and other related salary costs for existing staff funded under this line item; \$540,000 for increased communication costs, which is further justified in the Fixed Costs section of this budget submission; and \$1,800,000 in programmatic increases for digitization.

MEANS AND STRATEGY

The OCIO will use best practices in the management and operations of information technology to enhance the "increase and diffusion of knowledge" and achieve the Institution's goals of Broadening Access and Mission Enabling. The

following strategies are cross-cutting and central to the Smithsonian's mission of connecting Americans to their history and heritage, as well as to promoting innovation, research, and discovery in science:

- Use state-of-the-art, secure information systems to modernize financial, human resources, facilities management, collections, education, and research processes
- Replace network equipment, servers, desktop computers, and scientific workstations on an industry best practice life cycle to increase reliability and improve the security of information systems and the data that they contain
- Leverage commercially available technology to enhance existing IT systems at the Smithsonian so that they will increase public access to and use of digital surrogates of collection objects and research data; and implement an Institution-wide Digitization Strategic Plan that addresses the creation, management, and use of these digital assets
- Maintain the Institution's telecommunications infrastructure to provide reliable, secure, and cost-effective voice and data communications systems that support Smithsonian missions
- Meet federal requirements for providing timely and accurate financial information
- Improve the Institution's ability to integrate financial and performance management systems as part of the Enterprise Resource Planning (ERP) effort.

Digitization Assessment and Planning

The Digitization Program Office (DPO) leads the implementation of the first-ever Institution-wide digitization strategic plan. The DPO has implemented a framework of digitization policies; made assessments to account for the state and progress of digitization; and set Institution-wide digitization priorities to guide resource allocation and planning. The FY 2012 Digitization Assessment showed that the Smithsonian needs to create 17 million digital inventory records and 53 million digital images for its museum, archival, and library collections holdings to successfully digitize high-priority collections. Executing on Smithsonian Directive (SD) 610, Digitization and Digital Asset Management Policy, Smithsonian units have articulated their implementation of Institution-wide priorities in unit digitization plans (UDPs) and created foundational digital asset management plans (DAMPs) to ensure that the Smithsonian can effectively manage the digital content created as part of digitization activities as well as for scientific studies.

The DPO has strategically invested in rapid digitization prototype projects which showcase a replicable, cost-effective, high-throughput, high-quality process for addressing the Smithsonian digitization challenge. Open-house prototypes visited by more than 200 staff and senior management leaders have established a model that can be scaled up to capture entire collections as additional funding becomes available. In addition, the launch of the Smithsonian X 3D pilot project has established the Smithsonian as an international leader in 3D digitization of museum collections. The effort provides compelling evidence that 3D data enhances the effectiveness of curators, educators, scientists, and conservators in fulfilling the Smithsonian's mission,

and has captured the imagination of educators, learners, and policy makers around the nation by providing access to 3D printable data of priceless collection objects.

This budget request supports strategic and cost-effective digitization by building on the proven track record of the successful rapid capture prototypes and the Smithsonian X 3D pilot project. The new rapid capture workflows and techniques will become the foundation for executing on unit digitization plan priorities, thereby increasing the quality and quantity of digital records and images at specific collecting units and supporting Smithsonian units in their continued implementation of SD 610.

EXPLANATION OF CHANGE

The budget request includes an increase of \$2,608,000. The increase includes \$268,000 for necessary pay and other related salary costs for existing staff funded under this line item; \$540,000 for increased communications costs; and \$1,800,000 for programmatic increases for the digitization program. The pay and other related salary costs and communications increase requests are justified in the Fixed Costs section of this budget submission.

The programmatic summary of \$1,800,000 for the requested budget increase is described in greater detail below:

- (+\$1,200,000) — to continue implementing cost-efficient models for digitizing Smithsonian collections. The requested funding increase will unlock economies of scale, implement capture workflows and methodologies which can be leveraged across units, and target digitization of collections which are crucial to broader Smithsonian strategic objectives. These basic techniques ensure the maximum return on investment for Smithsonian digitization funding.
- (+\$200,000) — to expand the number of collections under digital inventory control. Creating adequate digital records for collections is essential to appropriately manage collections, as well as provide public access to them. The requested increase will upgrade existing stub records and create standardized new records.
- (+\$300,000) — to enhance the Institution's capacity for applying 3D technology to collections digitization. This increase builds on the significant progress the Smithsonian has made in this area through high-profile public/private partnerships, and ensures a basis for leveraging future fund raising.
- (+\$100,000) — to support a platform that helps units create digital asset management plans and minimizes the burden on Smithsonian units in implementing the SD 610 mandate.

NONAPPROPRIATED RESOURCES — General trust funds support salaries and benefits costs of personnel and other related costs of the OCIO.

ADMINISTRATION

	APPLICATION OF OPERATING RESOURCES							
	FEDERAL APPROPRIATIONS		GENERAL TRUST		DONOR/SPONSOR DESIGNATED		GOV'T GRANTS & CONTRACTS	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2013 ENACTED	179	32,839	196	34,363	9	3,554	0	291
FY 2014 ENACTED	185	34,185	198	36,415	10	3,011	0	100
FY 2015 ESTIMATE	187	34,637	197	35,224	11	2,845	0	100

STRATEGIC GOALS: BROADENING ACCESS; REVITALIZING EDUCATION; STRENGTHENING COLLECTIONS; AND MISSION ENABLING

Federal Resource Summary by Performance Objective and Program Category

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Broadening Access						
<i>Digitization and Web Support</i>						
Provide improved digitization and Web support	1	138	3	439	2	301
<i>Public Programs</i>						
Provide reference services and information						
<i>Exhibitions</i>						
Offer compelling, first-class exhibitions	0	59	0	60	0	1
Revitalizing Education						
<i>Education</i>						
Engage and inspire diverse audiences	3	234	3	238		4
Strengthening Collections						
<i>Collections</i>						
Improve the stewardship of the national collections	2	272	2	277	0	5
Mission Enabling						
<i>Management Operations</i>						
Strengthen an institutional culture that is customer centered and results oriented	43	7,082	43	7306	0	224
Ensure that the Smithsonian workforce is efficient, collaborative, committed, innovative, and diverse	67	13,694	67	13,442	0	-252
Modernize the Institution's financial management and accounting operations	38	7,019	38	7,113	0	94
Modernize and streamline the Institution's acquisitions management operations	31	5,587	31	5,762	0	75
Total	185	34,185	187	34,637	2	452

BACKGROUND AND CONTEXT

The Smithsonian Institution Administration program provides vision, leadership, policy, and oversight associated with managing and operating the Institution's museums and research centers. Administration includes executive leadership provided by the offices of the Secretary, the Under Secretary for Science, the Under Secretary for History, Art, and Culture, the Under Secretary for Finance and Administration/Chief Financial Officer, the Assistant Secretary for Education and Access, and the Deputy Under Secretary for Collections and Interdisciplinary Support, as well as the central administrative activities of human resources, diversity, financial, and contract management, as well as legal services.

The budget request includes a net increase of \$452,000 and 2 FTEs. This request includes:

- +\$564,000 for necessary pay and other related salary costs for existing staff funded under this line item, which are justified in the Fixed Costs section of this budget submission
- -\$412,000 decrease for Workers' Compensation, which is justified in the Fixed Costs section
- \$300,000 and 2 FTEs in program increase to implement Web Participant Access System (PAS), or MySI, which enables audiences to access all of the Smithsonian's content and research through one system

MEANS AND STRATEGY

The Smithsonian will use best practices in management to enhance the "increase and diffusion of knowledge" and achieve the Institution's goals while translating James Smithson's 19th century vision into a modern 21st century reality. The following strategies are cross-cutting and central to performing the Smithsonian's mission of connecting Americans to their history and heritage, as well as to promote innovation, research, and discovery in science:

- Support the Institution's Board of Regents and its committees
- Develop and implement necessary internal controls as recommended by the Board of Regents' Governance Committee, which involves strengthening personal property management inventory and meeting increased demands for acquisition of goods and services by realigning and augmenting resources
- Provide high-quality leadership and oversight for all policies, programs, and activities of the Institution's museums and research centers by attracting, recruiting, and retaining leaders with superior talent
- Provide oversight of the Smithsonian budget process as it is developed and executed to support the operating and capital programs of the Institution,

establish and enforce budgetary policies and procedures, and ensure that resources enable the Institution to achieve its goals and objectives

- Provide high-quality legal counsel and advice to the Regents, the Secretary, Under Secretaries, advisory boards, unit directors, Smithsonian Enterprises, and the Woodrow Wilson International Center for Scholars
- Provide leadership and guidance for Institution-wide collections initiatives, policies, and programs to improve the stewardship of the national collections
- Manage human resources, foster diversity, hire skilled workforce in a timely manner and align human capital with the Institution's goals and performance objectives. Continue to conduct workforce and gap analyses, strengthen training policies, develop succession planning, and evaluate and improve assessment tools for human resources performance
- Ensure the financial strength of the Institution and provide the Smithsonian with effective and efficient budgeting, financial, contracting, and management support services, including reliable financial reporting
- Advance the Institution's mission in the most economic, efficient, and cost-effective way by supporting audit, evaluation, investigative, contracting, and other advisory services
- Increase the Latino Center's public and educational outreach by: 1) developing exhibitions and correlative public and educational programs on Latino culture, art, and scientific achievement at the Smithsonian and affiliated institutions nationwide; 2) supporting Latino research, collections, exhibitions, and related projects at various Smithsonian museums and research centers; and 3) continuing innovation in new media, including the Latino Virtual Museum, social media, mobile applications, and other strategies which make full use of rapidly growing and accessible technologies and permit expanded delivery of programs and services to increasingly diverse audiences in a cost-effective and efficient manner
- Support the Smithsonian's commitment to teaching Americans about their rich heritage by increasing the capacity and resources of the Asian Pacific American Center (APAC) to produce exhibitions and correlative public and education programs on Asian Pacific America; continue innovative online initiatives that provide educational, programmatic, and outreach materials nationwide; form national partnerships with museums and research centers that enrich the Smithsonian's collections, research, and activities relating to Asian Pacific America.
- Establish and maintain partnerships with the various Administration agencies and initiatives related to under-represented groups, such as Asian Americans and Pacific Islanders, Hispanic Serving Institutions, Historically Black Colleges and Universities, the American Association of University Women, and Tribal Colleges and Universities, and perform the necessary public outreach to enhance the Smithsonian brand in these communities
- Work with the Secretary's executive diversity committee, Office of Human Resources, and Office of Equal Employment and Minority Affairs to ensure

compliance with federal Equal Employment Opportunity Commission mandates, promote the Smithsonian's Equal Employment Opportunity (EEO) and workforce diversity policies, and advocate for the use of small and disadvantaged businesses throughout the Smithsonian Institution

EXPLANATION OF CHANGE

The Administration budget estimate includes a net increase of 2 FTEs and \$452,000, which includes \$564,000 for necessary pay and other related salary costs for existing staff funded under this line item and a decrease of -\$412,000 for the Workers' Compensation bill for FY 2015. These amounts are justified in the Fixed Costs section of this budget submission.

The programmatic summary of 2 FTEs and \$300,000 for the requested budget increase is described as follows:

Broadening Access

- (+\$300,000, +2 FTEs) — This increase for the Office of the Assistant Secretary for Education and Access supports developing an open source Participant Access System (PAS), MySI, that will make Smithsonian content and resources easily accessible and available to learners everywhere at any time. PAS integrates with existing Smithsonian websites, databases and external data sets including collections, archives, programming and educational resources. Users of MySI will be able to search Smithsonian content by any subject matter and receive information from any of the Smithsonian's museums or research centers addressing that subject matter. This could include objects, images, video, lesson plans, etc. Users also have the ability to upload data from citizen science or civic engagement projects through multiple technologies from their communities, thus participating in a dialogue with the Smithsonian. MySI creates metrics on user interaction with the system which will allow SI to learn from our audiences.

Through the use of a registration system, login, profiles and surveys we will have the ability to learn about our audiences' interests and how they use our resources. For the first time at the Smithsonian, our audiences will be able to access all of our content and research through one system. In turn, we will be able to identify and evaluate the impact of our engagement with our audiences.

At this time, Smithsonian delivers content, but does not engage users of this content as contributors and evaluators. MySI will facilitate use as well as the Institution's understanding of the use of Smithsonian's content and the needs of learners of all ages. The Institution is requesting two FTEs who will directly support MySI: a Senior Technology Manager, (\$150,000) and a Lead Developer, (\$150,000).

NONAPPROPRIATED RESOURCES — General trust funds support salaries and benefits of personnel and other related costs. General trust funds are also used to support administrative activities, information dissemination, outreach, publications, and fund raising. Donor/sponsor-designated funds support costs related to programs and projects such as scientific research. For example, the Seward Johnson and Hunterdon endowment funds are used to improve basic support and strengthen important research efforts carried out at marine stations, and for pursuing scientific opportunities in oceanographic research. The Smithsonian received a \$10 million grant from the Gates Foundation to identify areas where the Institution wishes to expand its operations. Some of those funds have been applied to support the Grand Challenge “Understanding and Sustaining a Biodiverse Planet.” One of the signature programs expected to emerge from that Grand Challenge, and being supported in part by the Gates Foundation funding, is an initiative to build a Smithsonian Marine Global Earth Observatory (GEO) network. The Gates Foundation grant supports a series of planning workshops that include partners throughout Government and academia. Preliminary projects have been funded to design these GEOs and conduct some initial experiments to determine their uses and needs.

OFFICE OF THE INSPECTOR GENERAL

	APPLICATION OF OPERATING RESOURCES							
	FEDERAL APPROPRIATIONS		GENERAL TRUST		DONOR/SPONSOR DESIGNATED		GOV'T GRANTS & CONTRACTS	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2013 ENACTED	22	2,806	0	0	0	0	0	0
FY 2014 ENACTED	24	3,392	0	0	0	0	0	0
FY 2015 ESTIMATE	24	3,441	0	0	0	0	0	0

STRATEGIC GOAL: MISSION ENABLING

Federal Resource Summary by Performance Objective and Program Category

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Mission Enabling						
<i>Management Operations</i>						
Strengthen an institutional culture that is customer centered and results oriented	24	3,392	24	3,441	0	49
Total	24	3,392	24	3,441	0	49

BACKGROUND AND CONTEXT

The Inspector General Act requires the Office of the Inspector General (OIG) to conduct and supervise audits and investigations relating to programs and operations of the Smithsonian Institution (SI) that are, in the judgment of the IG, necessary or desirable.

The OIG fulfills its mandate by engaging in audits and reviews of SI operations and programs, and by conducting administrative and criminal investigations. The OIG's audits include annually required reports, such as the quality assurance review of Institution's annual financial statement audits and Federal Information Security Management Act (FISMA) reviews. The OIG also conducts audits and reviews as listed in its annual Audit Plan.

The budget estimate includes an increase of \$49,000 for necessary pay and other related salary costs for existing staff funded under this line item.

The Inspector General Reform Act of 2008 requires that the budget request detail the amount of funds requested by the OIG for staff training and to support the Council of the Inspectors General on Integrity and Efficiency (CIGIE). The OIG has

requested \$40,000 for training and to support CIGIE, which is funded in the base resources.

MEANS AND STRATEGY

The resources requested will be used to fund salaries, benefits, and support costs for staff engaged in audits, investigations, and other activities necessary to accomplish the OIG's mission. To balance its oversight responsibility with available resources, the OIG selects mission-critical areas for evaluation that:

- figure prominently in the Smithsonian's Strategic Plan and annual performance plans and reports;
- are the focus of congressional and executive branch attention;
- have high public interest or large dollar outlays; or
- have known performance or accountability risks.

