



Smithsonian

Fiscal Year 2022

Submitted to the Committees on Appropriations
Congress of the United States

Smithsonian Institution

Fiscal Year 2022

Budget Justification to Congress

May 2021

THIS PAGE INTENTIONALLY LEFT BLANK

SMITHSONIAN INSTITUTION (SI)
Fiscal Year 2022 Budget Request to Congress
TABLE OF CONTENTS

INTRODUCTION

| | |
|-------------------------------------|---|
| Overview | 1 |
| FY 2022 Budget Request Summary..... | 5 |

SALARIES AND EXPENSES

| | |
|--|----|
| Summary of FY 2022 Changes and Unit Detail..... | 15 |
| Fixed Costs | |
| Salary and Related Costs | 18 |
| Utilities, Rent, Communications, and Other | 20 |
| Summary of Program Changes..... | 23 |
| No-Year Funding and Object-Class Breakout | 39 |
| Federal Resource Summary by Performance/Program Category | 40 |

MUSEUMS AND RESEARCH CENTERS

| | |
|---|-----|
| Enhanced Interdisciplinary Research | 42 |
| National Air and Space Museum | 48 |
| Smithsonian Astrophysical Observatory | 56 |
| Major Scientific Instrumentation..... | 61 |
| National Museum of Natural History | 67 |
| National Zoological Park..... | 74 |
| Smithsonian Environmental Research Center | 80 |
| Smithsonian Tropical Research Institute..... | 84 |
| Arthur M. Sackler Gallery/Freer Gallery of Art | 91 |
| Center for Folklife and Cultural Heritage..... | 96 |
| Cooper Hewitt, Smithsonian Design Museum..... | 101 |
| Hirshhorn Museum and Sculpture Garden..... | 105 |
| National Museum of African Art | 110 |
| Anacostia Community Museum | 115 |
| Archives of American Art | 119 |
| National Museum of African American History and Culture | 123 |
| National Museum of American History, Behring Center | 130 |
| National Museum of the American Indian | 137 |
| National Museum of the American Latino | 141 |
| National Portrait Gallery..... | 145 |
| National Postal Museum..... | 153 |
| Smithsonian American Art Museum..... | 159 |
| Smithsonian American Women’s History Museum | 165 |

MISSION ENABLING

| | |
|--|-----|
| Outreach | 168 |
| • <i>The SI Traveling Exhibition Service and Affiliations; Office of Education Technology; Fellowships and Internships; and the SI Scholarly Press</i> | |
| Communications | 174 |
| Institution-wide Programs | 178 |
| • <i>Research Equipment Pool.....</i> | 179 |
| • <i>Information Resources Management Pool</i> | 180 |

- *Latino Initiatives Pool*..... 180
- *Collections Care and Preservation Fund*..... 181
- *Asian Pacific American Initiative Pool*..... 183
- *American Women’s History Initiative* 183
- *Research Program Initiatives*..... 185
- *Digital Support Pool*..... 186
- *Education Initiatives Pool*..... 187
- Smithsonian Exhibits..... 189
- Museum Support Center..... 192
- Museum Conservation Institute 194
- Smithsonian Libraries and Archives..... 199
- Office of the Chief Information Officer..... 204
- Administration 207
 - *The offices of the Secretary; Deputy Secretary, Under Secretary for Museums and Culture; Under Secretary for Science and Research; Under Secretary for Education; and Under Secretary for Administration*
- Office of the Inspector General 212
- Facilities Maintenance 214
- Facilities Operations, Security, and Support..... 217

FACILITIES CAPITAL

- Overview 221
- Summary Tables 224
- Revitalization Projects..... 227
 - National Air and Space Museum 229
 - Smithsonian Institution Building (Castle)..... 232
 - National Zoological Park 233
 - National Museum of Natural History 243
 - National Museum of American History..... 249
 - National Museum of the American Indian 251
 - Hirshhorn Museum and Sculpture Garden..... 253
 - Quadrangle..... 259
 - Donald W. Reynolds Center 260
 - Smithsonian Tropical Research Institute..... 261
 - Smithsonian Astrophysical Observatory 262
 - Smithsonian Environmental Research Center 266
 - Suitland Collections Center..... 271
 - Cooper Hewitt, Smithsonian Design Museum..... 274
 - Freer Gallery of Art 276
 - Multiple Location Revitalization Projects..... 277
- Facilities Planning and Design 280
- Construction (POD 6)..... 281

APPENDIX

- Organization Chart 283
- Visitation Chart..... 284
- Trust Funds Summary..... 285
- Appropriation Language and Citations 287
- Adjustments to FY 2021 Funding 296

A MOMENT OF PROMISE AND POSSIBILITY FOR THE SMITHSONIAN

Throughout history, some of the nation's most profound changes have come in response to crises: the massive demographic shift of African Americans leaving the South after the end of Reconstruction, the rise of the American middle class occurring with the rise of our global influence in the wake of the existential threat of World War II, and the expansion of voting rights and other civil liberties in response to the oppression of Jim Crow. Today, our country finds itself at another crossroads, facing the dual turning points of the global coronavirus pandemic and the persistent scourge of systemic racism.

When I began my tenure as Secretary of the Smithsonian, I knew that to best serve the American people, we would have to continue evolving to meet their changing needs and expectations. We would have to be more than our collection of 155 million objects; more than our 21 museums, 21 libraries, numerous research centers, and National Zoo; and more than the exhibitions at our physical locations. We have an obligation to help the nation live up to its ideals and to be an institution that transcends location. This unique moment in our history has proven our ability to do both. Our employees and volunteers have embraced the challenge of largely working from a distance. With creativity and determination, they have made the Smithsonian a more digital institution, to provide teachers, students, and scholars with more educational resources, and to lead important discussions to examine this moment and help Americans everywhere navigate our new normal.

The Smithsonian has faithfully served our nation and our world during this fraught time. It is our solemn responsibility to repay the trust we have been given as keepers of some of the nation's most revered artifacts. We are grateful for the robust support we receive from the American people, Congress, and the Administration; it enables the Institution to fulfill its mission to increase and diffuse knowledge. As medical experts and sound scientific data help guide our gradual and safe reopening, this is an opportunity to prove we are not standing still. Whether or not our physical locations are open, we will use our vast collections, research, data, and scholarship to improve communities locally and globally, embodying the promise of our Strategic Plan's goals of "greater reach, greater relevance, and profound impact."

Greater Reach

A key component of having greater reach is the Smithsonian's ongoing transformation into a virtual museum that complements our physical spaces. That need was highlighted — indeed, illuminated — by the advent of COVID-19. Nothing replaces the authentic objects we display, but by using all the digital tools available to us, we ensure that our treasures still reach millions across the country and the globe who cannot visit us in person. In fiscal year (FY) 2020, our websites attracted more than 178 million visitors, we had more than 18 million social media followers, and our Smithsonian podcast *Sidedoor* was downloaded more than three million times by people in all 50 states and more than 146 countries.