The OIG's Audit Plan includes four mandatory sets of audits: (1) the annual audits of Smithsonian's financial statements, which the OIG oversees; (2) the annual reviews under the Federal Information Security Management Act, which the OIG also oversees; (3) an audit of the travel and other expenses of the Regents, conducted at their request to fulfill a statutory requirement; and (4) an external peer review, as required every three years to meet Government auditing standards. In addition, the plan includes the following potential audits: facilities safety and disaster preparedness; unliquidated obligations; succession planning for critical positions; planning for capital projects; implementation of the Office of Advancement's donor information management system; the facilities maintenance program; management of overtime pay; and the Office of Sponsored Projects' pre-award operations. Finally, the OIG is establishing a regular audit program to identify potential noncompliance with Smithsonian policies and procedures, or regulations, as well as instances of fraud and weak internal controls.

The investigative staff conducts administrative and criminal investigations, resolves complaints, and proactively engages the SI staff to detect and prevent waste, fraud, and abuse. Additionally, audit and investigative staff are currently working on behalf of the Smithsonian Institution to pursue significant civil monetary recoveries and criminal restitution resulting from OIG investigations.

Smithsonian management has requested increased OIG support to help ensure that operations and major projects are efficient and effective. Other stakeholders (e.g., the Board of Regents and congressional oversight committees) continue to seek OIG assurance that the Smithsonian Institution is an effective steward of its resources, and that senior SI leaders are aware of and take appropriate steps to identify and mitigate risks to the SI mission.

NONAPPROPRIATED RESOURCES — The Office of the Inspector General does not receive any nonappropriated funds.

FACILITIES MAINTENANCE

	APPLICATION OF OPERATING RESOURCES							
	FEDERAL APPROPRIATIONS		GENERAL TRUST		DONOR/SPONSOR DESIGNATED		GOV'T GRANTS & CONTRACTS	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2013 ENACTED	359	63,758	0	0	0	0	0	0
FY 2014 ENACTED	367	69,032	0	0	0	0	0	0
FY 2015 ESTIMATE	398	75,180	0	0	0	0	0	0

STRATEGIC GOAL: MISSION ENABLING

Federal Resource Summary by Performance Objective and Program Category

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Mission Enabling						
Facilities						
Implement an aggressive and professional maintenance program	367	69,032	398	75,180	31	6,148
Total	367	69,032	398	75,180	31	6,148

BACKGROUND AND CONTEXT

The mission of the Office of Facilities Engineering and Operations (OFEO) is to provide world-class services and stewardship by building, operating, maintaining, and ensuring a safe, secure, and healthy environment to enhance the Smithsonian experience for all visitors. More than 30 million people visit the Smithsonian annually.

OFEO is responsible for the maintenance and repair of an infrastructure of approximately 12 million square feet of owned and leased buildings and structures, including 19 museums and galleries, nine research centers, and the National Zoological Park (NZIP). The buildings and structures range from the well-known museums to supporting structures such as guard booths, animal shelters, and hay barns. Facilities Maintenance focuses on facility preservation activities and encompasses the upkeep of property and equipment. This work is necessary to realize the originally anticipated useful life of facility assets.

As new and renovated museum spaces and major exhibitions open, maintenance requirements rise due to increased square footage, technological

advances, and an increase in the number of systems supporting the Smithsonian's infrastructure. For example, the renovation of the Elephant House at NZP, completed in February 2013, resulted in a 30 percent increase in the number of assets requiring maintenance in that facility.

In an effort to stretch current resources, OFEO has undertaken a number of initiatives to gain efficiencies. OFEO benchmarked its maintenance staffing levels with other museums and professional organizations, including the Association of Higher Education Facilities Officers (APPA), to ensure that resources were being effectively deployed. The Smithsonian is a past recipient of the prestigious Award of Excellence from APPA in recognition of the Institution's excellence in facilities management and its efforts to establish measurable performance standards and staffing levels for maintenance and efficient operations. To build on these efforts, OFEO is exploring ways to more effectively identify and group requirements.

Ultimately, the Institution intends to achieve APPA's recommended level-1 standard for building maintenance ("Showpiece Facility"). To avoid adding to the deferred maintenance backlog, the National Research Council recommends an annual maintenance budget in the range of 2 to 4 percent of the physical plant's aggregate current replacement value. The Institution's FY 2008 replacement value was estimated at \$5.3 billion. That equated to a minimum funding requirement of \$100 million for maintenance and minor repair projects. The current replacement value at the end of FY 2014 was \$6.6 billion, raising the current minimum annual maintenance funding target. These requirements have been validated through the Facility Condition Assessment process and Reliability Centered Maintenance (RCM) analysis. With existing resources, the Smithsonian operates at the lower end of the APPA maintenance level 3 (out of 5), "Managed Care," which provides a minimal level of preventive maintenance and building system reliability to ensure that proper conditions are maintained for collections and public expectations are met.

The budget estimate includes an increase of 31 FTEs and \$6,148,000. The increase includes \$848,000 for necessary pay and other related salary costs for existing staff funded under this line item, and a programmatic increase of 31 FTEs and \$5,300,000. The increase will fund high-priority needs, including partial-year funding to establish a maintenance program for the National Museum of African American History and Culture. The request will also help establish maintenance programs for new laboratories coming online at the Smithsonian Environmental Research Center and the Smithsonian Tropical Research Institute and solidify the Smithsonian's APPA rating at a solid Level 3 across the Institution.

MEANS AND STRATEGY

To support the Institution's goal of Mission Enabling, OFEO continues an aggressive, long-range facilities maintenance and minor repair program, using

the RCM approach that includes benchmarking efforts with organizations such as the APPA. The RCM approach is a widely accepted maintenance industry philosophy that incorporates a cost-effective mix of predictive, proactive, preventive, and reactive maintenance practices.

The Smithsonian's goal is to reduce its maintenance backlog through the coordinated efforts and appropriate funding of its maintenance and capital programs. Proper maintenance funding prevents the accelerated degradation of building systems and components that would increase the number and cost of major repairs. Through increased preventive maintenance and by addressing deficiencies in a timely manner, the Institution can realize the originally anticipated useful life of facilities systems and avoid the accelerated degradation of its infrastructure, and the associated costs, mentioned above.

During FY 2015, the Institution will continue to identify efficiencies in managing its existing resources to improve its current level of service. OFEO will also continue work to improve electronic security systems and physical security measures which provide protection for the Institution's facilities, collections, staff, visitors, and volunteers.

EXPLANATION OF CHANGE

The budget estimate includes an increase of 31 FTEs and \$6,148,000. The increase includes \$848,000 for necessary pay and other related salary costs for existing staff funded under this line item, and a programmatic increase of 31 FTEs and \$5,300,000 to support high-priority maintenance requirements, provide continued security systems maintenance, and develop a maintenance program for the new National Museum of African American History and Culture (NMAAHC). The specific increases are detailed as follows:

- **Facilities Maintenance (+\$4,265,000, +18 FTEs)** — The Smithsonian has a well-documented goal of achieving the highest APPA Level 1 (out of 5) maintenance in all of its facilities. Progress toward that goal has been made in recent years, thanks to approved funding increases. To reach level 3 Smithsonian-wide, the Institution requires \$4,265,000 and 18 FTEs to support maintenance of facilities and systems that have expanded the Smithsonian's requirements in recent years. Examples include new fire protection systems; the Smithsonian Environmental Research Center's Mathias lab renovation; the Smithsonian Tropical Research Institute's Gamboa lab in Panama; integration of the National Postal Museum's maintenance requirements into the overall program; and life support equipment at the National Zoo. In addition to the expanded requirements, the need for additional skilled maintenance workers and funding is partially attributable to the diversity of custom made materials that must be maintained and restored throughout our facilities. The request includes funding for eight engineering technicians, four utility system repair

operators, three electricians, a maintenance mechanic, a management support assistant, and an assistant building manager.

- **Security System Maintenance (+\$85,000, +1 FTE)** — Security maintenance responsibilities have also increased as the result of increased footprint of the Smithsonian and an increase in the number and complexity of security systems. The Institution requests \$85,000 and 1 FTE to provide electronic security maintenance services to Smithsonian facilities in Panama. The request represents funding to hire an alarm technician for the Smithsonian Tropical Research Institute. The technician would perform preventive and reactive maintenance on electronic security systems, as well as minor system and device installations.
- **Support for NMAAHC (+\$950,000, +12 FTEs)** — The Smithsonian requests \$950,000 and 12 FTEs to establish a maintenance program for the new 400,000-square-foot National Museum of African American History and Culture and to maintain systems as they come online during construction. The request includes \$630,000 in partial-year funding to hire 20 staff and annualize positions requested in FY 2014. The new staff includes 10 utility system repair operators, seven craftsmen, a technician to service high-voltage electrical systems, a fire technician, and an assistant building manager. Additional required resources will be requested in the Smithsonian's FY 2016 budget submission to annualize the requested FTE's and funding.

The requested funds provide the maintenance coverage required to keep facility systems fully functioning. Through diligent maintenance of facilities and systems, the Smithsonian can prolong the operational life of the equipment while maintaining reliable output to protect the national collections. Additionally, proper maintenance reduces the potential for unplanned equipment shutdowns which have a severe negative impact on visitors, staff, and collections — including the possible closure of exhibits, galleries or entire facilities.

FACILITIES OPERATIONS, SECURITY, AND SUPPORT

	APPLICATION OF OPERATING RESOURCES							
	FEDERAL APPROPRIATIONS		GENERAL TRUST		DONOR/SPONSOR DESIGNATED		GOV'T GRANTS & CONTRACTS	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2013 ENACTED	1,394	181,859	12	2,106	4	351	0	0
FY 2014 ENACTED	1,402	185,401	12	2,080	4	361	0	0
FY 2015 ESTIMATE	1,524	200,802	12	2,184	4	371	0	0

STRATEGIC GOALS: BROADENING ACCESS AND MISSION ENABLING

Federal Resource Summary by Performance Objective and Program Category

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Broadening Access						
<i>Exhibitions</i>						
Offer compelling, first-class exhibitions	4	450	4	450	0	0
Mission Enabling						
<i>Facilities</i>						
Improve the overall cleanliness and efficient operation of Smithsonian facilities	656	117,341	723	129,207	67	11,866
<i>Security and Safety</i>						
Provide world-class protection for Smithsonian facilities, collections, staff, visitors, and volunteers	702	61,570	757	65,105	55	3,535
Provide a safe and healthy environment	40	6,040	40	6,040	0	0
Total	1,402	185,401	1,524	200,802	122	15,401

BACKGROUND AND CONTEXT

The mission of the Office of Facilities Engineering and Operations (OFEO) is to provide world-class services and stewardship by building, operating, maintaining, and ensuring a safe, secure, and healthy environment to enhance the Smithsonian experience for all visitors. The Smithsonian receives more than 30 million visits annually.

The Facilities Operations, Security, and Support (OSS) program within OFEO operates, secures, and supports the Smithsonian's physical infrastructure in partnership with Smithsonian program staff. OFEO provides operational security and support services for approximately 12 million square feet of owned and leased

facilities, including 19 museums and galleries, nine research centers, and the National Zoological Park.

Resources within OSS support facilities operations, including activities such as custodial work; fire protection; building system operations; grounds care and landscaping; snow removal; pest control; refuse collection and disposal; fleet operations and maintenance; security services; and safety, environmental, and health services. Resources also support facilities planning, architectural and engineering design, as well as postage, utilities, and central rent costs.

The budget estimate includes an increase of 122 FTEs and \$15,401,000. The increase includes \$1,955,000 for necessary pay and other related salary costs for existing staff funded under this line item, and \$5,396,000 for utilities, postage, and rent, all of which are justified in the Fixed Costs section of this budget. The request also includes programmatic increases of 122 FTEs and \$8,050,000 to address high-priority operating, safety, and security requirements. The increase will fund high-priority needs, including partial-year support to fund facilities and security operations for the National Museum of African American History and Culture. In addition, the request will support operations for new laboratories coming online at the Smithsonian Environmental Research Center (SERC, Mathias) and the Smithsonian Tropical Research Institute (STRI, Gamboa).

MEANS AND STRATEGY

OFEO will achieve the Institution's goal of Broadening Access by continuing to develop exhibits and public programs for horticulture, architectural history, and historic preservation.

To achieve the Institution's goal of Mission Enabling, OFEO's base resources will focus on meeting the growing operational requirements of the Institution's facilities. OFEO will continue its efforts to efficiently use its resources to operate and secure facilities and grounds, and to provide safe, attractive, and appealing spaces to meet program needs and public expectations. In addition, OFEO will continue benchmarking the Institution's custodial staffing and service levels with other museums and professional organizations, including the Association of Higher Education Facilities Officers (APPA). As a past recipient of the prestigious APPA Award of Excellence, OFEO is committed to measuring performance and staffing levels to ensure that the highest affordable levels of appearance and cleanliness, as well as efficient operations, are maintained.

The Institution is committed to achieving APPA's appearance level 2 (out of 5), referred to as "Ordinary Tidiness." This level of appearance will provide an acceptable level of cleanliness that meets public expectations. With current resources, on average, OFEO achieves appearance level 3, "Casual Inattention." While this level of appearance is not totally acceptable, it ensures a generally clean and odorless environment.

Just as OFEO is committed to providing the highest levels of facility care, it is equally committed to providing the highest levels of security. OFEO will continue to provide protection for the Smithsonian's facilities, collections, staff, visitors, and volunteers, while also permitting an appropriate level of access to the national collections. The Institution will continue to focus on security measures required to address any identified risks.

OFEO continues its commitment to ensure that Smithsonian employees have a safe and healthy workplace by creating a culture that embraces and promotes zero injuries; provides professional services promoting a culture of health and wellness; and ensures that all Smithsonian facilities comply with environmental regulations and best practices.

EXPLANATION OF CHANGE

The budget estimate includes an increase of 122 FTEs and \$15,401,000. The increase includes \$1,955,000 for necessary pay and other related salary costs for existing staff funded under this line item; and \$5,396,000 for utilities, postage, and rent, all of which are justified in the Fixed Costs section of this budget. The request also includes programmatic increases of 122 FTEs and \$8,050,000, as follows:

- **Facilities Operations (+\$2,800,000, +37 FTEs)** — The Institution requests 37 FTEs and \$2,800,000 to support the Mathias and Gamboa laboratories, and to account for staffing and funding shortfalls in facilities operations. The request will allow the Smithsonian to establish a solid “Casual Inattention” level of appearance in its facilities. The facilities operations budget has received little real growth in recent years, losing ground to inflationary pressures. At the same time, the Smithsonian's physical footprint has grown, creating additional, unfunded requirements at the National Zoo, the National Museums of American and Natural History, the Donald W. Reynolds Center, the Smithsonian Environmental Research Center, and other locations. The request will fund the hiring of 31 building service workers, two biological technicians, two horticulturists, a processing clerk, and a groundskeeper.
- **Security Requirements (+\$2,000,000, +10 FTEs)** — As the footprint of the Smithsonian has increased and, as facilities are revitalized, the Institution's security and law-enforcement needs have also increased. For example, the increase in the scope and mission of the Smithsonian Conservation Biology Institute (SCBI) in Front Royal, Virginia, associated with the George Mason University partnership and other activities, has significantly increased the security and public safety responsibilities. The Smithsonian requests \$2,000,000 and 10 FTEs to begin addressing these needs. The request will provide funds to hire a lieutenant, two sergeants, three corporals, three security officers, and one administrative assistant. In addition, the requested

funds will support the addition of five contract officer posts at STRI in Panama and two at the Cooper-Hewitt, National Design Museum in New York City, as well as allow the Smithsonian's security operation to fill currently unfunded positions.

- **National Museum of African American History and Culture (+\$3,250,000, +75 FTEs)** — The Smithsonian requests \$3,250,000 and 75 FTEs to establish facility operations and security programs for the new 400,000-square-foot National Museum of African American History and Culture. The request represents partial-year funding to hire 145 employees, including 39 building service workers; nine facilities services supervisors/leaders; four horticulturists; two administrative support assistants; a motor vehicle operator; a contract administrator; 88 security officers; and a physical security specialist; as well as 3 FTEs to annualize positions included in the Smithsonian's FY 2014 budget request. The addition of a national Museum to the Smithsonian creates a tremendous operational responsibility. The NMAAHC will be a major Museum, with high traffic and major security responsibilities. The requested positions will ensure appropriate operation and security of this new facility.

NONAPPROPRIATED RESOURCES — General trust funds support salaries and benefits, and other related costs. Donor/sponsor-designated funds cover costs related to Smithsonian programs, such as horticulture operations, and architectural history and historic preservation projects.

FACILITIES CAPITAL

FY 2013 Enacted	\$165,581,000
FY 2014 Enacted	\$158,000,000
FY 2015 Estimate	\$150,100,000

STRATEGIC GOAL: MISSION ENABLING

Federal Resource Summary by Performance Objective and Program Category

Performance Objective/ Program Category	FY 2014		FY 2015		Change	
	FTE	\$000	FTE	\$000	FTE	\$000
Mission Enabling						
<i>Facilities</i>						
Execute an aggressive, long-range revitalization program and limited construction of new facilities	48	94,980	48	102,090	0	7,110
<i>Security and Safety</i>						
Provide world-class protection for Smithsonian facilities, collections, staff, visitors, and volunteers	0	3,750	0	3,850	0	100
Provide a safe and healthy environment	0	4,270	0	3,650	0	-620
Subtotal	48	103,000	48	109,590	0	6,590
National Museum of African American History and Culture	0	55,000	0	24,010	0	-30,990
Earthquake Damage Repairs	0	0	0	16,500	0	16,500
Total	48	158,000	48	150,100	0	-7,900

BACKGROUND AND CONTEXT

The Facilities Capital Program underpins the Smithsonian's mission and represents an investment in the long-term interest of the nation. It is intended to provide modern facilities that satisfy public programming needs and facilitate world-renowned research efforts.

In the Facilities Capital Program, revitalization involves making major repairs or replacing declining or failed infrastructure to address the problems of advanced deterioration. Once completed, these projects will enable the Smithsonian to avoid the failures in building systems that can create hazardous conditions for visitors and staff, harm animals, damage collections, and cause the loss of precious scientific data. Fulfilling the Smithsonian's mission also includes the construction of the National Museum of African American History and Culture (NMAAHC).

Funding for facilities routine maintenance and minor repairs is included in the Institution's Salaries and Expenses request. These resources are applied to realize the intended design life and full economic value of Smithsonian facilities and to protect the Institution's investment in revitalization

The Institution plans to use these resources to provide for safe, code-compliant, and functional facilities that support Smithsonian programs across the long-term to sustain the viability of the Institution's physical plant.

EXPLANATION OF CHANGE

The Institution requests \$150,100,000 and 48 FTEs for the Facilities Capital Program in FY 2015. The Institution is requesting \$24.01 million for the National Museum of African American History and Culture (NMAAHC); \$16.5 million for earthquake-related repairs; and \$109.59 million for revitalization and planning and design of future projects. Major renovation efforts will continue at the National Zoological Park (NZIP), which will be guided by the master plan. This request also recognizes the need to sustain progress in other priority areas, which include revitalizing the National Museum of Natural History (NMNH) and the National Air and Space Museum (NASM). This request also provides funding to continue renovating the Renwick Gallery (RG). Other priorities include funding to complete phase one of the Suitland collections storage project; renovate the Freer Gallery humidification system; replace the cooling plant at the National Museum of American Indian — New York; and, address various safety and security issues throughout the Institution.

The chart that follows summarizes the Institution's full request for the highest priority FY 2015 projects and the related future program funding requirements through FY 2019.

SMITHSONIAN INSTITUTION										
Federal Facilities Capital Program Summary										
FY 2013 – FY 2019										
CATEGORY	Federal	Trust'	Federal	Trust'	Congress	Trust'	Future Program Estimates			
	Received		Received	Estimate	Request	Estimate	FY 2016	FY 2017	FY 2018	FY 2019
<i>\$Millions</i>	FY 2013		FY 2014		FY 2015					
REVITALIZATION										
<i>Major Projects</i>										
Arts & Industries Building	2.6									
Cooper-Hewitt, National Design Museum	1.4	5.4								
Freer Gallery of Art					6.0					
Hirshhorn Museum and Sculpture Garden							3.5		9.2	7.8
National Air and Space Museum	0.0				1.0		6.0	75.5	50.0	50.0
National Museum of American History	10.0		24.2	26.0		18.5	11.4	3.1		6.0
National Museum of the American Indian, GGHC				3.4	2.5		2.5			
National Museum of Natural History	8.8		17.7	10.0	22.9	10.0	25.0	12.5	9.0	14.1
National Zoological Park	17.2	2.8	15.0	2.7	15.8	2.5	21.6	28.9	28.9	16.8
Renwick Gallery			8.0	7.0	7.5	7.5				
Smithsonian Environmental Research Center	15.1				2.0		3.3		2.5	2.5
Smithsonian Tropical Research Institute	7.0			1.6						2.4
Collections Space & Support Program (Multiple Locations)	3.0		2.1	4.7	2.5	2.4	20.4	8.0	5.0	9.0
Udvar-Hazy Center								0.0	18.0	
<i>Other Revitalization Projects</i>	18.5	2.0	22.2		26.8		56.3	43.9	38.1	39.4
<i>Facilities Planning and Design</i>	10.9		13.8		22.6		45.0	28.1	24.3	22.0
SUBTOTAL	94.5	10.2	103.0	55.4	109.6	40.9	195.0	200.0	185.0	170.0
CONSTRUCTION										
National Museum of African American History & Culture	71.1	106.7	55.0	29.2	24.0					
Anacostia — Gallery/Office Expansion				0.3						
Collections Space & Support Program (Multiple Locations)							5.0	0.0	15.0	30.0
National Zoological Park						0.5				
SERC — Master Plan Facilities				5.5		2.0				
SUBTOTAL	71.1	106.7	55.0	35.0	24.0	2.5	5.0	0.0	15.0	30.0
EARTHQUAKE DAMAGE REPAIRS										
Museum Support Center & National Air and Space Museum					16.5					
TOTAL PROGRAM	165.6		158.0		150.1		200.0	200.0	200.0	200.0

* Trust funding is mostly programmatic.

SUMMARY TABLES

REVITALIZATION

Major Projects

Investment in major projects provides for the replacement of failing or failed major building systems and equipment, and for major renovation projects to preserve the buildings. It primarily includes the exterior envelope, HVAC, electrical, and other utility systems at the older buildings. Projects also entail modifications to ensure compliance with life-safety and Americans with Disabilities Act (ADA) codes, restoration of historic features, and modernization of the buildings to support current program requirements. Major projects are those that cost more than \$5 million.

Facility	Project	\$000
National Museum of Natural History	Revitalize Public and Non-Public Space	22,900
National Zoological Park	Repair General Services Building	10,090
	Upgrade Fire Suppression, Life-Safety, and Infrastructure Systems	5,750
Renwick Gallery	Restore Renwick Gallery	7,500
Freer Gallery of Art	Replace Humidification System	6,000
Suitland Collections Facility	Construct Collections Storage Swing Space	2,510
National Museum of the American Indian — New York	Replace Cooling Plant	2,500
Smithsonian Environmental Research Center	Rebuild/Realign Contees' Wharf Road	2,000
National Air and Space Museum	Renovate Building Systems and Exterior	1,000
TOTAL MAJOR PROJECTS		\$60,250

Other Revitalization Projects

These projects correct extensive and serious facilities deficiencies to materially extend the service life of systems. Unlike the major projects, these are smaller in scale, costing \$5 million or less, and usually involve capital repair or replacement of individual systems or components.

Facility	Project	\$000
Freer Gallery of Art	Install Glass Blast Mitigation	1,000
National Museum of the American Indian	Repair Exterior Water Feature	4,000
National Zoological Park	Modernize Electronic Security and Public Warning/Notification Systems — Rock Creek	1,000
	Modernize Electronic Security and Public Warning/Notification Systems — SCBI	600
Quadrangle	Replace Lead-lined Ceiling Tiles	700
Smithsonian Astrophysical Observatory — Arizona	Hazardous Road Improvement	800
Smithsonian Environmental Research Center	Upgrade Fire-Protection Water Distribution System	3,200
Smithsonian Tropical Research Institute	Panama Canal Expansion Mitigation	1,340
Multiple Locations	Construction Supervision Administration	6,200
	Misc. projects \$500,000 and under	<u>7,900</u>
TOTAL OTHER PROJECTS		\$26,740
Earthquake Damage Repairs	Museum Support Center and National Air and Space Museum	\$16,500
FACILITIES PLANNING AND DESIGN		<u>\$22,600</u>
FY 2015 TOTAL REVITALIZATION		\$126,090

New Facilities Construction

Facility	Project	\$000
National Museum of African American History and Culture	Construct Museum	<u>24,010</u>
TOTAL NEW FACILITIES		\$24,010
FY 2015 TOTAL REQUEST		<u>\$150,100</u>

REVITALIZATION PROJECTS

Major Projects:

PROJECT TITLE: Revitalize Public and Non-Public Spaces
INSTALLATION: National Museum of Natural History (NMNH)
LOCATION: Washington, DC

FY 2015 COST ESTIMATE (Thousands of Dollars):

Continue HVAC/Utility System Replacement and Building Renovation	\$22,900
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<u>PRIOR-YEAR FUNDING:</u>	\$273,454
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FUTURE-YEAR FUNDING:

Ongoing HVAC Replacement and Code Improvements	<u>\$238,800*</u>
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Total	\$535,154
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* Does not include funding in Planning and Design account to complete future design of revitalization projects.

BUILDING BACKGROUND:

The NMNH building opened to the public in 1910. The East and West Wings were added in the early 1960s. Two infill buildings were constructed in the original building's East and West courtyards in the late 1990s. The gross interior square footage of the building is approximately 1.5 million square feet. The building includes 300,000 square feet of public museum space, with collections, laboratory, office, and building service spaces filling the remainder. NMNH is one of the most visited museums in the world and hosted more than eight million visitors in FY 2013.

PROJECT JUSTIFICATION:

The building's mechanical and electrical systems were installed in the early 1960s. At 50 years of age, they are in need of major replacement. Breakdowns of the mechanical systems are frequent, repair parts are often difficult to find, and the system does not provide the environmental air quality necessary for visitors or collections. The reliability of the electrical system is compromised by the deteriorated condition of the building's three main electrical switchgears, and the antiquated distribution system poses a safety hazard. In addition, main stairwells and auditorium exit corridors are dark, violating building codes, and are insufficiently served by smoke-evacuation fans. Asbestos-laden pipes in the utility tunnels are a potential health hazard and hamper proper maintenance and response to utility failures. In addition, the windows in the original portion of the building are deteriorated and do not comply with current security standards.

PROJECT DESCRIPTION:

Based on the master implementation plan completed in 1987, and revised in 2006, the Institution is slowly completing a comprehensive renovation program in the NMNH building, which will replace the HVAC equipment, ductwork, electrical equipment and wiring, piping systems, and windows of the main building. Asbestos and lead will be

abated or encapsulated; the fire-protection, communications, alarm, and emergency power systems will be upgraded; and storm-water systems and a hazardous-chemical control facility will be installed.

The Institution requests \$22.9 million in FY 2015 to continue the renovation. Specific work will include: beginning renovation of Halls 2–6 (\$7.5 million); replacement of the East and West Wing roofs (\$2.5 million); continuing replacement of the main building windows (\$1.0 million); completion of HVAC renovations in the southeast section of the main building ground floor and mezzanine (\$10.9 million); and completion of HVAC renovations in the East Wing ground floor (\$1.0 million).

PROGRESS TO DATE:

Recent projects completed include HVAC renovations of the West Wing ground and first floors; a building-wide modernization of electronic security; and improvements to the chiller plant. During the past year, work continued on the replacement of the doors in the North Lobby and there was substantial progress on the HVAC system renovations for the West Wing second floor and Exhibition Hall 26. Design work on the East Wing Ground Floor HVAC renovation (Phase 1) was completed and the project is now in construction. It should be completed in late FY 2014 and this floor will become the staging area for deinstallation of the Paleontology exhibit. Additionally, design work was completed for renovation of the southeast main building ground floor, which includes the replacement of 13 ground-floor monumental windows. Construction will commence in mid-FY 2014 on utility components such as switchgears and transformers that serve the entire building. A solicitation for the construction contract is nearly complete. A feasibility study for the East and West Wing roof replacement has been completed, and the scope of work for the design of Halls 2–6 (the Paleontology exhibit) is being finalized and negotiated with the architecture/engineering (A/E) firm. The master plan provides the basis for prioritizing future infrastructure renovations.

IMPACT OF DELAY:

If funding is delayed, building systems will continue to deteriorate and environmental conditions required for the Museum's collections and the visiting public cannot be maintained. In addition, the Museum's exhibit re-installation program would not proceed according to the planned schedule, causing the continued closure of several important exhibition areas to the public.

PROJECT TITLE: Repair Structural Systems and North Road Retaining Wall,
General Services Building (GSB), Phases 1 and 2
INSTALLATION: National Zoological Park (NZIP), Rock Creek Park
LOCATION: Washington, DC

FY 2015 COST ESTIMATE (Thousands of Dollars): \$10,090

PRIOR-YEAR CONSTRUCTION FUNDING: \$27,757
(Design funding not shown)

Total \$37,847

PROJECT JUSTIFICATION:

The General Services Building (GSB) houses numerous functions at the NZIP, including the animal nutrition commissary, maintenance and repair shops, and offices for safety, horticulture, exhibits, project management, engineering design and space for construction staff, as well as parking for staff and visitors. Recent studies identified structural deficiencies that are responsible for cracks in the foundation walls that are allowing water into the commissary, which was cited by the USDA in November 2005 as a deficiency requiring immediate attention. If the structural deficiencies are not repaired, they will fail and cause localized collapse.

PROJECT DESCRIPTION:

This project will strengthen and repair structural deficiencies (e.g., cracked concrete, deteriorated steel reinforcement, and degraded tie-back tension rods) in the GSB and in the retaining wall that supports the North Road, the major public and private route through the Zoo. These extremely complex and disruptive repairs include the installation of structural shear walls and mezzanines for lateral stability, reinforcement of columns, underpinning of a portion of the foundation wall, and waterproofing. In order to accomplish this, the GSB functions and occupants must be relocated during the course of a phased construction period. The planned fire-protection and life-safety upgrades that were previously identified as a separate effort are now incorporated into this structural renovation to minimize impact on the functionality of services. During the course of design in 2008–2009, the Institution re-evaluated programmatic uses of the GSB with the view that all functions except the commissary would need to be relocated during the construction period. Nearly all functions will be relocated temporarily into swing space for the duration of the phased construction. For FY 2015, the Institution requests \$10.09 million to complete work on the GSB structural renovation and retaining wall reconstruction.

PROGRESS TO DATE:

Phase 1 of the project is complete. Repairs addressing the most immediate structural concerns in the GSB were completed early in 2009. Temporary repairs to the wood lagging on the existing retaining wall were completed in 2010. Construction of the Vehicle Maintenance Branch facility in Suitland was completed in November 2011 and the facility is now operational. Designs for structural stabilization, fire-protection, and life-safety upgrades and replacement of the failing retaining wall were completed in 2012. Also during FY 2012, the Institution began Phase 2 of the project by awarding preparatory and swing space contracts for the GSB renovation and retaining wall

projects. A construction contract was awarded in May of 2013. As future funds become available, they will allow construction activities to continue in an uninterrupted fashion during the construction period. This phase of the project is scheduled to be completed in FY 2016.