For years, we have digitized our objects, specimens, archival materials, and library books to make them more accessible to the public. Our museums and libraries have created digital images for more than five million objects, specimens and books, and electronic records for more than 33 million artifacts and items in the national collections. Our Digitization Program Office has created 3D digital images for collection objects people can access, explore, and even print, such as the Apollo 11 command module, *Columbia*. And in February of 2020, we launched Smithsonian Open Access, an initiative that makes more than three million digital objects in our collections freely available for anyone to download, share, and reuse for any purpose. In its first year, people viewed this content more than 35 million times and downloaded it more than 1.7 million times, using it to explore, discover and create.

To expand on all these efforts, a new Institution-wide Digital Steering Group is working to implement concrete plans to make us a more virtual Smithsonian. By prioritizing innovative new and ongoing digital initiatives, we can use a more expansive, unified digital portfolio to reach audiences across the nation and around the world. It will allow audiences to experience our world-renowned scholarship, research, and collections in new and exciting ways. This initiative will be organized around themes such as democracy, race, innovation, sustainability, and identity. By seeking out more innovative partnerships to leverage state-of-the-art resources, we can scale up our use of groundbreaking technology and reach new audiences worldwide. To execute this institutional digital transformation strategy, we are seeking a Head of Digital Transformation who will conceptualize, integrate, and prioritize ongoing digital initiatives, consider and act on new and innovative ideas, and implement cultural and structural reforms needed to support a “One Smithsonian” digital approach.

Greater Relevance

One of the Institution’s strengths that we want to leverage during this national reckoning on race and identity, and in the years ahead, is our ability to engage people in meaningful dialogue. We have launched several initiatives to help us grapple with the nation’s racial divide. “Our Shared Future: Reckoning with Our Racial Past,” the first coordinated Smithsonian effort to explicitly address racism and racial equity, will explore how Americans confront race, its impact on communities, and the way it shapes our nation’s future. In addition, the National Museum of African American History and Culture’s (NMAAHC) “Talking About Race” portal offers a wealth of resources to inform and contextualize discussions about race in keeping with its original charter to serve as a place for learning and reconciliation.

The Smithsonian is also collecting contemporary items dealing with the COVID-19 pandemic and systemic racism so that future visitors and scholars can understand the impact of the coronavirus and the social justice movement. The National Museum of American History and the NMAAHC are documenting the coronavirus pandemic for posterity and exploring how best to exhibit those collections. Those museums and the Anacostia Community Museum are also collaborating to collect and preserve oral histories, homemade masks, and signs from protests in Washington, DC’s Lafayette Square Park in the wake of the killing of George Floyd.

With a focus on our top priorities to drive large, visionary, interdisciplinary research and scholarly projects and reach one billion people a year with a “digital-first” strategy, the Smithsonian will continue to address relevant topics through scientific research, collecting, and public programming on topics including climate change, zoonotic diseases, life during the COVID-19 pandemic (as well as the science related to it), and understanding the impact of race on our nation. This will help ensure all these initiatives increase rigor and focus on important societal issues and are relevant to the biggest and most diverse national and global audiences we serve.

Finally, thanks to the wisdom and boldness of Congress, we have been tasked with bringing to life the Smithsonian American Women’s History Museum and the National Museum of the American Latino. We have named two interim directors for these museums and have begun the process of putting together boards and searching for permanent leadership. With the success of NMAAHC, we have shown we have the expertise in creating poignant, powerful museums that tell the American story through different lenses. These museums will help the Smithsonian further reimagine what new museums look like in a post-pandemic world, expand the American narrative, and be an even more responsive, representative institution.

As the leader of an influential scientific, cultural, and educational institution, I believe it is essential for us to exercise our power to bring people together to share big ideas and conflicting perspectives, especially about important topics that touch all aspects of society like race relations or a deadly virus. The Smithsonian, as a gift to the United States, has an obligation to increase the public’s ability to understand our universe, our history, and our shared future, and to work for the common good.

Profound Impact

One of the primary ways the Smithsonian achieves a profound impact is by reaching students, teachers, and scholars with our educational resources. Today, we have many education, learning, and discovery spaces in our museums and research centers. Smithsonian education providers such as the Smithsonian Science Education Center, Smithsonian Affiliate museums, and the Smithsonian Institution Traveling Exhibition Service are working diligently to virtually bring our educational offerings in art, history, culture, and science, technology, engineering, and mathematics (STEM) to every state nationwide and countries around the world.

Our Smithsonian Learning Lab website is an example of the kind of effect we can have despite most of our physical locations being closed. In the first month of school closures last spring, the website saw a 346 percent increase in traffic compared to the same time the previous year, providing even more people with lesson plans, materials, and activities in arts, history, design, and STEM. An example of the vital STEM curricula we create is the Smithsonian Science Education Center’s “COVID-19! How Can I Protect Myself and Others?” resource. By partnering with the World Health Organization, the Center developed this downloadable guide in multiple languages to help young people understand the medical and social science of COVID-19 and give them the tools to keep themselves, their families, and their communities safe.

However, we cannot rely on digital learning alone. Many young people, especially those who have been underserved, lack access to a computer or reliable internet service. Starting in 2020, the Smithsonian committed to bridging the digital divide, providing no-tech educational resources to people across the country. Partnering with *USA Today*, we created a series of learning packets offering hands-on activities to help kids and adults explore STEM, the arts, and history. Distributed through public libraries and schools, Boys and Girls Clubs of America, our affiliate museums, and directly through newspaper subscriptions, they reached nearly two million households, with more editions planned.

Building on our history and respected reputation, I plan to apply innovative thinking to ensure our position as a national leader, not only in lifelong learning, but also in pre-K–12 education. My goal is for the Smithsonian to reach every classroom in America. As we have proven during this unique time, educational materials based on our science and scholarship can enhance the ways students and teachers engage in 21st-century learning. We are developing a model of the future of education and museums through a collaboration with the Washington, D.C., public school system. Sharing that work nationwide and abroad while drawing on best practices and lessons learned will expand our impact and help us make the most effective use of our resources.

As all of these projects continue or are implemented, program managers will monitor distance learning and other education outreach audience participation rates to gauge the effectiveness of the Smithsonian’s work to catalyze national conversations on climate change, public health, and race so we can fine tune our resources and knowledge-sharing platforms for maximum impact.

Looking Ahead

The past year has been incredibly hard on the American people, as we have all had to deal with the uncertainty, anxiety, and fear of these twin crises. Despite this, these difficult circumstances have reinforced what an amazing group of people we have at the Smithsonian. Whether in person or online, our creative staff has shown impressive resilience and dedication, building breathtaking online exhibitions, curating new collections that chronicle this moment in time, and preparing our public spaces for the return of our visitors.

As we approach the Smithsonian’s 175th anniversary in 2021, I am more convinced than ever that we can be the best version of ourselves, a fully realized version of the Smithsonian that Americans need and deserve. With the continued support of the Administration, Congress, and the American people, I have no doubt we will achieve our goals. The Smithsonian will continue to welcome everyone to learn, marvel, and imagine, using our creativity, imagination, and intellectual capital for the good of society. We will also continue the project of transforming this hallowed Institution into a cauldron of ideas, innovation, and understanding that reaches more people and has greater impact than ever before.

Lonnie G. Bunch III
Secretary
Smithsonian Institution

SMITHSONIAN INSTITUTION FY 2022 BUDGET REQUEST SUMMARY

| Account | FY 2020 Enacted | FY 2021 Enacted | FY 2022 Request |
|-----------------------|------------------------|------------------------|------------------------|
| Salaries and Expenses | \$793,658,000 | \$818,192,000 | \$872,000,000 |
| Facilities Capital | <u>\$253,700,000</u> | <u>\$214,530,000</u> | <u>\$230,000,000</u> |
| Total | \$1,047,358,000 | \$1,032,722,000 | \$1,102,000,000 |

The fiscal year (FY) 2022 budget request that follows supports the Institution’s top strategic priorities and addresses some of the most important societal issues of today. The budget request will enable the Smithsonian to provide innovative and important research; expand our digital support and education programs; strengthen our collections stewardship; improve our security and overall infrastructure; and provide the initial funding required for two new museums.

For FY 2022, the Smithsonian’s request to fund essential operating expenses and revitalization of the Institution’s physical infrastructure is **\$1,102 million**. The total amount includes **\$872 million** for Salaries and Expenses (S&E) and **\$230 million** for the Facilities Capital account. A detailed summary of the increases requested is provided in the table at the end of this section.

SALARIES AND EXPENSES

FIXED COSTS INCREASES

- **Salaries and Related Costs (+\$15,521,000)** — This funds the annualization of the 1.0 percent pay raise effective in January of 2021 and the 2.7 percent pay raise effective in January of 2022. The request also includes a portion of the unfunded federal retirement plans.
- **Non-pay Fixed Items (+\$5,087,000)** — The Institution requests additional funding, largely for inflation-related increases in utilities, software licenses, and other operating costs. Details are provided in the S&E section of this budget submission.

PROGRAM CHANGES

This budget request for FY 2022 aligns 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 strategic goals.

TWO NEW MUSEUMS

Public Law 116-260, signed by the President on December 27, 2020, established the National Museum of the American Latino (NMAL) and the Smithsonian American Women’s History Museum (SAWHM) within the Smithsonian Institution.

- **The National Museum of the American Latino (+\$2,000,000)** — The mission of the NMAL is to give voice to the richness and the challenges of the Latino American experience, make it possible for all people to understand the depth, complexity, and promise of the American experience, and serve as a national forum for collaboration on and celebrating Latino American history and culture for educational and other popular institutions.
- **The Smithsonian American Women’s History Museum (+\$2,000,000)** — There exists no national museum in the United States that is devoted to the documentation of women’s contributions throughout the nation’s history. Our proposal for a comprehensive women’s history museum would document the full spectrum of the experiences of women in the United States, represent a diverse range of viewpoints, experiences, and backgrounds, more accurately depict the history of the United States, and add value to the Smithsonian Institution for the American people.

ENHANCED INTERDISCIPLINARY RESEARCH

- **Research Program Initiatives (+\$5,000,000)** — The funding requested will support an innovative and emerging research pool of funds to be managed by the Under Secretary for Science and Research. The pool will foster a research environment conducive to scientific innovation and provide the critical financial support necessary to execute world-class science. Priority will be given to high-risk, high-reward activities that simultaneously build technical capabilities within the Smithsonian’s established areas of research. This program will help recruit and retain the finest scientific talent, support postdoctoral researchers, and help build a diverse science, technology, engineering, and mathematics (STEM) workforce. Examples of relevant research we expect to fund include: One Health, biodiversity genomics, and studying endangered and invasive species and how climate change is impacting all of these areas.
- **Biodiversity Research (+\$4,000,000)** — The Institution’s Forest Global Earth Observatories (ForestGEOs) and Marine Global Earth Observatories (MarineGEOs) provide a global-scale network of ecological observatories dedicated to understanding changes in the structures and functions of forest and marine ecosystems. ForestGEO provides the research platform that enables Smithsonian scientists and their university and federal agency partners to better understand the storage and movement of carbon and water in tropical and temperate forests, as well as the impacts of climate change on the relationships of forests with wildlife, the atmosphere, and sources of fresh water.

MarineGEO is one of the Smithsonian’s signature programs in Earth observations and understanding global change, and is dedicated to understanding changes in the structures and functions of marine ecosystems. This comprehensive approach to environmental research will provide a fundamental understanding of our oceans, their sustainability, and their importance to human life and society.

EXPAND DIGITAL TECHNOLOGIES

- **Digital Support and Programming (+\$6,500,000)** — A key pillar of the Secretary’s strategic framework is creating a virtual Smithsonian that leverages digital capabilities and platforms to reach new audiences across the nation and around the world. We will accomplish this by integrating and prioritizing ongoing digital initiatives to ensure that new and innovative ideas are carefully considered and acted upon, and by targeting key cultural and structural reforms needed to support a truly “One Smithsonian” digital approach. The Smithsonian is special because of our 155 million objects which have been assembled during our 175 years of history. These iconic collections, especially when digitized for broader access, will offer our staff and the public a powerful resource to conduct research, “increase and diffuse knowledge,” and share our discoveries with the world. Included in this is an Open Access Initiative that has made millions of images of our digitized collections available without restrictions on use.

This request also supports additional digitization efforts, including those for audiovisual collections, and scaling up the processing of 3D data sets. To further accelerate the Institution’s digitization progress, this budget requests funding a digitization pool where units will compete for resources that support the Open Access and Virtual Smithsonian initiatives, especially about important topics that touch all aspects of society such as race relations, a deadly virus, or sustainability.

Building on the Institution’s long history of being a trusted educational resource, the Smithsonian also requests funding to support our educational outreach. With a keen focus on K–12 education, the Smithsonian seeks to continue developing online materials and educational content that bring the depth and breadth of the Institution to classrooms across America. We will harness the power of information technology to increase the volume of digital content and offer resources on the most important topics of the day.

UNDERSTAND AND IMPACT 21st CENTURY AUDIENCES

- **Visitor Engagement (+\$635,000)** — One of the Institution’s goals is to broaden access to the Smithsonian and enhance the experience of visitors, both online and in person. The Institution is increasingly relying on digital technology to tell the stories from our history, art, and science collections. We continue to see a tremendous growth in new technology in our exhibits, our programs, and on the Web, as well as increased public interest in these areas. Accordingly, the requested funding will provide new tools and technologies to exponentially broaden access to the Institution. The nation’s growing diversity challenges the Smithsonian to reach new audiences and ensure that the Institution’s collections, exhibitions, and outreach programs are readily accessible and speak to all visitors, especially those with disabilities.