IMPACT OF DELAY:

Delay of the project will risk structural failure in the building and injury to staff or visitors. Deterioration of the building and retaining wall will accelerate, the amount of intervention needed to correct the problems will increase, and the costs will escalate. Until the work is completed, the NZP will not be able to comply with the USDA requirement to stop water infiltration into the commissary.

PROJECT TITLE: Upgrade Life-Safety and Facilities Infrastructure
INSTALLATION: National Zoological Park (NZIP), Rock Creek and Front Royal
LOCATIONS: Washington, DC and Front Royal, Virginia

<u>FY 2015 COST ESTIMATE (Thousands of Dollars):</u>	\$5,750
<u>PRIOR-YEAR FUNDING:</u>	\$39,050
<u>FUTURE-YEAR FUNDING:</u> (projection based on master plan)	<u>\$46,900</u>
Total	\$91,700

PROJECT JUSTIFICATION:

Many of NZP's current utility, safety, and fire-protection systems are obsolete and failing. Correcting deficiencies in water and electrical service mains and distribution is necessary to provide fire-suppression systems in many of the unprotected areas and to supply adequate water for the animals. In addition, infrastructure systems such as HVAC, plumbing, and elevators are beyond their useful life and need renovation.

PROJECT DESCRIPTION:

The Institution requests \$5.75 million in FY 2015 to make required fire-protection, life-safety, and infrastructure improvements at both the Rock Creek Park and Front Royal, Virginia facilities. Projects include utility upgrades and upgrades to water, sewage, and storm-water management; power distribution system upgrades; correction of containment and structural deficiencies; installation of smoke-evacuation equipment; and miscellaneous HVAC, plumbing and elevator improvements.

PROGRESS TO DATE:

The Institution uses a master plan to coordinate work at its Rock Creek Park and Front Royal locations by developing and implementing projects in priority order to address its infrastructure needs. Through FY 2012, many infrastructure and fire-protection projects were completed, including replacement of a medium-voltage electrical distribution system; installation of new ductbank conduits, feeders, switches and transformers; replacement of the fire-protection water supply from the Adams Mill gate to the Great Ape House (phases 1 and 2 of the utility master plan); installation/replacement of fire hydrants; upgrades to the fire-alarm, smoke-detection, and fire-suppression systems throughout most animal facilities; and installation of and/or upgrades to the central fire alarm-monitoring system and fire protection for several facilities at NZP–Front Royal. Design continues for smoke-evacuation systems in animal facilities, phased implementation of fire protection is under way for remaining Front Royal facilities, and the Zoo will continue implementing utility master plans for both the Rock Creek Park and Front Royal facilities. In FY 2013, installation of steam lines began beneath the Conservation Carousel for incorporation into later phases, and fire-protection improvements were completed at Residence Row in Front Royal.

IMPACT OF DELAY:

A delay in completing this work would hamper the care and safety of the live animal collections.

PROJECT TITLE: Renwick Gallery Major Renovation
INSTALLATION: Renwick Gallery (RG)
LOCATION: Washington, DC

FY 2015 COST ESTIMATE (Thousands of Dollars): \$7,500

PRIOR-YEAR FUNDING: \$8,000

Total \$15,500

BUILDING BACKGROUND:

Architect James Renwick designed this National Historic Landmark in the Second Empire style. It was constructed in 1858 as the city's first art museum, the original Corcoran Gallery of Art. With the advent of the Civil War, the building became a warehouse for military material and the headquarters of the Quartermaster General before finally opening as a museum in 1871. When the Corcoran moved to its new gallery in 1897, the Renwick became the home of the U.S. Court of Claims for 65 years. In 1965, the building was transferred to the Smithsonian and returned to use as a museum. An extension of the Smithsonian American Art Museum, the Gallery is dedicated to the collection, exhibition, study, and preservation of American crafts from the 19th century to the present.

PROJECT JUSTIFICATION:

The Renwick Gallery requires a major renewal to address failing infrastructure, including: chilled water reliability; HVAC and electrical systems installed in 1967–72; fire-alarm and life-safety systems; roof repairs; roof drainage system; energy efficiency; exterior façade repairs; visitor entrance accessibility; rest room upgrades; electronic security modernization; use of high-efficiency plumbing fixtures and plumbing code compliance; and anti-terrorism improvements. It is not possible to schedule these individual projects over many years while the Gallery remains open because of the severe impact each project would have on operations. Instead, the Gallery will be closed to renovate its infrastructure as part of a single major project.

PROJECT DESCRIPTION:

The Renwick Gallery will be closed during the major renewal project, approximately 18–24 months. All major mechanical, electrical, and plumbing systems will be upgraded and/or replaced. When part of the work was completed in 1967–72 to insert 20th century systems into a 19th century building, designers in-filled the original interior light courts with mezzanines and wedged in two of the building's four air-handling units (AHUs). This made it impossible to perform routine maintenance in a safe and effective manner. These units will be relocated to a more accessible location that will be carved out of existing attic space. Several significant projects in the building have been studied or designed individually in the past, yet not implemented because they would cause major disruption of staff, collections, and operations if done while the building is occupied. Therefore, the major renewal project will incorporate these previously studied projects: installing backflow preventers, upgrading electronic security, and improving anti-terrorism blast protection. In addition, the major renewal project also includes repairs to the exterior, historic façade, replacement of the windows with historically accurate profiles and appropriate thermal properties, and accessibility

improvements. The project will be split-funded between federal and trust resources, with each covering 50 percent of the revitalization cost. For FY 2015, the Smithsonian requests \$7.5 million to complete construction.

PROGRESS TO DATE:

The Smithsonian completed the design in November 2013. The Museum closed to the public in December 2013 to allow time to remove artifacts and furniture. Bids were received in December and the construction contract was awarded in February 2014.

IMPACT OF DELAY:

Delays to the Renwick Gallery major renovation increase the risk of mechanical systems failures and would prevent improvements needed to meet current fire-protection coverage and safety standards. The planned renovation will help minimize threats to the safety of the Gallery's collections, visitors, and staff. Existing equipment and systems are at the end of their useful lives and will begin to fail at increasing rates, demand increasing maintenance staff time, and be more expensive to replace if this project is delayed.

In addition, a delay of funding this major renovation could result in a breach of agreements with several major donors. This could put anticipated pledge payments at risk.

PROJECT TITLE: Upgrade Freer Humidification System
INSTALLATION: Freer Gallery of Art (FGA)
LOCATION: Washington, DC

FY 2015 COST ESTIMATE (Thousands of Dollars): \$6,000

BUILDING BACKGROUND:

The Freer Gallery of Art opened to the public in 1923 and was the Smithsonian's first art museum. In 1990, the ground floor was completely renovated and the basement expanded to consolidate the collections storage. The building design, in an Italian-Renaissance style, by the American architect Charles Platt, was inspired by Freer's visits to Italian palazzos. Constructed in granite and marble, the Gallery and its central courtyard are among the most peaceful and serene spaces in Washington, DC.

PROJECT JUSTIFICATION:

The existing steam reheat and humidification systems for the Freer Gallery are more than 25 years old and are nearing the end of their useful life expectancy. The systems are deteriorating in performance and reliability, creating conditions that compromise the environmental conditions necessary for the proper preservation of the priceless art collection. Failures of duct-mounted steam-heating coils and humidifiers have resulted in periodic leaks above ceilings and loss of temperature and humidity control. All of the steam heating coils and humidifiers and the associated steam and condensate piping must be replaced to re-establish long-term system reliability.

PROJECT DESCRIPTION:

Installation of a new steam-to-steam generating system will produce "clean" steam for building humidification. A dedicated low-pressure steam system will extend from the steam generator to new humidifiers at air-handling units. Existing air-handling units will be replaced. The existing low-pressure steam piping and condensate-return piping will be replaced with a new hot water heating system, along with electrical upgrades to support the new equipment. The Smithsonian requests \$6 million in FY 2015 to begin construction.

PROGRESS TO DATE:

Design is 95 percent complete. Final construction documents will be completed in FY 2014 and issued for bids early in FY 2015. Construction is scheduled to begin in the second quarter of FY 2015.

IMPACT OF DELAY:

Temporary repairs would continue to be applied to a humidification system that is more than 25 years old and increasingly unreliable. Although past repairs have kept the system minimally operational, it is imperative that the humidification system be upgraded to provide a stable indoor environment for the preservation of the priceless Freer collection, the building, and the comfort of visitors and staff.

PROJECT TITLE: Construct Collections Storage Swing Space
INSTALLATION: Suitland Collections Facility
LOCATION: Suitland, Maryland

<u>FY 2015 COST ESTIMATE (Thousands of Dollars):</u>	\$2,510
<u>PRIOR-YEAR FUNDING:</u>	\$5,120
<u>FUTURE-YEAR FUNDING:</u>	<u>\$8,250</u>
Total	\$15,880

BACKGROUND:

An exhaustive evaluation of the Smithsonian's collections storage space has identified the Suitland Collections Facility, specifically, the Garber collections storage site, originally constructed as 10- to 15-year temporary buildings in the 1950s, as having almost half of the Smithsonian's unacceptable collections space. Much of the more than 230,000 square feet of space is either not up to code requirements for structural support or is compromised by hazardous materials in and around the collections.

PROJECT JUSTIFICATION:

Buildings 15, 16, and 18 contain asbestos and/or lead, and the collections therein have been contaminated. Encapsulation and containment fields of heavy polyethylene sheeting, which are more than 10 years old, are beginning to fail, further contaminating the collections. The August 2011 earthquake and hurricane exacerbated this problem by causing the sheeting to split in many locations. Only a few highly trained and qualified Smithsonian staff, properly outfitted in full hazmat suits with respirators, are permitted in the buildings. Otherwise, they are closed and locked, and the collections within the three buildings are not available for research, exhibition, display, or loan, and are off limits to academia and the public. In addition to hazmat concerns, the structural designs of the buildings have been evaluated and found to be structurally inadequate to withstand current code-required combination wind and snow loads. This project will provide swing space, permitting cleanup and temporary storage of collections, and allow for remediation and removal of the contaminated facilities.

PROJECT DESCRIPTION:

The first phase is to create swing space to store cleaned collection items, by erecting a temporary, pre-manufactured 20,000-square-foot building on the adjacent concrete pad of the recently removed Building 21. The Smithsonian will also temporarily lease 20,000 square feet of off-site collections storage space. The next step will be to build a decontamination chamber within Building 15, and begin the process of decontaminating the collections. This labor-intensive process includes accounting and inventory assessments, stabilizing the collection, and moving cleaned collections into the new temporary swing space at Garber. This swing space will serve as the area for emergency conservation and treatment, packing and crating, and will be the new shipping and receiving hub for Garber. The collections will then be shipped to the leased space for short-term storage. Once its contents are removed, Building 15 will be

demolished. Phase II and Phase III will repeat this process for Buildings 16 and 18. For FY 2015, the Institution requests \$2.51 million to continue the first phase of this project.

PROGRESS TO DATE:

This project is part of the larger Garber redevelopment portion of the Suitland master plan that was revised most recently in 2005. Additional work to implement the master plan cannot proceed until the swing space is available. The contract for the pre-manufactured 20,000-square-foot building has been awarded, with construction scheduled to start in April 2014. The project scope for Building 15 collections decontamination is in progress, with the contract to be awarded during FY 2014.

IMPACT OF DELAY:

Temporary fixes are holding the facilities stable, but, to be prudent stewards of the national collections, action must be taken to protect, preserve and provide access to these trapped collections before the facilities are further contaminated or the structures collapse and potentially spread hazmat contamination in the surrounding area. Aside from the risk to the public that this situation presents, the Smithsonian cannot proceed with the remainder of the master plan improvements at the Garber and Suitland facilities without this first phase being completed.

PROJECT TITLE: Replace Cooling Plant
INSTALLATION: National Museum of the American Indian,
George Gustav Heye Center (NMAI-GGHC)
LOCATION: New York, New York

<u>FY 2015 COST ESTIMATE (Thousands of Dollars):</u>	\$2,500
<u>FUTURE-YEAR FUNDING:</u>	<u>\$4,000</u>
Total	\$6,500

BUILDING BACKGROUND:

The National Museum of the American Indian — New York, the George Gustav Heye Center, is located within the historic Alexander Hamilton U.S. Custom House, designed by Cass Gilbert (1859–1934) and completed in 1907. Rich in architectural and historic significance, the Custom House is a National Historic Landmark. The Museum occupies 80,000 square feet of dedicated leased space on the basement, first, and second floors.

PROJECT JUSTIFICATION:

The Museum’s cooling plant is approximately 20 years old and uses R22 refrigerant that must be phased out due to environmental concerns. Additionally, the cooling tower, chillers, and pumps routinely fail and outages of steam service from the municipal power company (such as during Hurricane Sandy in 2012) also threaten the reliable operation of the plant. The facility is in great need of a high-efficiency solution that provides for ease of maintenance, redundancy, environmental controls, and planned program expansion.

PROJECT DESCRIPTION:

Replacement of the cooling plant will be phased, based on priorities established as part of the design phase of the project. Anticipated phasing, in priority order, includes replacement of the cooling towers, replacement of chillers, replacement of pumps, and evaluation of whether to replace piping and support elements. Also, building automation systems are needed to improve efficiency of the system. Electrical redundancies will also be evaluated to ensure continual operation in the event of primary service failure. The Smithsonian requests \$2.5 million in FY 2015 to begin construction on this project.

PROGRESS TO DATE:

A Logistics and Sustainability Workshop held in 2013 established preliminary priorities and phasing for the project. Due to the importance of this project, the Smithsonian expects to begin construction in early FY 2015.

IMPACT OF DELAY:

If funding is delayed, building systems will continue to deteriorate and the environmental conditions required to protect the Museum’s collections and serve the visiting public cannot be maintained. Some existing equipment and system components are at the end of their useful lives and will begin to fail at increasing rates, demand increasing maintenance staff time, and be more cost-prohibitive to replace if this project is delayed. Additionally, leaking of rooftop cooling plant units negatively impacts Smithsonian agreements with GSA for proper maintenance of the dedicated systems.

PROJECT TITLE: Realign and Rebuild Contees' Wharf Road
INSTALLATION: Smithsonian Environmental Research Center (SERC)
LOCATION: Edgewater, Maryland

<u>FY 2015 COST ESTIMATE (Thousands of Dollars):</u>	\$2,000
<u>FUTURE-YEAR FUNDING:</u>	<u>\$3,300</u>
Total	\$5,300

BACKGROUND:

SERC conducts long-term research addressing such issues as global climate change, the effects of nutrients/chemicals passing through our landscapes, maintenance of productive fisheries, changes to our environment from biological invaders, and protection of fragile wetlands and woodlands. SERC is situated on an approximately 2,650-acre site along the Rhode River on the shore of the Chesapeake Bay.

PROJECT JUSTIFICATION:

Contees' Wharf Road provides the only land access to the research center. Its numerous safety risks and deteriorating composition present a hazard to staff and the public during even the best weather conditions.

PROJECT DESCRIPTION:

This project will widen and realign the road to eliminate the dangerous passing areas and will also pave the road. The Institution requests \$2.0 million in FY 2015 to begin construction.

PROGRESS TO DATE:

The final design phase is currently at 95 percent completion. It addresses remediation of blind brows, improving sight distances, straightening out curves, road widening and turn-out lanes. The design will be submitted to the Maryland Department of the Environment, with final submission expected in the second quarter of FY 2014. Construction is scheduled to begin in the fourth quarter of FY 2014.