- **Exhibit Support (+\$500,000)** — The Smithsonian has a long tradition of raising private funds to design and install new exhibitions. For generations, these exhibitions have been the reason why millions of visitors have come to the National Mall. To be successful requires a strong public/private partnership.

The budget request supports additional resources to continue to expand the Asian Pacific American Center (APAC) presence in the Smithsonian’s presentation of and research into the American experience. APAC requires a director of exhibitions and programs needed for short- and long-term sustainability. This position is modeled after the Smithsonian Latino Center’s director of exhibitions and programs position.

The requested budget increase will also support the Institution’s traveling exhibitions, including the popular Museums on Main Street (MoMS) program. The MoMS program works with state humanities councils to bring traveling exhibitions, educational resources, and programming to small towns across America through local museums and community venues. The MoMS program continues to enrich the underserved populations of rural America.

PRESERVE OUR NATURAL AND CULTURAL HERITAGE

- **Collections Support (+\$1,865,000)** — Currently, the Institution has insufficient staff to provide optimal care for its collections, and is hindered in strengthening and sharing its collections with diverse national and international audiences. Several recent Inspector General collections stewardship audit reports have identified a vital need to fill high-priority positions to care for and preserve collections, ensure full inventory control over collections, provide proper preservation of collections at risk, and support a robust digitization program to make collections available online to national and international communities. The Smithsonian needs these requested funds to rebuild its curatorial and collections management staffing in support of excellent research; improve exhibitions and digitization of the nation’s vast collection of artifacts; and fully realize the benefits of the Institution’s investments in facilities infrastructure.
- **Animal Welfare (+\$700,000)** — Funding is requested to provide specialized animal care exhibits support. Maintaining animal habitats and providing specialized items for animals’ health and well-being are not just recommended best practices, but required by oversight and regulatory entities. Maintaining these standards is essential to safely and humanely house our living collections while safeguarding the public and staff. Without the additional resources needed for both the operations and specialized exhibits support, the quality and quantity of scientific research and animal care will be diminished.
- **Facilities Operations and Support (+\$4,000,000)** — The Institution requests additional funding to address high-priority operating and life-safety needs. Contracts for basic facility services, materials, and supplies have outpaced any budget growth the Smithsonian has seen. In addition, the Institution’s operations and physical footprint have grown, creating even more unfunded

requirements. This increased funding will enable the Institution to effectively provide the proper cleaning and sanitizing services to approach APPA Level 2 cleaning. The funds will support much-needed services to manage the growth in our building footprint and begin to address increasing workforce requirements.

- **Security (+\$4,000,000)** — The Institution requests an increase to address critical security needs. As the physical footprint of the Smithsonian has increased and facilities are revitalized, the Institution's security and law-enforcement needs have also grown. To evaluate the effectiveness of existing security resources versus the current requirements, the Smithsonian conducted a security staffing analysis for each of its major buildings. The facility analyses confirmed that the Smithsonian needs to provide a higher level of security around building perimeters and in interior public spaces such as galleries.

As a result, the Institution requests funding to begin implementing a new screening system. The technology will improve the ability to detect prohibited weapons/items, identify the location of any prohibited weapons/items, and decrease the transmission of germs/disease by reducing the acts of physically touching items during the screening process while also increasing social distancing. The new screening system has already been successfully deployed at several popular venues across the country.

ENABLE COST-EFFECTIVE AND RESPONSIVE ADMINISTRATION

- **Information Technology (IT) Security (+\$1,500,000)** — This funding request supports the upgrade and replacement of aging IT security infrastructure at the Smithsonian. The IT security program does not have sufficient personnel and tools to adequately address the constantly growing risks and threats to the Smithsonian's complex computing environment. The request includes funds for security monitoring, response, and assessment; maintenance of seven sites and the replacement of the Internet firewall; recurring funds to maintain and/or replace outdated and inadequate intrusion-detection systems; and funds for maintenance and replacement of outdated Web proxy servers. These security devices perform an essential role to detect malicious activity and to monitor and protect sensitive Smithsonian data.

In response to the ever-growing threat of cybercrime, the Institution performed an enterprise security architecture gap analysis and identified many areas where additional tools and processes are required, as well as people to implement and manage them. Initiatives were identified to address the gaps over the next several years, but this plan depends on additional funding. The activities and items funded by this request are directly related to the identified security gaps.

- **Management Operations (+\$500,000)** — This request funds essential positions required to provide the necessary Institution-wide diversity support and for internal controls to prevent waste, fraud, and abuse in areas that they oversee. The ongoing success of the Supplier Diversity Program has units, small businesses, and congressional representatives seeking more information and assistance on how the Institution can continue to improve its supplier diversity status. Veteran-owned and other firms in Historically Underutilized Business (HUB)-Zones have poor representation in our base of suppliers and interest in how the Smithsonian is doing in these business communities remains a constant refrain for these small businesses and Congress. These resources will be focused on providing more support for fostering engagement with and support from small business suppliers.

This request also supports Human Resources (HR) staff required to facilitate internal and external strategic changes; adequately address hiring timeliness goals; provide high-quality, timely advice and services to Smithsonian units; minimize risks; and improve the response time for answering requests for guidance or information. Additional resources are also needed to adequately address safety, security, and telework issues resulting from the COVID-19 pandemic.

FACILITIES CAPITAL PROGRAM

The request for the Facilities Capital Program (**\$230,000,000**) is essential to arrest the deterioration of some of the Smithsonian's oldest and most visited buildings and maintain the current condition of other facilities through systematic renewal and repairs. This amount will allow the Facilities Capital Program to address all of the priority one projects ready to be fixed in FY 2022.

For FY 2022, the requested funds will enable the Institution to continue the major renovation project at the National Air and Space Museum (NASM, at \$56 million). The request will also support the continuation of major revitalization work at the Smithsonian Institution Building (the Castle, at \$9.0 million); the National Zoological Park (\$18.2 million); the National Museum of Natural History (\$14.3 million); and the National Museum of American History (\$9.6 million). In addition, these funds will allow the Smithsonian to perform essential revitalization work at the National Museum of the American Indian (\$4.5 million); the Hirshhorn Museum and Sculpture Garden (\$17.65 million); the Quadrangle (\$1.0 million); the Donald W. Reynolds Center (\$3.5 million); the NASM Steven F. Udvar-Hazy Center (\$1.05 million); the Smithsonian Tropical Research Institute (\$0.7 million); the Smithsonian Astrophysical Observatory (\$4.1 million); the Smithsonian Environmental Research Center (\$6.75 million); the Suitland Collections Center (\$11.0 million); Cooper Hewitt, Smithsonian Design Museum (\$3.0 million); and the Freer Gallery of Art (\$2.0 million). This request also provides for critical revitalization projects throughout the Institution, supervision and program support, and projects costing under \$1 million each (\$23.3 million). Furthermore, this request accounts for planning and design of future projects (\$36.75 million) and for the Museum Support Center to begin construction of Pod 6 (\$7.6 million). Details are provided in the Facilities Capital section of this budget request.

**SMITHSONIAN INSTITUTION
FY 2022 BUDGET SUMMARY
BY APPROPRIATION ACCOUNT**

| SALARIES AND EXPENSES | FTEs | Amount |
|--|--------------|----------------------|
| FY 2021 Request | 4,278 | \$818,192,000 |
| <u>FIXED COSTS INCREASES</u> | | 20,608,000 |
| Salaries and Related Costs | 0 | 15,521,000 |
| Utilities, Communications, and Other | 0 | 5,087,000 |
| <u>PROGRAM INCREASES</u> | | |
| New Museums | 25 | 4,000,000 |
| National Museum of the American Latino | 12 | 2,000,000 |
| Smithsonian American Women’s History Museum | 13 | 2,000,000 |
| Enhanced Interdisciplinary Research | 15 | 9,000,000 |
| Biodiversity Research (Global Earth Observatories) | 15 | 4,000,000 |
| Research Program Initiatives | 0 | 5,000,000 |
| Expand Digital Technologies | 16 | 6,500,000 |
| Digital Support and Programming | 16 | 6,500,000 |
| Understand and Impact 21st Century Audiences | 8 | 1,135,000 |
| Visitor Engagement | 5 | 635,000 |
| Exhibit Support | 3 | 500,000 |
| Preserve Our Natural and Cultural Heritage | 37 | 10,565,000 |
| Collections Support | 13 | 1,865,000 |
| Animal Welfare | 5 | 700,000 |
| Facilities Operations, Security and Support | 10 | 4,000,000 |
| Security | 9 | 4,000,000 |
| Enable Cost-Effective and Responsive Administration | 6 | 2,000,000 |
| Information Technology Security | 3 | 1,500,000 |
| Management Operations | 3 | 500,000 |
| Total FY 2022 Salaries and Expenses | 4,385 | \$872,000,000 |

**SMITHSONIAN INSTITUTION
FY 2022 BUDGET SUMMARY
BY APPROPRIATION ACCOUNT**

| FACILITIES CAPITAL | FTEs | Amount |
|--|--------------|------------------------|
| FTEs in Base | 48 | |
| Revitalization | | |
| National Air and Space Museum (NASM) | | 56,000,000 |
| Smithsonian Institution Building (Castle) | | 9,000,000 |
| National Zoological Park | | 18,200,000 |
| National Museum of Natural History | | 14,300,000 |
| National Museum of American History | | 9,600,000 |
| National Museum of the American Indian | | 4,500,000 |
| Hirshhorn Museum and Sculpture Garden | | 17,650,000 |
| Quadrangle | | 1,000,000 |
| Donald W. Reynolds Center | | 3,500,000 |
| NASM Steven F. Udvar-Hazy Center | | 1,050,000 |
| Smithsonian Tropical Research Institute | | 700,000 |
| Smithsonian Astrophysical Observatory | | 4,100,000 |
| Smithsonian Environmental Research Center | | 6,750,000 |
| Suitland Collections Center | | 11,000,000 |
| Cooper Hewitt, Smithsonian Design Museum | | 3,000,000 |
| Freer Gallery of Art | | 2,000,000 |
| Multiple Location Revitalization Projects | 5 | 23,300,000 |
| | | |
| Facilities Planning and Design | | 36,750,000 |
| Construction — MSC Pod 6 | | 7,600,000 |
| | | |
| Total FY 2022 Facilities Capital Projects | 53 | \$230,000,000 |
| | | |
| FY 2022 REQUEST, ALL ACCOUNTS | 4,438 | \$1,102,000,000 |

THIS PAGE INTENTIONALLY LEFT BLANK

**SMITHSONIAN INSTITUTION
SALARIES AND EXPENSES (S&E)
FY 2022 Request**

| SALARIES AND EXPENSES | FTEs | Amount |
|--|--------------|----------------------|
| FY 2021 Enacted | 4,278 | \$818,192,000 |
| <u>FIXED COSTS INCREASES</u> | | 20,608,000 |
| Salaries and Related Costs | 0 | 15,521,000 |
| Utilities, Communications, and Other | 0 | 5,087,000 |
| <u>PROGRAM INCREASES</u> | | |
| New Museums | 25 | 4,000,000 |
| National Museum of the American Latino | 12 | 2,000,000 |
| Smithsonian American Women’s History Museum | 13 | 2,000,000 |
| Enhanced Interdisciplinary Research | 15 | 9,000,000 |
| Biodiversity Research | 15 | 4,000,000 |
| Research Program Initiatives | 0 | 5,000,000 |
| Expand Digital Technologies | 16 | 6,500,000 |
| Digital Support and Programming | 16 | 6,500,000 |
| Impact of 21st Century Audiences | 8 | 1,135,000 |
| Visitor Engagement | 5 | 635,000 |
| Exhibit Support | 3 | 500,000 |
| Preserve Our Natural and Cultural Heritage | 37 | 10,565,000 |
| Collections Support | 13 | 1,865,000 |
| Animal Welfare | 5 | 700,000 |
| Facilities Operations and Support | 10 | 4,000,000 |
| Security | 9 | 4,000,000 |
| Enable Cost-Effective and Responsive Administration | 6 | 2,000,000 |
| Information Technology Security | 3 | 1,500,000 |
| Management Operations | 3 | 500,000 |
| | | |
| Total Program Increases | 107 | 33,200,000 |
| | | |
| Total Increases | 107 | 53,808,000 |
| | | |
| Total FY 2022 Salaries and Expenses | 4,385 | \$872,000,000 |