IMPACT OF DELAY:

Continued deterioration of Contees' Wharf Road would increase the risk to staff, visiting scientists, and the public visitors who must use the road to access SERC's facilities.

PROJECT TITLE: Renovate Building Systems and Exterior Envelope
INSTALLATION: National Air and Space Museum (NASM)
LOCATION: Washington, DC

FY 2015 COST ESTIMATE (Thousands of Dollars): \$1,000

FUTURE-YEAR FUNDING: TBD

Total TBD

BUILDING BACKGROUND:

NASM was built in 1976 to memorialize the national development of aviation and space flight. The 516,688-square-foot building (including approximately 161,145 square feet of exhibit galleries) preserves and displays artifacts, aeronautical and space flight equipment, significant historical data, and related technologies. The exhibit galleries hold the largest collection of historic air and spacecraft in the world and, in recent years, the Museum has received an average of more than 7 million visitors annually.

PROJECT JUSTIFICATION:

The exterior Tennessee Pink Marble façade of the NASM building is a feature of the original construction and forms the primary exterior weather seal for the envelope on all surfaces other than at the roofs, terraces, skylights and window walls. The panels are porous, and are beginning to show signs of aging and, in some cases, damage through visible cracks. The current marble primary weather seal assembly does not provide a continuous vapor barrier across the entire façade and the R-value is not consistent with current sustainable best practices and energy conservation. There is no secondary weather seal on the marble wall assembly. This has raised condensation and energy conservation issues.

The building's mechanical systems are original to the 1976 building and have exceeded their useful life spans. The mechanical systems are further burdened by the condition of the exterior façade and condensation and moisture that the exterior envelope is allowing into the building.

PROJECT DESCRIPTION:

This project will repair and restore the building's marble façade, and improve the blast and earthquake resistance, as well as the energy efficiency, of the exterior envelope. The mechanical systems will be replaced. A primary goal for the planned HVAC replacement portion of the project is to provide the collections area and all occupied spaces with appropriate temperature and humidity controls. The Smithsonian requests \$1.0 million in FY 2015 to begin preparation work for future construction.

PROGRESS TO DATE:

A final feasibility study was received in mid-December 2013. The recommendations and conclusions confirmed the need to replace the exterior stone, make seismic structural upgrades, replace the heating, ventilation and air-conditioning systems, and replace the outdated sprinkler fire-protection system.

Design work is scheduled to start during FY 2014. The estimated timeline for design is 30 months. The construction timeline will depend on whether the project is completed in a single phase or broken up into multiple phases. The budget and scope of work will be defined as design work progresses.

IMPACT OF DELAY:

If funding is delayed, NASM's stone façade and building systems will continue to deteriorate and the environmental conditions needed to safeguard the Museum's collections and the visiting public cannot be maintained.

Other Revitalization Projects

PROJECT TITLE: Install Freer Gallery Glass Mitigation

INSTALLATION: Freer Gallery of Art

LOCATION: Washington, DC

FY 2015 COST ESTIMATE (Thousands of Dollars): \$1,000

PROJECT DESCRIPTION: A blast vulnerability assessment performed on the Freer Gallery of Art's exterior revealed that the existing windows do not meet minimum blast safety requirements. This upgrade will achieve an Interagency Security Committee (ISC) medium level of protection to reduce the risk of personnel and visitors being hit by falling debris in the event of a blast. For an ISC medium level of protection, the windows will fail only under specified design loads and will not impact a vertical surface 10 feet behind the window system.

PROJECT TITLE: Repair Exterior Water Feature

INSTALLATION: National Museum of the American Indian (NMAI)

LOCATION: Washington, DC

FY 2015 COST ESTIMATE (Thousands of Dollars): \$4,000

PROJECT DESCRIPTION: The Museum's iconic water feature is leaking into the building as well as in the perimeter retaining walls. A concept design report in March 2013 identified current design/operational failures of the original construction, and identified a range of treatment alternatives. While reactive repairs temporarily remedy the building leaks, a permanent repair is needed to eliminate the construction defect and minimize the need for emergency repairs. The project will reline the water feature and correct perimeter detailing to eliminate leaks and the resulting masonry failures.

PROJECT TITLE: Upgrade Electronic Security, CCTV, and Mass Notification Systems

INSTALLATION: National Zoological Park (NZN), Rock Creek Park

LOCATION: Washington, DC

FY 2015 COST ESTIMATE (Thousands of Dollars): \$1,000

PROJECT DESCRIPTION: The National Zoological Park's Rock Creek campus and buildings do not meet Smithsonian Security Design Criteria for electronic and physical security. In addition to its staff, the NZN hosts large numbers of visitors and has an obligation to provide appropriate security. This project will upgrade portions of the mass notification, intrusion detection, physical security, and access control systems.

PROJECT TITLE: Upgrade Electronic Security and Mass Notification Systems

INSTALLATION: National Zoological Park (NZN-SCBI)

LOCATION: Front Royal, Virginia

FY 2015 COST ESTIMATE (Thousands of Dollars): \$600

PROJECT DESCRIPTION: The National Zoological Park's Conservation Biology Institute (SCBI) serves as an umbrella for the Smithsonian's global effort to conserve species and train future generations of conservationists. The Institute hosts visiting researchers, students and the general public. The campus and buildings do not meet Smithsonian Security Design Criteria for electronic and physical security. This project will upgrade portions of the mass notification, intrusion detection, physical security, and access control systems.

PROJECT TITLE: Replace Lead-lined Ceiling Tiles
INSTALLATION: Quadrangle (Quad)
LOCATION: Washington, DC

FY 2015 COST ESTIMATE (Thousands of Dollars): \$700

PROJECT DESCRIPTION: The suspended ceiling system in the public corridors within the Quadrangle is original to the building. This includes oversized, lead-lined panels that are failing due to their considerable weight and age. This project will install new ceiling tiles and replace lighting fixtures and sprinkler heads.

PROJECT TITLE: Hazardous Road Improvements
INSTALLATION: Smithsonian Astrophysical Observatory (SAO)
LOCATION: Mt. Hopkins, Arizona

FY 2015 COST ESTIMATE (Thousands of Dollars): \$800

PROJECT DESCRIPTION: The summit facilities, located on Mt. Hopkins, are at an elevation of 8,500 feet and are accessible solely via a single, steep, twisting road. The summit is exposed to harsh winter weather with gusty winds of up to 100 mph, and significant snow. The subject road has an extreme slope of approximately 25 percent. When ice accumulates, the road becomes a treacherous safety hazard. This project will provide cost-effective alternatives for an improved road system to mitigate the icing, greatly increasing safety to staff and visitors, and enhancing accessibility. The project includes replacement of paving with an aggressively textured and grooved surface, robust perimeter guardrails, and options for installing an infrared, pole-mounted pavement surface-heating system.

PROJECT TITLE: Upgrade Fire-Protection Water Distribution System
INSTALLATION: Smithsonian Environmental Research Center (SERC)
LOCATION: Edgewater, Maryland

FY 2015 COST ESTIMATE (Thousands of Dollars): \$3,200

PROJECT DESCRIPTION: The Research Core is made up of a large variety of structures, including laboratories, maintenance and operations facilities, visitor and intern housing, administrative offices, and conference and public facilities. All fire-protection water mains in the Research Core are fed by a single water tower and fire pump system that is severely undersized, non-code-compliant and unable to respond to a fire emergency in more than one facility at a time. This project will construct a new

330,000-gallon water tower that will bring the fire-protection water distribution system into current code compliance, and allow full protection for all facilities in the Research Core. In non-emergency status, the tower will also store reclaimed water that is collected from SERC's wastewater treatment facility.

PROJECT TITLE: Panama Canal Expansion Mitigation
INSTALLATION: Smithsonian Tropical Research Institute (STRI)
LOCATION: Panama

FY 2015 COST ESTIMATE (Thousands of Dollars): \$1,340

PRIOR-YEAR FUNDING: \$2,600

Total \$3,940

PROJECT DESCRIPTION: The Panama Canal Authority, through its modernization program, is raising the elevation of Gatun Lake. The increased water level will be higher than the piers and the buildings near the current shorelines at several STRI locations, such as Barro Colorado Island (e.g., maintenance buildings, fuel deposits, generator room, game warden office and concrete pier), Gigante (pier and water pump room), and Gamboa (concrete pier). This project will raise STRI infrastructure approximately 0.80 meters so that it remains above the waterline and preserves these structures.

PROJECT TITLE: Construction Supervision and Administration
INSTALLATION: Multiple Locations
LOCATION: Institution-wide

FY 2015 COST ESTIMATE (Thousands of Dollars): \$6,200

PRIOR-YEAR FUNDING: \$6,200

PROJECT DESCRIPTION: This request includes staff costs for permanent cost-estimating staff, the construction management staff required to supervise and administer construction contracts, as well as term and temporary staff required to perform specialized work associated with revitalization projects. A total of 48 FTEs will be funded from the \$6.2 million. The construction managers directly supervise construction contractors to ensure that quality work is performed safely. In addition, they resolve issues that arise during construction, negotiate change orders, approve payments, and perform other administrative functions. This request also funds five contract specialists who support all aspects of the procurement process for acquiring the necessary contract services to execute the Smithsonian's Capital Program.

EARTHQUAKE DAMAGE REPAIRS

PROJECT TITLE: Earthquake Damage Repairs

INSTALLATION: Multiple Locations

LOCATION: Washington, DC

FY 2015 COST ESTIMATE (Thousands of Dollars):

National Air and Space Museum (NASM): Repairs to Restore Leaking Exterior Envelope	\$5,250*
Museum Support Center (MSC): Structural Repairs and Seismic Upgrades to Pods 1, 2, and 4	<u>\$11,250*</u>
Total	\$16,500

* Critical design funded in previous years by delaying other Institution projects

BACKGROUND:

The earthquake of August 2011 damaged multiple Smithsonian buildings. Along with building damage, various collections in each were also damaged due to floor and wall movement. NASM and MSC were especially hard hit by the earthquake with either major building envelope breaches or structural damage. NASM is the most visited Smithsonian museum and one of the most visited in the world. The damage to the building envelope left it with many leaking skylights, wall connections, rain leaders, and façade joints. The MSC is the main collections storage location for many Smithsonian museums. Three of the five concrete reinforced collections pods, due to the method of constructing interior floors using steel structures, have experienced large movements of structural steel footings and slippage of the main girders holding the roofs. Their current condition, although safe for present use, requires repairs and seismic upgrades to prevent future damage.

PROJECT JUSTIFICATION:

At NASM, the skylight system has experienced numerous leaking frames and connections which cannot be repaired without extensive construction support involving interior scaffolds, suspended work platforms, phasing, lighting and lifts. The multi-jointed stone façade and flat built-up roof of the building were jolted and twisted by the earthquake, resulting in cracks and openings for leakage of water and air. Maintenance crews continue to repair leaks when found, but the multiple major leaks can only be temporarily patched and continue to reopen. As a result, exhibit, public, and administrative areas are constantly being surveyed for water, water damage and repairs.

At MSC, engineering surveys of the structure have demonstrated an immediate need for repairs that entail a seismic upgrade of the existing structure and roofing systems. Footings have been ripped from their anchors and roof beams slipped up to four inches away from their initial support seating. Although the structure performed as designed during the earthquake, with damages instead of failure, this movement has compromised the original seismic design criteria for the structure. This is similar to an automobile that protected its occupants during a crash, but then requires repairs to

enable it to perform that function again. In addition, the structure must be upgraded so that, if another earthquake occurs, collections damage will be reduced.

PROJECT DESCRIPTION:

The NASM scope of work consists of exterior façade restoration, repairs to damaged marble cladding, anchors, and clips, re-insulation and waterproofing of the cavity between the interior/exterior walls, roof repairs to corners, flashing, parapets, and coping, and repairs to the frames and associated connections in the skylight system.

The MSC repairs entail reseating the roof beams and interior structural floor systems of the pods, seismic upgrading for the connections of both the roof beams and the floor systems, to secure them to the main building structure, and repairs to sections of the roof and walls that were damaged or may have to be rebuilt during the work.

For FY 2015, the Institution requests \$5.25 million for NASM and \$11.25 million for MSC to perform this work.

PROGRESS TO DATE:

Damage surveys, pre-project planning, and cost estimates have been completed to help assess the specific repairs and necessary seismic upgrades. This information was used in design efforts in FY 2012. The Smithsonian redirected funds during FY 2012 to cover design costs and some minor repairs. The MSC earthquake damage repairs are 65 percent designed. The NASM earthquake remediation documents are 95 percent complete.

IMPACT OF DELAY:

If funding is further delayed, the NASM building roof and exterior wall systems will continue to deteriorate and environmental conditions required for the Museum's collections, exhibits, and the visiting public will not be maintained. The MSC pods, although considered safe in their present state, have had structural damages and must be restored to current local seismic code criteria. Without this work, the structure may be even more severely damaged in a future earthquake, resulting in the loss of national collections.

FACILITIES PLANNING AND DESIGN

Feasibility studies, needs assessments, and design for capital projects are required before site work can take place. This category includes all costs for contract facility master planning, preliminary and final design for all revitalization and construction projects, special studies, and a small amount for facility engineering, capital leveraging, and research activities, similar to operations at the Department of Defense and the National Aeronautics and Space Administration (NASA). The funding will enable development of project baselines, including costs, scope, and schedules, prior to receiving funds to perform the work.

In order to plan and design ahead of Capital Program execution, funding of 10 to 15 percent of the following year's program is required each year. The funding requested for FY 2015 will provide necessary planning and design to the 35 percent stage for most projects included in the planned FY 2017 program, and will complete design for projects planned for FY 2016. This will move the Institution closer to meeting the National Academy of Public Administration's (NAPA) recommendation that firm baselines be established before funding requests to provide more accurate cost estimates and to enable timely award of construction contracts upon receipt of future-year funding.

The Institution requests a total of \$22,600,000 for planning and design in FY 2015. These funds will be used to design several major revitalization projects at the National Air and Space Museum (\$6.7 million), National Zoological Park (\$2.5 million), National Museum of Natural History (\$2.0 million), and the Smithsonian Castle (\$1.0 million). The request also includes funding to prepare designs for numerous smaller revitalization projects, including security upgrades and master planning (\$10.4 million). This budget request will also enable the Smithsonian to prepare comprehensive master planning studies to guide future facilities decisions, and other studies to ensure more effective use of existing space.

This funding will enable the Institution to proceed with vital planning and design activities to ensure the successful execution of the Smithsonian's long-range Capital Program.

CONSTRUCTION PROJECTS

PROJECT TITLE: Plan, Design, and Construct the National Museum of African American History and Culture (NMAAHC)
INSTALLATION: National Museum of African American History and Culture
LOCATION: Washington, DC

<u>FY 2015 COST ESTIMATE (Thousands of Dollars):</u>	\$24,010
<u>PRIOR-YEAR FUNDING:</u>	<u>\$245,990</u>
Total	\$270,000

BUILDING BACKGROUND:

The National Museum of African American History and Culture Act, signed by President George W. Bush on December 19, 2003, established the newest museum within the Smithsonian Institution. The Act stipulates that project funding be shared equally between federal appropriations and privately raised funds.

PROJECT JUSTIFICATION:

The purpose of the proposed action is to fulfill the mandate of the National Museum of African American History and Culture Act (NMAAHC Act), P.L. 108–184, enacted by the Congress on December 16, 2003. The law directs that the new Museum provide for the collection, study, and establishment of programs relating to African American life, art, history, and culture. To that end, the Museum will create and maintain permanent and temporary exhibits documenting the history of African American life during the periods of slavery, Reconstruction, the Harlem Renaissance, the civil rights movement, and other periods of the African American diaspora. The Museum will also provide for the collection and study of artifacts and documents relating to African American life, and foster collaboration with other museums, historically black colleges and universities, and other organizations to promote the study and appreciation of African American life and its impact on the nation and its entire people.