SMITHSONIAN INSTITUTION

Unit Detail of the FY 2021 Enacted, FY 2021 Revised and FY 2022 Request (\$\$ in Thousands)

| Page # | FTE = Full-Time Equivalent | FY 2021 Enacted | | FY 2021 Revised | | FY 2022 Request | | ANALYSIS OF CHANGE (FY 2022 Increases) | | | | | | |
|--------|--|-----------------|--------|-----------------|--------|-----------------|--------|---|------------------------|-------------------|---------------------|-------|--|--|
| | | FTEs | \$000 | FTEs | \$000 | FTEs | \$000 | Pay & Benefits \$000 | Rent & Utilities \$000 | Fixed Other \$000 | Program Change FTEs | | | |
| | | | | | | | | | | | | | | |
| | MUSEUMS AND RESEARCH CENTERS | | | | | | | | | | | | | |
| 48 | National Air and Space Museum | 151 | 20,945 | 151 | 20,945 | 154 | 21,960 | 607 | 0 | 0 | 3 | 408 | | |
| | <i>Visitor Engagement</i> | | | | | | | | | | 1 | 138 | | |
| 56 | Smithsonian Astrophysical Observatory | 99 | 25,226 | 99 | 25,226 | 99 | 25,733 | 507 | 0 | 0 | 0 | 0 | | |
| 61 | Major Scientific Instrumentation | 0 | 4,118 | 0 | 4,118 | 0 | 4,118 | 0 | 0 | 0 | 0 | 0 | | |
| 42 | Universe Consortium | 0 | 184 | 0 | 184 | 0 | 184 | 0 | 0 | 0 | 0 | 0 | | |
| 67 | National Museum of Natural History | 317 | 51,551 | 317 | 51,551 | 320 | 53,435 | 1,317 | 0 | 0 | 3 | 567 | | |
| | <i>Collections Support</i> | | | | | | | | | | 3 | 567 | | |
| 74 | National Zoological Park | 217 | 32,221 | 217 | 32,221 | 222 | 33,755 | 834 | 0 | 0 | 5 | 700 | | |
| | <i>Animal Welfare</i> | | | | | | | | | | 5 | 700 | | |
| 80 | Smithsonian Environmental Research Center | 34 | 4,616 | 34 | 4,616 | 34 | 4,759 | 143 | 0 | 0 | 0 | 0 | | |
| 84 | Smithsonian Tropical Research Institute | 191 | 15,266 | 191 | 15,266 | 191 | 15,643 | 377 | 0 | 0 | 0 | 0 | | |
| 42 | Biodiversity Consortium | 0 | 1,543 | 0 | 1,543 | 15 | 5,543 | 0 | 0 | 0 | 15 | 4,000 | | |
| 91 | Arthur M. Sackler Gallery/Freer Gallery of Art | 45 | 6,461 | 45 | 6,461 | 46 | 6,829 | 228 | 0 | 0 | 1 | 140 | | |
| | <i>Visitor Engagement</i> | | | | | | | | | | 1 | 140 | | |
| 96 | Center for Folklife and Cultural Heritage | 17 | 3,565 | 17 | 3,565 | 17 | 3,637 | 72 | 0 | 0 | 0 | 0 | | |
| 101 | Gregory Hecht, Smithsonian Design Museum | 36 | 5,190 | 36 | 5,190 | 38 | 5,517 | 110 | 0 | 0 | 2 | 217 | | |
| | <i>Collections Support</i> | | | | | | | | | | 1 | 100 | | |
| 105 | Digitally Enabled Museum and Sculpture Garden | 41 | 5,007 | 41 | 5,007 | 44 | 5,479 | 117 | 0 | 0 | 3 | 355 | | |
| | <i>Collections Support</i> | | | | | | | | | | 1 | 140 | | |
| 110 | National Museum of African Art | 31 | 4,972 | 32 | 5,140 | 34 | 5,587 | 117 | 0 | 0 | 2 | 330 | | |
| | <i>FY 2021 Revised - Operational Support see page 296</i> | | | | | | | | | | 2 | 330 | | |
| 42 | World Culture Consortium | 0 | 792 | 0 | 792 | 0 | 792 | 0 | 0 | 0 | 0 | 0 | | |
| 115 | Anacostia Community Museum | 20 | 2,698 | 20 | 2,698 | 21 | 2,873 | 60 | 0 | 0 | 1 | 115 | | |
| | <i>Collections Support</i> | | | | | | | | | | 1 | 115 | | |
| 119 | Archives of American Art | 17 | 1,987 | 17 | 1,987 | 17 | 2,023 | 36 | 0 | 0 | 0 | 0 | | |
| 123 | National Museum of African American History & Culture | 152 | 33,751 | 152 | 33,751 | 155 | 34,853 | 668 | 0 | 0 | 3 | 434 | | |
| | <i>Education Support</i> | | | | | | | | | | 2 | 250 | | |
| | <i>Collections Support</i> | | | | | | | | | | 1 | 184 | | |
| 130 | National Museum of American History, Behring Center | 167 | 26,581 | 167 | 26,581 | 170 | 27,691 | 750 | 0 | 0 | 3 | 360 | | |
| | <i>Digital Support</i> | | | | | | | | | | 3 | 360 | | |
| 137 | National Museum of African American History and Culture | 206 | 34,654 | 206 | 34,891 | 206 | 35,680 | 789 | 0 | 0 | 0 | 0 | | |
| | <i>FY 2021 Revised - Support for New Museum see page 296</i> | | | | | | | | | | 237 | | | |
| 141 | National Museum of the American Latino | 0 | 0 | 5 | 1,307 | 17 | 3,324 | 17 | 0 | 0 | 12 | 2,000 | | |
| | <i>New Museum Support</i> | | | | | | | | | | 12 | 2,000 | | |
| 145 | National Portrait Gallery | 57 | 6,983 | 57 | 6,983 | 59 | 7,511 | 193 | 0 | 0 | 2 | 335 | | |
| | <i>Visitor Engagement</i> | | | | | | | | | | 1 | 200 | | |
| 153 | National Postal Museum | 6 | 1,854 | 6 | 1,854 | 8 | 2,105 | 21 | 0 | 0 | 2 | 230 | | |
| | <i>Collections Support</i> | | | | | | | | | | 2 | 230 | | |

SMITHSONIAN INSTITUTION

Unit Detail of the FY 2021 Enacted, FY 2021 Revised and FY 2022 Request (\$s in Thousands)

| Page # | FTE = Full-Time Equivalent | FY 2021 Enacted | | FY 2021 Revised | | FY 2022 Request | | ANALYSIS OF CHANGE | | | | |
|--------|---|-----------------|----------------|-----------------|----------------|-----------------|----------------|----------------------|------------------------|-------------------|----------------------|---------------|
| | | FTEs | \$000 | FTEs | \$000 | FTEs | \$000 | Pav & Benefits \$000 | Rent & Utilities \$000 | Fixed Other \$000 | Program Change \$000 | |
| | | | | | | | | | | | | |
| 159 | Smithsonian American Art Museum | 90 | 10,938 | 90 | 10,938 | 91 | 11,413 | 325 | 0 | 0 | 1 | 150 |
| 165 | Smithsonian American Women's History Museum | 0 | 0 | 0 | 500 | 13 | 2,500 | 0 | 0 | 0 | 13 | 2,000 |
| | <i>New Museum Support</i> | | | | | | | | | | 13 | 2,000 |
| | <i>FY 2021 Revised - Support for New Museum see page 296</i> | | | | 500 | | | | | | | |
| 42 | American Experience Consortium | 0 | 600 | 0 | 600 | 0 | 600 | 0 | 0 | 0 | 0 | 0 |
| | Total for Museums and Research Centers | 1,894 | 301,703 | 1,900 | 303,915 | 1,971 | 323,544 | 7,288 | 0 | 0 | 71 | 12,341 |
| | MISSION ENABLING | | | | | | | | | | | |
| | Program Support and Outreach | | | | | | | | | | | |
| 168 | Outreach | 64 | 9,717 | 64 | 9,717 | 66 | 10,224 | 207 | 0 | 0 | 2 | 300 |
| | <i>Exhibit Support</i> | | | | | | | | | | 2 | 300 |
| 174 | Communications | 23 | 2,915 | 23 | 2,915 | 25 | 3,204 | 67 | 0 | 0 | 2 | 222 |
| | <i>Visitor Engagement</i> | | | | | | | | | | 2 | 222 |
| 178 | Institution-wide Programs | 0 | 25,284 | 0 | 23,284 | 0 | 32,634 | 0 | 0 | 0 | 0 | 9,350 |
| | <i>Digital Support/Preserv - Support for New Museums see page 296</i> | | | | (2,000) | | | | | | | |
| | <i>Educational/Information Initiatives</i> | | | | | | | | | | | 0 |
| | <i>Research/Information Initiatives</i> | | | | | | | | | | | 2,850 |
| | <i>Research/Information Initiatives</i> | | | | | | | | | | | 5,000 |
| | <i>Research/Information Initiatives</i> | | | | | | | | | | | 1,500 |
| 189 | Smithsonian Exhibits | 28 | 3,266 | 28 | 3,266 | 29 | 3,498 | 94 | 0 | 0 | 1 | 138 |
| | <i>Collections Support</i> | | | | | | | | | | 1 | 138 |
| 192 | Museum Support Center | 18 | 1,949 | 18 | 1,949 | 18 | 1,991 | 42 | 0 | 0 | 0 | 0 |
| 194 | Museum Conservation Institute | 22 | 3,459 | 22 | 3,459 | 22 | 3,562 | 103 | 0 | 0 | 0 | 0 |
| 199 | Smithsonian Libraries and Archives | 115 | 15,106 | 115 | 15,106 | 117 | 16,056 | 421 | 0 | 300 | 2 | 229 |
| | <i>Digital Support/Preserv - Library Subscription Inflation</i> | | | | | | | | | 300 | | |
| | <i>Collections Support</i> | | | | | | | | | | 1 | 100 |
| | <i>Collections Support</i> | | | | | | | | | | 1 | 129 |
| | Subtotal, Program Support and Outreach | 270 | 61,696 | 270 | 59,696 | 277 | 71,169 | 934 | 0 | 300 | 7 | 10,239 |
| 204 | Office of the Chief Information Officer | 107 | 55,845 | 107 | 55,845 | 110 | 60,838 | 635 | 0 | 2,858 | 3 | 1,500 |
| | <i>Fixed Costs - Communications</i> | | | | | | | | | 2,858 | | |
| | <i>Information Technology Security</i> | | | | | | | | | | 3 | 1,500 |
| 207 | Administration | 202 | 38,366 | 196 | 38,391 | 203 | 40,700 | 1,096 | 0 | 93 | 7 | 1,120 |
| | <i>Collections Support</i> | | | | | | | | | | 1 | 200 |
| | <i>Educational/Information Operations</i> | | | | | | | | | | 1 | 170 |
| | <i>Educational/Information Operations</i> | | | | | | | | | | 3 | 500 |
| | <i>Educational/Information Operations</i> | | | | | | | | | | 2 | 250 |
| | <i>FY 2021 Revised - Operational/New Museums Spt see page 296</i> | | | | 832 | | | | | | | |
| 212 | Office of the Inspector General | 27 | 4,184 | 27 | 4,184 | 27 | 4,295 | 111 | 0 | 0 | 0 | 0 |
| | Facilities Services | | | | | | | | | | | |
| 214 | Facilities Maintenance | 492 | 115,261 | 492 | 115,261 | 492 | 116,917 | 1,656 | 0 | 0 | 0 | 0 |
| 218 | Facilities Operations, Security, and Support | 1,286 | 241,137 | 1,286 | 240,900 | 1,305 | 254,537 | 3,801 | 1,836 | 0 | 19 | 8,000 |
| | <i>Utilities</i> | | | | (237) | | | | | | | |
| | <i>Security</i> | | | | | | | | 1,836 | | | |
| | <i>Facilities Operations</i> | | | | | | | | | | 9 | 4,000 |
| | <i>Facilities Operations</i> | | | | | | | | | | 10 | 4,000 |
| | Subtotal, Facilities Services | 1,778 | 356,398 | 1,778 | 356,161 | 1,797 | 371,454 | 5,457 | 1,836 | 0 | 19 | 8,000 |
| | Total for Mission Enabling | 2,384 | 516,489 | 2,378 | 514,277 | 2,414 | 548,456 | 8,233 | 1,836 | 3,251 | 36 | 20,859 |
| | SALARIES AND EXPENSES TOTAL | 4,278 | 818,192 | 4,278 | 818,192 | 4,385 | 872,000 | 15,521 | 1,836 | 3,251 | 107 | 33,200 |

SALARIES AND EXPENSES

| | |
|-----------------|---------------|
| FY 2020 Enacted | \$793,658,000 |
| FY 2021 Enacted | \$818,192,000 |
| FY 2022 Request | \$872,000,000 |

For fiscal year (FY) 2022, the Smithsonian requests **\$872 million** in the Salaries and Expenses (S&E) account. Within the total increase requested, approximately 38 percent is attributable to fixed costs for sustaining base operations (e.g., pay, utilities, etc.), and the remainder is for high-priority requirements throughout the Institution.

FIXED COSTS

SALARY AND PAY-RELATED COSTS (+\$15,521,000) — The Institution requests an increase of \$15.5 million for higher salary and pay-related costs. The request funds the annualization of the enacted 1 percent pay raise effective in January of 2021 and a 2.7 percent increase for a civilian pay raise in January of 2022. Also included is a 1.0 percent increase to the Employer Federal Retirement Plan contribution.

Salary and Related Costs:

| | <u>Request</u> |
|--|---------------------|
| ▪ Annualization of 2021 pay raise (1/4 year at 1.0%) | 1,295,000 |
| ▪ Proposed 2022 pay raise (3/4 year at 2.7%) | 10,658,000 |
| ▪ Increase to Employer Federal Retirement Plan | 3,774,000 |
| ▪ Workers' Compensation | <u>-206,000</u> |
| Total | \$15,521,000 |

- **Annualization of the enacted January 2021 Pay Raise of 1.0 percent (+\$1,295,000)** — This request funds the annualization of the enacted 1.0 percent pay raise in January of 2021 for the first quarter of FY 2022.
- **Funding of the proposed January 2022 Pay Raise of 2.7 percent (+\$10,658,000)** — This request funds the proposed 2.7 percent pay raise in January of 2022 for the last three quarters of FY 2022.
- **Increase to the Employer Contribution to the Federal Retirement Plan (+\$3,774,000)** — This provides funding for a 1.0 percent increase to the employer contribution for the Federal Retirement Plan.
- **Workers' Compensation (-\$206,000)** — This supports the provisions of Section 8147(b) of Title 5, *United States Code*. The Workers' Compensation bill for FY 2022 is **\$2,712,000**, based on a Department of Labor invoice for costs incurred from July 1, 2019 through June 30, 2020. This represents a -\$206,000 decrease from the FY 2021 Workers' Compensation costs (\$2,918,000).