Section 2 of the NMAAHC Act outlines the findings of Congress as to why such a museum is needed. The findings of Congress were based in large part on the conclusions of the Presidential Commission, known as the NMAAHC Plan for Action Presidential Commission, in its 2003 study, *The Time Has Come: Report to the President and Congress*. This Presidential Commission stated that:

“... the time has come to establish the National Museum of African American History and Culture because the museum is important not only for African Americans but for all Americans. It is the only institution that can provide a national meeting place for all Americans to learn about the history and culture of African Americans and their contributions to and relationship with every aspect of our national life. Further, the museum is the only national venue that can respond to the interests and needs of diverse racial constituencies who share a common commitment to a full and accurate telling of our country’s past as we prepare for our country’s

future. And, even more importantly, it is the only national venue that can serve as an educational healing space to further racial reconciliation.”

PROJECT DESCRIPTION:

The Museum is under construction on a five-acre site, located on the National Mall near the Washington Monument. The site is bounded by Constitution Avenue and Madison Drive, between 14th and 15th Streets, NW. This site has westerly panoramic views, sweeping from the White House grounds on the northwest to the Jefferson Memorial on the southwest. The National Mall and the Washington Monument are both listed on the National Register of Historic Places. For FY 2015, the Smithsonian requests \$24.01 million to complete the federal funding portion of the construction of this congressionally mandated Museum.

PROGRESS TO DATE:

The Smithsonian Board of Regents selected the Monument site for the new Museum building in January 2006. Transfer of the site from the National Park Service to the Smithsonian was completed in June 2007. The Cultural Resources Report (Section 106) and the “Tier 1” environmental impact statement (EIS), as well as the “Master Facilities Programming” (Architectural Programming/Exhibitions Master Planning), were completed in 2008. A design competition involving six invited architect-engineer (A/E) teams culminated in April 2009 with the selection of Freelon Adjaye Bond/SmithGroup as the A/E team for the Museum design. The Institution awarded an A/E design contract in FY 2010. Extensive historic preservation consultations resulted in a “programmatic agreement” that specifies mitigation actions. The final EIS (“Tier 2”) and Record of Decision were adopted by the National Capital Planning Commission (NCPC) at their November 2011 meeting. After a best-value solicitation for construction management-at-risk, Clark/Smoot/Russell, JV was selected and awarded pre-construction services in July 2011. Construction commenced in January 2012 and site utilities and excavation are significantly complete. In May 2012, a design assist contract was awarded for the exterior curtain wall. Concrete and vertical transportation contracts were awarded in September 2012, followed by the structural steel award in January 2013. The mechanical/electrical/plumbing contracts also were awarded in January 2013. The final build-out and site work contract will be awarded in mid-2014. As of February 1, 2014, construction has progressed to approximately 30 percent of completion. The exhibit design firm of Ralph Appelbaum Associates was awarded a contract in February 2011. The final exhibit design is anticipated in June 2014. A solicitation for an exhibit fabrication contractor is expected to be issued in early 2014, followed by a contract to be awarded in early FY 2015.

IMPACT OF DELAY:

The Museum opening is scheduled in FY 2016 to coincide with the 150th anniversary of the end of the Civil War; the 150th anniversary of the 13th Amendment, which ended slavery in America; and the 50th anniversary of the Voting Rights Act. A further delay in funding would impede construction and introduce schedule delays for both construction and exhibit fabrication contracting and installation. Such delays would result in increases to the overall estimated project costs.

OPPORTUNITY, GROWTH, AND SECURITY INITIATIVE

Through the Bipartisan Budget Act of 2013 (BBA), Congress came together on a bipartisan basis and took an important first step toward replacing the damaging cuts caused by sequestration with longer-term reforms. Recognizing the importance of the two-year budget agreement Congress reached in December 2013, the President's Budget adheres to the BBA's discretionary funding levels for 2015 that promote growth and opportunity, enhance national security, and make important reforms.

However, the BBA levels are not sufficient to drive the growth our economy needs. For that reason, the President's Budget also includes a separate, fully paid for \$56 billion Opportunity, Growth, and Security (OG&S) Initiative. This initiative provides additional discretionary investments in 2015 to spur economic progress, promote opportunity, and strengthen national security. Moreover, this initiative balances spending cuts and reforms (by closing tax loopholes), showing that additional pro-growth investments can be made without increasing the deficit.

At the Smithsonian, this initiative fully supports the Institution's Strategic Plan, specifically in the area of Excellent Research. What follows are five specific research programs (**+\$6,800,000 and +11 FTEs**) that support the Smithsonian Institution's Strategic Plan goals and objectives.

EXCELLENT RESEARCH (GRAND CHALLENGES)

Unlocking the Mysteries of the Universe — Greenland Telescope (+\$3,700,000)

The Smithsonian Institution requests \$3,700,000 to support the completion of the first phase of the Greenland Telescope project that will conduct groundbreaking, high-priority observations of supermassive black holes, and conduct terahertz (very high frequency) observations of the cold universe as part of the only "mid-scale" priority in the 2010 National Research Council "Decadal Survey of Astronomy." The Smithsonian Astrophysical Observatory (SAO), in partnership with the National Science Foundation (NSF) Division of Polar Programs, has identified a high, dry, northern site on the Greenland ice sheet as the ideal place for the Smithsonian's 12-meter radio antenna. The telescope will conduct single-dish submillimeter and terahertz observations, and very long baseline observations, in conjunction with telescopes in Chile and the Smithsonian's submillimeter telescope array (SMA) in Hawaii.

As part of the first phase of this project, the Smithsonian requests these funds to buy infrastructure and logistics support in coordination with NSF's Division of Polar Programs, which is developing a new site near their present Summit Station to enable clean climate and related research. Specifically, these funds will be used to verify antenna performance following a significant retrofit for cold weather operations, prior

to transferring the equipment to the final site. These funds will also support the logistics and infrastructure development of the antenna site at NSF's station on the Greenland ice sheet.

Funding in FY 2015 will support work to conduct the first observations with the Greenland Telescope in 2017. A significant portion of the funding for the project will come from external partners, including the University community, which will provide important scientific instruments. The Smithsonian considers this an excellent opportunity to capitalize on a highly leveraged use of federal funds with high-value science returns on the investment.

In recognition of the Smithsonian's expertise in astronomy, the NSF awarded its ALMA Vertex Prototype antenna to SAO, thus giving SAO researchers primary access to its state-of-the-art submillimeter radio antenna, after a competitive selection process. Together with its partners in Taiwan, the Academia Sinica Institute for Astronomy & Astrophysics (ASIAA, which is also a 25 percent partner in the Submillimeter Array), and NSF's Division of Polar Programs (which desires to improve the Greenland site for its own needs and for astronomy), SAO proposes to relocate this telescope near the NSF Summit Station, at a new site to be called Isi Station.

The Greenland Telescope will form the northernmost node of a Very Long Baseline Interferometer (VLBI) operated jointly with the SMA (Hawaii) and ALMA (Chile), to make unprecedented observations of the event horizon of the supermassive black hole (six billion times the mass of our sun) at the heart of the giant galaxy M87. This will complement the observations to be made in the southern hemisphere of the less massive black hole (only four million solar masses) at the center of our own Milky Way galaxy. The combination of these observations will revolutionize our understanding of gravity where it is at its strongest, the very edges of black holes, and provide pioneering data for astronomers and physicists to analyze as they pursue the Smithsonian's Grand Challenge of Unlocking the Mysteries of the Universe. When the Greenland Telescope is not connected to the VLBI network, it will exploit its high, dry location to make sensitive measurements of molecules in space at the highest frequencies achievable: the terahertz regime.

Unlocking the Mysteries of the Universe — Giant Magellan Telescope (GMT)
(+\$1,900,000)

The Institution requests \$1,900,000 to lead a multi-institutional team to develop the “GMT-Consortium Large Earth Finder” (G-CLEF) that will be the first scientific instrument installed on the Giant Magellan Telescope. G-CLEF will target high-priority astrophysical questions, including the characterization of “exoearths” and “exosolar systems,” especially habitable planets orbiting nearby stars.

One of the greatest scientific questions of the 21st century is, “Do inhabited worlds other than our own exist?” We currently stand at the crossroads of science and technology, where we will soon be able to find and characterize Earth-like planets orbiting stars like our sun. We call these planets “exoearths.” A relatively modest investment now could move humanity from its current knowledge about the existence of planets orbiting other stars to an understanding of whether life is likely to exist elsewhere in the universe.

G-CLEF is a spectroscopic instrument for the Giant Magellan Telescope (GMT) that is designed to detect and characterize rocky exoearths, and exosolar systems, orbiting solar-type stars. It has also been designed to discover and characterize the oldest stars in the universe (ultra-metal-poor stars), which are fossil artifacts from the birth of the structure in the universe as we observe it today. Furthermore, G-CLEF will enable numerous cosmological investigations into the origin and large-scale structure of the universe as a whole.

The conceptual design for G-CLEF was developed by a team of astronomers and engineers at SAO, along with a large, international team of collaborators. The design selected for construction will make it the “first-light” instrument for the GMT. Its exoearth-finding capability is unique among instruments currently planned for the coming generation of extremely large telescopes.

At present, no existing instrument has achieved the spectroscopic precision necessary to detect exoearths. Several technical innovations planned for G-CLEF and the GMT, especially the development of new calibrators and the adaptive optics technology of the GMT itself, will make the instruments sensitive enough to detect exoearths.

The innovative optical design of G-CLEF exploits the unique hexagonal symmetry of the GMT primary mirror to achieve an efficient, economical design that is capable of detecting exoearths. The precision required for these measurements must be sensitive to oscillatory motions of the host star at the level of 10 cm/sec — the gentle rocking of the star over a year time-scale, with a maximum velocity of one-fifth of a mile per hour.

The Institution requests \$1,900,000 in FY 2015 to complete the design of G-CLEF and to initiate the long lead time procurements of the optical elements.

Understanding and Sustaining a Biodiverse Planet — MarineGEO (+\$400,000, +5 FTEs)

The Institution requests \$400,000 and 5 FTEs for the Marine Global Earth Observatories, or MarineGEO, that are envisioned as a global-scale network of ecological observatories dedicated to understanding changes in the structure and function of marine ecosystems. This network is unique in that it will combine: (1) a commitment to standardized, long-term measurements to document changes during the next 30–50 years; (2) the incorporation of innovative experiments across traditional disciplinary boundaries as a core element to determine causes of observed changes; (3) the use of extensive collections in anthropological and paleontological studies that put present changes in a much broader temporal context; and (4) a focus on separating natural and anthropogenic causes of biodiversity changes. This comprehensive approach will provide a new, fundamental understanding of the sustainability of our oceans.

MarineGEO is a global-scale network, which spans latitudes and ocean basins and engages a diverse consortium of partner institutions and collaborators at many sites. This network will provide the platform for integrative, multi-disciplinary research to answer a diverse range of fundamental questions about marine ecosystems, how they function, and their sustainability. MarineGEO will also provide a vibrant and dynamic platform for education and outreach activities for students, citizen-scientists, resource managers, and policy makers. MarineGEO has begun as a select set of three core nodes, or sites, where the Smithsonian already has major research activities to facilitate rapid development of the program (i.e., the Smithsonian Environmental Research Center; Smithsonian Marine Station at Fort Pierce, Florida; and the Smithsonian Tropical Research Institute [STRI] at Bocas del Toro, Panama).

Presently, the Smithsonian has five sites that encompass tropical, semi-tropical, and temperate regions. Once studies and approaches to research are established and tested at the three core sites, MarineGEO will reach out to the Smithsonian's global partners and expand to the other two Smithsonian sites (Belize and STRI, Naos) and both latitudinally into the polar region and longitudinally to encompass multiple ocean basins. The Smithsonian will continue to develop strategic partnerships with other institutions and organizations to establish these new sites and form a global-scale network, using the Institution's protocols and publically accessible websites. To do this in the most efficient manner possible, the Institution will draw on lessons learned from creating its current network of Global Earth Observatories that analyze the health of forest plots in the terrestrial field.

Federal appropriations will be valuable in leveraging private support, which will be used to address some of the program's infrastructure equipment needs.

The requested funds (+\$400,000) will provide salaries and benefits for 5 FTEs (i.e., a data manager; two field site molecular technicians; and two bioinformatics/collections specialists). In addition, federal funds will support staff travel to the MarineGEO sites.

Valuing World Cultures — Preserving Threatened Cultural Heritage (+\$300,000, +1 FTE)

The Smithsonian requests \$300,000 and 1 FTE to augment the Institution's World Culture consortium. Specifically, this request will help address a gap in U.S. federal efforts to preserve important cultural heritage collections threatened by major natural disasters and man-made conflicts at home and abroad — for example, helping to save collections in Haiti after the 2010 earthquake, in New York City after Hurricane Sandy, and in Mali after the cultural destruction wrought by an in-country conflict.

The 18-month Haiti Cultural Recovery Project, supported mainly by the U.S. Agency for International Development (USAID) and private donations, saved approximately 35,000 damaged and endangered paintings, murals, sculptures, artworks, artifacts, rare books and archives. It provided training for more than 150 Haitian cultural heritage professionals so they could save collections and be better prepared for future disasters. Now, mainly private and Haitian funds are supporting the construction and operation of a cultural heritage conservation and training center at Quesqueya University in Port-au-Prince, a significant step toward ensuring the survival of Haitian heritage for generations to come.

The Smithsonian was a key member of the Heritage Emergency National Task Force, providing vital technical expertise and emergency aid for salvaging valuable cultural heritage objects damaged in New York during Hurricane Sandy. The Smithsonian provided damage assessment teams, conservation reports, and supplies and equipment for salvaging and saving collections, working in cooperation with New York museums, the city's Cultural Affairs Division, the Alliance for Response in New York, and the American Institute for Conservation.

In addition, the Smithsonian has worked with the International Council of Museums, the National Museum of Mali, and other organizations to address the damage to Malian heritage caused by extremist groups. The Smithsonian has provided emergency supplies and services, and organized training workshops for museum professionals from Mali and seven other West African countries to help with recovery from damage and looting and to better prepare them to respond to possible future disasters.

In keeping with U.S. ratification of the 1954 Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict, the Smithsonian has organized numerous cultural property protection training workshops for U.S. military personnel — at the Smithsonian's museums, the National Defense University, and at the Metropolitan Museum of Art. In keeping with U.S. policy on the recovery and return of Nazi-era art, the Smithsonian, with the concurrence of the Department of Justice, is providing expertise to the German government in tracing the provenance of the recently recovered Gurlitt collections of Nazi-looted paintings in Bavaria.

Also, for the past two years, the Smithsonian has hosted a Working Group on Preserving Syrian Heritage — which includes U.S. Government agencies, NGOs and academic institutions, along with representatives from the Syrian National Coalition. As a result, the Smithsonian is working with a group of cultural heritage organizations to monitor the damage to heritage sites in Syria, providing needed conservation materials and training for refugee Syrian conservators, in the hopes of salvaging damaged collections in the wake of that nation’s civil war.

The Smithsonian works closely with the U.S. Departments of State and Defense on these projects, and cooperates with international organizations, USAID, the National Park Service and local authorities, as appropriate. The Smithsonian builds on its vast experience and knowledge of conservation in undertaking projects. However — given the priorities to care for the Institution’s own national collections — this initiative must mobilize professional NGOs, contractors, and volunteers for specific projects. Currently, limited federal support for 1 FTE has helped the Institution initiate projects and leverage private support for operations. To achieve a more strategic and stronger impact, increased funds will make the program more effective by supporting a training coordinator who can develop workshops and mini-courses online and in the field, mobilize partners, contractors, and volunteers, and provide instructors and basic resources to affected museums and organizations so they can manage and preserve their endangered collections in emergency situations. This initiative is a major component of the Institution’s Strategic Plan. Federal support will help leverage private gifts and foundation contributions which are part of the Smithsonian’s fundraising campaign.

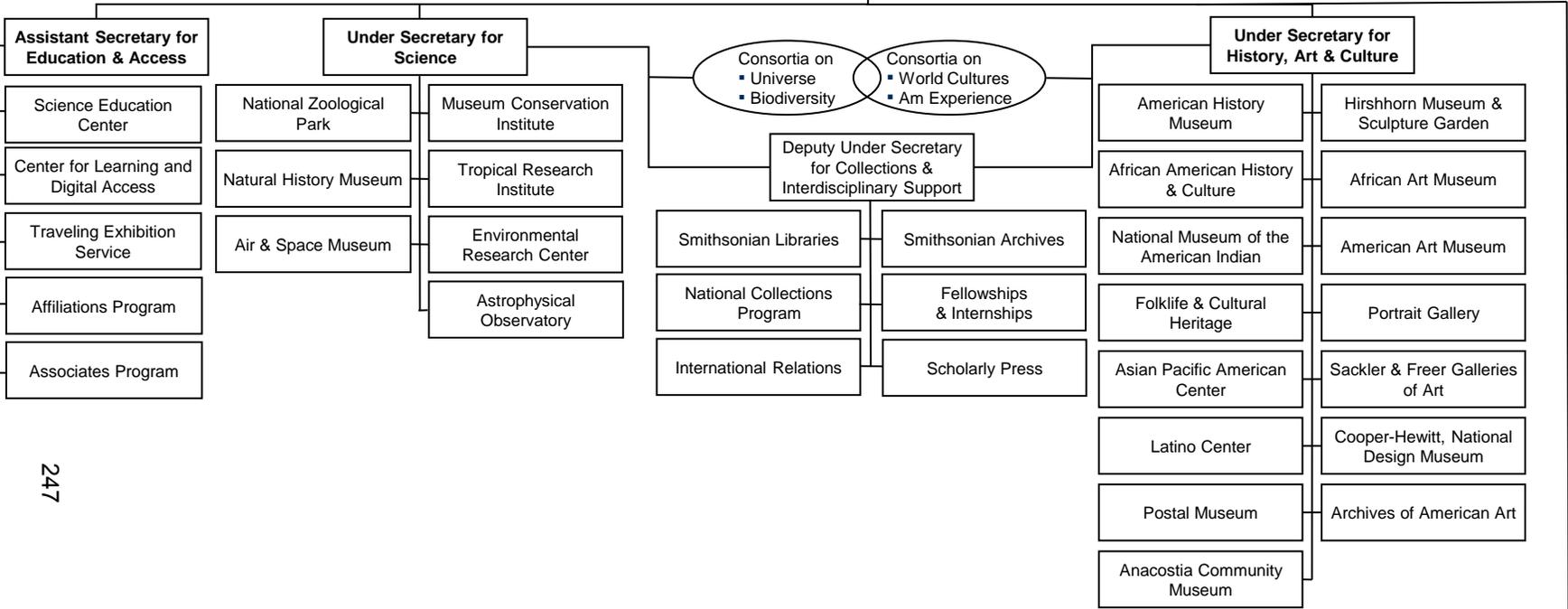
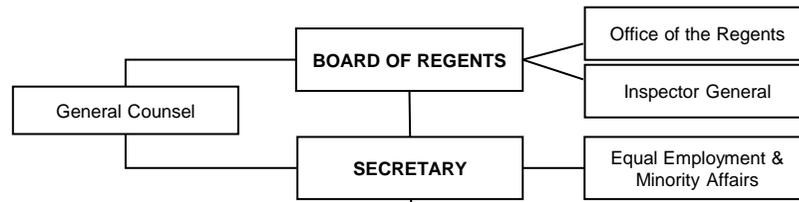
Understanding the American Experience — Curating History and Culture
(+\$500,000, +5 FTEs)

The Institution requests \$500,000 and 5 FTEs to augment the Institution’s American Experience consortium. Specifically, this request will continue the efforts to collect the artifacts and documentation needed to produce the exhibitions and educational programs that tell the American story in the broadest, most inclusive way. To do so, the Smithsonian seeks to increase the number of curators specializing in the history, art, and culture of Latino/Hispanic Americans and Asian Americans — the two largest growing segments of the U.S. population.

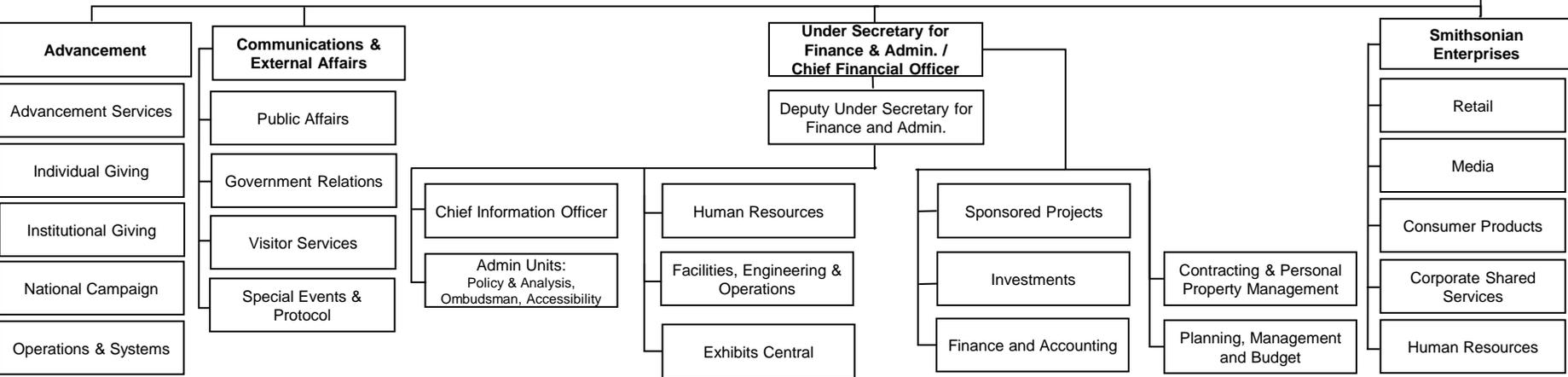
Given the progress made to date, with curatorial positions placed in the National Museum of American History, the Smithsonian American Art Museum, the National Portrait Gallery, the Smithsonian Traveling Exhibition Service and other units, and the important exhibitions and educational programs that have resulted, increased funds are sought for three curators with expertise in the Asian American experience and two curators with expertise in the Latino experience. Curators will be assigned to museums and programs that develop the best, most effective plans for serving the public in these areas. While assigned to units, curators will also coordinate Institution-wide planning for cooperative programs and educational outreach efforts. Securing these key positions will help the Smithsonian realize its Strategic Plan goals of understanding how Americans have forged a unique sense of

national identity out of considerable cultural and ethnic diversity, and conveying the richness and complexity of that history to the broad American public.

These new curators will help the Smithsonian join networks of Latino and Asian American cultural, scholarly, and educational organizations across the United States and will generate increased private support for related programmatic initiatives. Good progress has been made in coordinating Smithsonian efforts with Latino/Hispanic organizations. Among Asian-Pacific initiatives, the Smithsonian is exploring a collaborative relationship with the Bishop Museum that builds upon the Smithsonian's existing activities in Hawaii. Such a relationship is aimed at marshalling the Asian and Pacific resources of both organizations, and possibly others, in an effort to better understand this region that is so vital to America's interests in the 21st century. The Smithsonian-Bishop collaboration would concentrate on the continuities and changes in Asian-Pacific American cultures, as well as the ecology and natural heritage of the Asia-Pacific region. Work with the Bishop Museum will leverage a variety of resources and enable the Smithsonian to research and produce educational programs and materials which advance U.S. understanding of the Asia-Pacific region and the experiences of Asian Americans.



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**VISITS TO THE SMITHSONIAN
FY 2009–FY 2013**

<u>MUSEUM</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>
MALL					
SI Castle	1,823,699	1,813,818	1,599,986	1,453,220	1,405,651
A&I Building ¹	0	0	0	0	0
Natural History	7,543,542	6,969,616	6,768,580	7,378,612	8,281,983
Air and Space/ Silver Hill	7,040,578	8,013,000	7,283,019	6,907,969	7,167,075
American Indian	1,412,202	1,365,915	1,326,457	1,605,547	1,444,279
Freer Gallery	624,219	516,164	542,792	567,183	401,101
Sackler Gallery	321,749	307,732	373,800	400,950	225,053
African Art	376,610	333,342	369,635	405,441	227,547
Ripley Center	444,536	365,580	447,224	519,878	226,052
American History	4,178,295	4,237,760	4,588,853	4,764,131	4,978,559
Hirshhorn	685,016	612,460	617,751	722,008	717,663
OFF MALL					
DW Reynolds Center (AA/PG)	1,042,915	1,010,876	1,080,177	1,078,774	1,063,299
Renwick	166,198	145,555	161,765	175,183	138,951
Anacostia	29,691	52,552	50,785	37,952	37,611
Cooper-Hewitt ²	164,098	180,852	233,732	328	0
American Indian ³ (Heye Center/CRC)	286,053	295,862	352,463	422,665	602,056
National Zoo	2,275,626	2,217,060	1,825,329	2,237,922	2,092,824
Postal	356,993	330,453	334,039	325,571	284,971
Udvar-Hazy Center	<u>1,199,655</u>	<u>1,106,804</u>	<u>1,198,873</u>	<u>1,324,297</u>	<u>1,366,322</u>
TOTAL	29,971,675	29,875,401	29,155,260	30,327,631	30,660,997

¹ The Arts and Industries (A&I) Building closed to the general public in January 2004.

² The Cooper-Hewitt, National Design Museum closed to the public in October 2011 for phase two of the Carnegie Mansion renovation project.

³ Includes the George Gustav Heye Center in New York City and the Cultural Resources Center in Suitland, Maryland.

TRUST FUNDS

In addition to support provided by federal appropriations, the Smithsonian Institution receives and generates trust funds to expand and enrich its programs. Trust funds are used to leverage the Smithsonian’s research capacity through partnerships with federal agencies, universities, non-Governmental organizations, industry, and other private organizations, both national and international. Trust funds will also be raised to meet the Institution’s funding commitment with Congress to build and open the new National Museum of African American History and Culture. In addition, trust funds will be used to renovate and modernize exhibits throughout the Institution. The following provides an overview of the current sources of trust funds.

The Institution’s trust funds include general trust funds with limited or no restrictions on their use, funds restricted by the donor or sponsor, and Government grants and contracts. Projections are subject to the uncertainty of the size of donations, grants, and contracts; to fluctuations in visitor attendance; and to the volatility of the economy, which together directly affect the return on the endowment, short-term interest income, and donor giving, as well as restaurant, magazine, catalogue, and museum shop revenues, memberships, and other business activities. The Institution’s gross operating revenue, less the expenses of the auxiliary activities, represents the net operating revenue available for programmatic and related purposes. The following table summarizes the sources of trust operating funds.

(Dollars in Millions)	FY 2013 Actuals	FY 2014 Estimates
General Trust	76.4	77.0
Donor/Sponsor-Designated	256.8	213.5
Government Grants and Contracts	153.2	158.0
Total Available for Operations	\$486.4	\$448.5

SOURCE AND APPLICATION OF TRUST FUNDS — The following sections describe the sources of each category of trust funds as well as a general account of how they are used.

General Trust Funds — The sources of general trust funds are investment income; payout from unrestricted endowments; net proceeds from the museum shops, catalogues, and food service concessions; sales of Smithsonian books, records, and other products based on designs and objects in the collections; theater/planetarium operations at the National Air and Space Museum and the Samuel C. Johnson IMAX Theater in the National Museum of Natural History; licensing fees from the Smithsonian Channel and student travel programs; rental of exhibitions of the Smithsonian Institution Traveling Exhibition Service; membership programs (including subscriptions to *Smithsonian* and *Air*

and Space magazines); the sale of posters, exhibition brochures, catalogues, and other publications; and admission fees. Projected sources of FY 2014 general trust funds total \$77,000,000. These funds are used to support administrative programs such as central management, legal counsel, accounting, personnel, contracting, and budget, as well as fund raising, education, research and public programs, scholarly studies, and exhibitions.

Donor/Sponsor-Designated Funds — Designated trust funds include gifts, grants, and earnings on endowments from individuals, foundations, organizations, and corporations which specify the purpose of the funds. Designated funds in FY 2014 are projected to total \$213,500,000. Generally, these funds support a particular exhibition or program, or are used to manage the Smithsonian collections and/or support research projects in accordance with the Institution's mission.

Government Grants and Contracts — Various Government agencies and departments provide grants and contracts for specific projects that align with the Smithsonian's expertise in a particular area of science, history, art, or education. For FY 2014, Government grants and contracts are projected to total \$158,000,000. Of this amount, \$75,600,000 would be available for astrophysical research and development of programs carried out by the Smithsonian Astrophysical Observatory.

APPROPRIATION LANGUAGE AND CITATIONS

The Act of August 10, 1846, codified within 20 U.S.C. §§ 41–70, established the Smithsonian Institution “for the increase and diffusion of knowledge,” and provided the organizational structure for the Institution’s administration. The mission of the Smithsonian Institution has remained unchanged throughout its 168-year history, although additional authority for many of the Institution’s programs and operations has been enacted over the years. Those statutes, along with the Smithsonian charter, and language from prior year appropriations acts are cited below as the authority for the Smithsonian Institution’s FY 2014 appropriations language.

Appropriation: Salaries and Expenses

1. For necessary expenses of the Smithsonian Institution, as authorized by law, including research in the fields of art, science, and history;

20 U.S.C. § 50 provides that “...all objects of art and of foreign and curious research, and all objects of natural history, plants, and geological and mineralogical specimens...shall be so arranged and classified...as best to facilitate the examination and study of them...”

20 U.S.C. § 53a provides that “Appropriations are hereby authorized for...the making of solar observations at high altitudes...”

20 U.S.C. § 69 provides that “The Secretary of the Smithsonian Institution is hereby authorized...to continue independently or in cooperation anthropological researches among the American Indians and the natives of lands under the jurisdiction or protection of the United States...”

20 U.S.C. § 75b(b) provides that “The [National Portrait] Gallery shall function as a free public museum for the exhibition and study of portraiture and statuary depicting men and women who have made significant contributions to the history, development, and culture of the people of the United States and of the artists who created such portraiture and statuary.”

20 U.S.C. § 76bb(c) provides that “The Joseph H. Hirshhorn Museum and Sculpture Garden...shall be used for the storage, exhibition, and study of works of art...”

20 U.S.C. § 77a provides that “Said national air and space museum shall...provide educational material for the historical study of aviation and space flight.”

20 U.S.C. § 78 provides that “The Secretary of the Smithsonian Institution is hereby authorized to cooperate with any State, educational institution, or scientific organization in the United States, for continuing paleontological investigations...”

20 U.S.C. § 80m(a)(3) provides that “...the Board may--...(3) conduct programs of research and education [in the Museum of African Art]...”

20 U.S.C. §§ 80q-1(b)(1),(3) provide that “The purposes of the National Museum [of the American Indian] are to-- (1) advance the study of Native Americans, including the study of language, literature, history, art, anthropology, and life...(3) provide for Native American research and study programs...”

2. development, preservation, and documentation of the National Collections;

20 U.S.C. § 50 provides that “...all objects of art and of foreign and curious research, and all objects of natural history, plants, and geological and mineralogical specimens...shall be delivered to such persons as may be authorized by the Board of Regents to receive them, and shall be so arranged and classified...as best to facilitate the examination and study of them...”

20 U.S.C. § 50a provides that “The Smithsonian Institution is . . . authorized to include in its estimates of appropriations such sums as may be needful for the preservation and maintenance of the [John Gellatly art] collection.”

20 U.S.C. § 59 provides that “All collections of rocks, minerals, soils, fossils, and objects of natural history, archaeology, and ethnology...when no longer needed for investigations in progress shall be deposited in the National Museum.”

20 U.S.C. § 69 provides that “The Secretary of the Smithsonian Institution is hereby authorized...to continue independently or in cooperation...the excavation and preservation of archaeological remains.”

20 U.S.C. § 75e(1) provides that “...the Board may-- (1) purchase, accept, borrow, or otherwise acquire portraiture, statuary, and other items for preservation, exhibition, or study.”

20 U.S.C. § 76c(b) provides that “(b)...the Regents are hereby authorized...to acquire (by purchase or otherwise) and sell contemporary works of art or copies thereof...”

20 U.S.C. § 76cc(a) provides that “(a) There is established in the Smithsonian Institution a Board of Trustees...which shall have the sole authority (i) to purchase or otherwise acquire (whether by gift, exchange, or other means) works of art for the Joseph H. Hirshhorn Museum and Sculpture Garden...”

20 U.S.C. § 77a provides that “Said national air and space museum shall...collect, preserve, and display aeronautical and space flight equipment of historical interest and significance...”

20 U.S.C. § 80a(a) provides that “(a)...the Smithsonian Institution shall collect, preserve, and exhibit military objects of historical interest and significance.”

20 U.S.C. §§ 80m(a)(1),(2) provide that “...the Board may-- (1) purchase, accept, borrow or otherwise acquire additional works of art or any other real or personal property for the Museum [of African Art]; (2) preserve, maintain, restore...or otherwise hold any property of whatsoever nature acquired...”

20 U.S.C. § 80q-1(b)(2) provides that “(b) The purposes of the National Museum [of the American Indian] are to-- ...(2) collect, preserve, and exhibit Native American objects of artistic, historical, literary, anthropological, and scientific interest...”

20 U.S.C. § 81 provides that “The National Zoological Park is placed under the direction of the Regents of the Smithsonian Institution, who are authorized to transfer to it any living specimens, whether of animals or plants, in their charge, to accept gifts for the park...[and] to make exchanges of specimens...”

3. presentation of public exhibits and performances;

20 U.S.C. § 75b(b) provides that “(b)The [National Portrait] Gallery shall function as a free public museum for the exhibition and study of portraiture and statuary...”

20 U.S.C. § 76c(b) provides that “(b) In order to encourage the development of contemporary art and to effect the widest distribution and cultivation in matters of such art, the Regents are hereby authorized to...conduct exhibitions...”

20 U.S.C. § 76bb(c) provides that “(c) The Joseph H. Hirshhorn Museum and Sculpture Garden...shall be used for the storage, exhibition, and study of works of art...”

20 U.S.C. § 77a provides that “Said national air and space museum shall...collect, preserve, and display aeronautical and space flight equipment of historical interest and significance...”

20 U.S.C. § 80a(a) provides that “(a)...the Smithsonian Institution shall collect, preserve, and exhibit military objects of historical interest and significance.”

20 U.S.C. § 80m(a)(2) provides that “...the Board may--
...(2)...display...any property of whatsoever nature acquired [for the Museum of African Art]...”

20 U.S.C. § 80q-1(b) provides that “(b) The purposes of the National Museum [of the American Indian] are to--...(2) collect, preserve, and exhibit Native American objects of artistic, historical, literary, anthropological, and scientific interest...”

4. collection, preparation, dissemination, and exchange of information and publications;

20 U.S.C. § 53a provides that “Appropriations are hereby authorized for...preparation of manuscripts, drawings, and illustrations for publications.”

5. conduct of education, training, and museum assistance programs;

20 U.S.C. §§ 65a(a)(1),(3),(4) provide that “The Director of the National Museum under the direction of the Secretary of the Smithsonian Institution shall-- (1) cooperate with museums and their professional organizations in a continuing study of museum problems and opportunities, both in the United States and abroad;... (3) prepare and distribute significant museum publications; (4) perform research on, and otherwise contribute to, the [development of] museum techniques....”

20 U.S.C. § 77a provides that “Said national air and space museum shall...provide educational material for the historical study of aviation and space flight.”

20 U.S.C. § 79a provides that “The purpose of setting aside such an area [Barro Colorado Island] is to preserve and conserve its natural features...thus providing a place where duly qualified students can make observations and scientific investigations for increase of knowledge, under such conditions and regulations as may be prescribed by the [Smithsonian Institution].”

20 U.S.C. § 79e provides that “There are authorized to be appropriated annually...such sums as are necessary for the administration of [the Canal Zone Biological Area] ... and for the maintenance of laboratory or other facilities...”

20 U.S.C. § 80m(a) provides that “(a)...the Board [of Regents] may -- ... (3) conduct programs of research and education [in the Museum of African Art]...”

6. maintenance, alteration, operation, lease agreements of no more than 30 years, and protection of buildings, facilities, and approaches;

20 U.S.C. § 53a provides that “Appropriations are hereby authorized for the maintenance of the Astrophysical Observatory and...for repairs and alterations of buildings and grounds occupied by the Smithsonian Institution in the District of Columbia and elsewhere...”

20 U.S.C. § 76g provides that “There are hereby authorized to be appropriated annually such sums as may be necessary to maintain and administer the [National Portrait] Gallery...”

20 U.S.C. § 76ee provides that “There is authorized to be appropriated...such additional sums as may be necessary for the maintenance and operation of such...[Hirshhorn] museum and sculpture garden.”

20 U.S.C. § 79b(c) provides that “The ...[Smithsonian Institution] shall...(c) be responsible for the construction and maintenance of laboratory and other facilities on the area provided for the use of students authorized to carry on studies within the confines of the area...”

20 U.S.C. § 80m(a)(2) provides that “...the Board may--...(2) preserve, maintain...any property of whatsoever nature acquired [for the Museum of African Art]...”

20 U.S.C. § 81 provides that “The National Zoological Park is placed under the direction of the Regents of the Smithsonian Institution, who are authorized...to administer and improve the said Zoological Park for the advancement of science and the instruction and recreation of the people.” Public Law 101-512 making appropriations for the Department of the Interior and Related Agencies for the fiscal year 1991 extended the maximum term for federal leases from ten years to thirty.

7. not to exceed \$_____ for services as authorized by 5 U.S.C. 3109;

5 U.S.C. § 3109(b) provides that “(b) When authorized by an appropriation or other statute, the head of an agency may procure by contract the temporary (not in excess of 1 year) or intermittent services of experts or consultants or an organization thereof, including stenographic reporting services.”

8. and purchase, rental, repair, and cleaning of uniforms for employees,

5 U.S.C. §§ 5901(a)(1),(2) provide that “(a) There is authorized to be appropriated annually to each agency of the Government of the United States...on a showing of necessity or desirability, such sums as may be necessary to carry out this subchapter.

40 U.S.C. § 6306(c) provides that “(c) The employees designated as special police under subsection (a) [covering the Smithsonian Institution] may be provided, without charge, with uniforms and other equipment as may be necessary for the proper performance of their duties...”

9. \$ _____, to remain available until September 30, 2015, except as otherwise provided herein;

Wording added by the Congress in Public Law 111-88 making appropriations for the Department of the Interior and Related Agencies for fiscal year 2010 to extend the availability for the Salaries and Expenses account from one year to two years unless otherwise provided.

10. of which not to exceed \$ _____ for the instrumentation program, collections acquisition, exhibition reinstallation, the National Museum of African American History and Culture, and the repatriation of skeletal remains program shall remain available until expended;

Wording added by the Congress in Public Law 100-446 making appropriations for the Department of the Interior and Related Agencies for fiscal year 1989 to permit the Institution to establish no-year funding within the Salaries and Expenses account for the development of major scientific instrumentation. Public Law 101-512, making appropriations for the Department of the Interior and Related Agencies for fiscal year 1991, allowed no-year funding to be used for the instrumentation program as well as purchases for museum collections; the move to the Museum Support Center; the reinstallation of museum exhibitions; and the National Museum of the American Indian and the repatriation of skeletal remains. Public Law 108-447 making appropriations for the Department of the Interior and Related Agencies for fiscal year 2005 allowed no-year

funding for the instrumentation program; collections acquisition; exhibition reinstallation; the repatriation of skeletal remains; and the National Museum of African American History and Culture.

31 U.S.C. § 1301(c)(2) provides that “(c) An appropriation in a regular, annual appropriation law may be construed to be permanent or available continuously only if the appropriation--... (2) expressly provides that it is available after the fiscal year covered by the law in which it appears.”

11. and including such funds as may be necessary to support American overseas research centers:

Wording added by the Congress in Public Law 99-190 making appropriations for Other Related Agencies for fiscal year 1986.

12. *Provided*, That funds appropriated herein are available for advance payments to independent contractors performing research services or participating in official Smithsonian presentations.

31 U.S.C. § 3324(b)(1) provides that (b) “An advance of public money may be made only if it is authorized by-- (1) a specific appropriation or other law...”

Appropriation: Facilities Capital

1. For necessary expenses of repair, revitalization, and alteration of facilities owned or occupied by the Smithsonian Institution, by contract or otherwise, as authorized by section 2 of the Act of August 22, 1949 (63 Stat. 623),

20 U.S.C. § 53a provides that “Appropriations are hereby authorized...for repairs and alterations of buildings and grounds occupied by the Smithsonian Institution in the District of Columbia and elsewhere...”

20 U.S.C. § 81 provides that “The National Zoological Park is placed under the direction of the Regents of the Smithsonian Institution, who are authorized...to administer and improve the said Zoological Park for the advancement of science and the instruction and recreation of the people.”

Public Law 108-108, making appropriations for the Department of the Interior and Related Agencies for fiscal year 2004, established the Facilities Capital appropriation. The appropriation includes activities formerly financed through the Repair, Restoration and

Alteration of Facilities appropriation and the Construction appropriation.

2. and for construction,

20 U.S.C. § 53a provides that “Appropriations are hereby authorized...for repairs and alterations of buildings and grounds occupied by the Smithsonian Institution in the District of Columbia and elsewhere...”

3. including necessary personnel,

Wording added by Congress for clarification in Public Law 108-7 making appropriations for the Department of Interior and Related Agencies for fiscal year 2003.

4. \$ _____ to remain available until expended,

31 U.S.C. § 1301(c)(2) provides that “(c) An appropriation in a regular, annual appropriation law may be construed to be permanent or available continuously only if the appropriation--... (2) expressly provides that it is available after the fiscal year covered by the law in which it appears.”

5. of which not to exceed \$_____ is for services as authorized by 5 U.S.C. 3109,

5 U.S.C. § 3109(b) provides that “(b) When authorized by an appropriation or other statute, the head of an agency may procure by contract the temporary (not in excess of 1 year) or intermittent services of experts or consultants or an organization thereof, including stenographic reporting services.”

6. and of which \$_____ shall be for construction of the National Museum of African American History and Culture.

20 U.S.C. § 80-r-6(a)(2) provides that “The Board of Regents, in consultation with the [National Museum of African American History and Culture] Council, may plan, design, and construct a building for the Museum...”

Adjustments for FY 2014
(Dollars in Thousands)

Unit	FY 2014 Appropriation \$000	Reorganizations and Reprogrammings \$000	FY 2014 Adjusted Base \$000
MUSEUMS AND RESEARCH CENTERS			
<i>Unlocking the Mysteries of the Universe</i>			
National Air and Space Museum	18,123	0	18,123
Smithsonian Astrophysical Observatory	23,946	(200) \1	23,746
Major Scientific Instrumentation	3,918	200 \1	4,118
Universe Consortium	184	0	184
Subtotal, Unlocking the Mysteries of the Universe	46,171	0	46,171
<i>Understanding and Sustaining a Biodiverse Planet</i>			
National Museum of Natural History	47,428	0	47,428
National Zoological Park	24,533	0	24,533
Smithsonian Environmental Research Center	3,873	0	3,873
Smithsonian Tropical Research Institute	14,095	(155) \2	13,940
Biodiversity Consortium	1,520	0	1,520
Subtotal, Understanding and Sustaining a Biodiverse Planet	91,449	(155)	91,294
<i>Valuing World Cultures</i>			
Arthur M. Sackler Gallery/Freer Gallery of Art	6,019	0	6,019
Center for Folklife and Cultural Heritage	2,490	0	2,490
Cooper-Hewitt, National Design Museum	4,710	0	4,710
Hirshhorn Museum & Sculpture Garden	4,270	0	4,270
National Museum of African Art	4,209	0	4,209
World Cultures Consortium	284	0	284
Subtotal, Valuing World Cultures	21,982	0	21,982
<i>Understanding the American Experience</i>			
Anacostia Community Museum	2,079	0	2,079
Archives of American Art	1,844	0	1,844
National Museum of African American History & Culture	34,260	(98) \3	34,162
National Museum of American History, Behring Center	21,381	0	21,381
National Museum of the American Indian	31,293	0	31,293
National Portrait Gallery	5,943	0	5,943
National Postal Museum	1,052	0	1,052
Smithsonian American Art Museum	9,153	238 \4,5	9,391
American Experience Consortium	593	0	593
Subtotal, Understanding the American Experience	107,598	140	107,738
TOTAL MUSEUMS AND RESEARCH CENTERS	267,200	(15)	267,185

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Adjustments for FY 2014
(Dollars in Thousands)

Unit	FY 2014 Appropriation \$000	Reorganizations and Reprogrammings \$000	FY 2014 Adjusted Base \$000
MISSION ENABLING			
Program Support and Outreach			
Outreach	9,121	0	9,121
Communications	2,696	(140) ^{\6}	2,556
Institution-wide Programs	7,778	0	7,778
Office of Exhibits Central	2,950	0	2,950
Museum Support Center	1,836	0	1,836
Museum Conservation Institute	3,222	0	3,222
Smithsonian Institution Archives	2,149	0	2,149
Smithsonian Institution Libraries	10,239	98 ^{\3}	10,337
Subtotal, Program Support and Outreach	39,991	(42)	39,949
Office of the Chief Information Officer	47,994	(138) ^{\7}	47,856
Administration	33,907	278 ^{\6,7}	34,185
Office of the Inspector General	3,392	0	3,392
Facilities Services			
Facilities Maintenance	69,032	0	69,032
Facilities Operations, Security, and Support	185,484	(83) ^{\2,4,5}	185,401
Subtotal, Facilities Services	254,516	(83)	254,433
TOTAL MISSION ENABLING	379,800	15	379,815
GRAND TOTAL, SMITHSONIAN INSTITUTION	647,000	0	647,000

Footnotes for FY 2014 Appropriation:

- \1 Transfer of \$200,000 from the Smithsonian Astrophysical Observatory to Major Scientific Instrumentation to return funding provided in the FY 2013 Sequestration Operating Plan.
- \2 Transfer of \$155,000 from the Smithsonian Tropical Research Institute to the Office of Facilities Operations, Security, and Support to fund a salary increase for staff located in Panama.
- \3 Transfer of \$98,000 from the National Museum of African American History and Culture to Smithsonian Institution Libraries to support a librarian for the NMAAHC library.
- \4 Transfer of \$210,000 from Facilities Operations, Security, and Support to the Smithsonian American Art Museum for operational support.
- \5 Transfer of \$28,000 from Facilities Operations, Security, and Support to the Smithsonian American Art Museum for collections storage.
- \6 Transfer of \$140,000 from Communications (Government Relations) to Administration for operational support.
- \7 Transfer of \$138,000 and 1 FTE from the Office of the Chief Information Officer to Administration to support an information technology position.