FY 2022 Increased Pay Costs (Dollars in Thousands)

| Line Item | Federal Retirement Contributions | FY 2022 Pay Raise and FY 2021 Pay Annualization | FY 2022 Total Pay Increase |
|---|---|--|-----------------------------------|
| National Air and Space Museum | 150 | 457 | 607 |
| Smithsonian Astrophysical Observatory | 126 | 381 | 507 |
| National Museum of Natural History | 326 | 991 | 1,317 |
| National Zoological Park | 207 | 627 | 834 |
| Smithsonian Environmental Research Center | 36 | 107 | 143 |
| Smithsonian Tropical Research Institute | 88 | 289 | 377 |
| Arthur M. Sackler Gallery/Freer Gallery of Art | 44 | 184 | 228 |
| Center for Folklife and Cultural Heritage | 17 | 55 | 72 |
| Cooper Hewitt, Smithsonian Design Museum | 27 | 83 | 110 |
| Hirshhorn Museum and Sculpture Garden | 29 | 88 | 117 |
| National Museum of African Art | 29 | 88 | 117 |
| Anacostia Community Museum | 15 | 45 | 60 |
| Archives of American Art | 9 | 27 | 36 |
| National Museum of African American History & Culture | 165 | 503 | 668 |
| National Museum of American History, Behring Center | 183 | 567 | 750 |
| National Postal Museum | 5 | 16 | 21 |
| National Museum of the American Indian | 195 | 594 | 789 |
| National Museum of the American Latino | 4 | 13 | 17 |
| National Portrait Gallery | 48 | 145 | 193 |
| Smithsonian American Art Museum | 81 | 244 | 325 |
| Smithsonian American Women's History Museum | 0 | 0 | 0 |
| Outreach | 49 | 158 | 207 |
| Communications | 16 | 51 | 67 |
| Museum Support Center | 10 | 32 | 42 |
| Museum Conservation Institute | 25 | 78 | 103 |
| Smithsonian Libraries and Archives | 104 | 317 | 421 |
| Smithsonian Exhibits | 23 | 71 | 94 |
| Office of the Chief Information Officer | 157 | 478 | 635 |
| Administration | 229 | 1,073 | 1,302 |
| Inspector General | 27 | 84 | 111 |
| Facilities Maintenance | 409 | 1,247 | 1,656 |
| Facilities Operations, Security, and Support | 941 | 2,860 | 3,801 |
| Workers' Compensation (Administration) | | -206 | -206 |
| Total Pay-Related Costs | 3,774 | 11,747 | 15,521 |

UTILITIES, POSTAGE, RENT, COMMUNICATIONS, AND OTHER FIXED COSTS (+\$5,087,000) — For FY 2022, the Institution requests an

increase of \$5,087,000 for utilities and other fixed-cost accounts, as detailed in the chart below. The requested increase reflects consumption and rate changes in the utilities accounts and increases for Communications and Other Support to provide for fixed software licensing and maintenance costs, inflationary increases for library subscriptions, and to meet compliance requirements.

The following table displays the estimates for FYs 2021 and 2022. The details that follow address the specific changes affecting the FY 2022 accounts.

**Federal Utilities, Postage, Rent, Communications, and
Other Fixed Costs
FYs 2021–2022**

(Dollars in Thousands)

| | FY 2021 Estimate | FY 2022 Estimate | Change |
|--------------------------|-----------------------------|-----------------------------|----------------|
| Utilities: | | | |
| Electricity | 20,342 | 20,707 | 365 |
| Chilled Water | 3,090 | 3,008 | -82 |
| Steam | 8,492 | 8,169 | -323 |
| Natural Gas | 3,056 | 3,284 | 228 |
| DC Gov't Water/Sewer | 7,131 | 8,775 | 1,644 |
| Other Water and Fuel Oil | <u>1,236</u> | <u>1,240</u> | <u>4</u> |
| Subtotal, Utilities | 43,347 | 45,183 | 1,836 |
| Postage | 1,461 | 1,461 | 0 |
| Motor Fuel | 370 | 370 | 0 |
| Rental Space: | | | |
| Central | 42,807 | 42,807 | 0 |
| Unit | <u>5,793</u> | <u>5,793</u> | <u>0</u> |
| Subtotal, Rent | 48,600 | 48,600 | 0 |
| Communications | 22,650 | 25,508 | 2,858 |
| Other Support | 5,527 | 5,920 | 393 |
| Total | \$121,955 | \$127,042 | \$5,087 |

UTILITIES (+\$1,836,000) — Justified here, but included in the Facilities Operations, Security, and Support line item, are requested changes to cover the costs of energy and water. The request includes the following:

- **Electricity (+\$365,000)** — 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 ensure the comfort of visitors and staff. The anticipated changes in FY 2022 include a 1.3 percent increase, along with minor increases throughout the Institution.
- **Chilled Water (-\$82,000)** — Chilled water costs represent actual chilled water usage supplied by the General Services Administration's (GSA) central plant to the Smithsonian's south Mall facilities. A decrease of \$82,000 is anticipated due to the change from chilled water to electricity at the National Air and Space Museum (NASM).
- **Steam (-\$323,000)** — The Smithsonian uses steam for heating and humidification, and to produce hot water for facilities on the Mall and in New York City. This decrease is due to the change from steam to natural gas at the NASM.
- **Natural Gas (+\$228,000)** — The Smithsonian uses natural gas and propane for heating and generating steam. This increase is due to the change to natural gas from steam at the NASM.
- **DC Water and Sewer (+\$1,644,000)** — Funds cover the costs of both water and sewer services provided by the District of Columbia Water and Sewer Authority (DCWSA). The net increase includes rate and billing adjustments transmitted by DCWSA to the Smithsonian in April of 2020, as well as the delay in the federal billing process of serving the National Zoo's Energy Savings Performance Contract.
- **Other Water and Fuel Oil (+\$4,000)** — Funds provide water service for facilities outside of Washington, DC, and fuel oil used in dual-fuel boilers and generators for emergency power. There are minimal changes projected for FY 2022.

POSTAGE AND MOTOR FUEL (\$0) — Funds provide for all official domestic and international mail services and for motor fuel that powers the Smithsonian's motor vehicle fleet and scientific research vessels. No increases are requested in FY 2022.

RENTAL SPACE (\$0) — No increase is requested for rental space because of the purchase of an Administrative Headquarters Building in the Washington, DC area and the subsequent savings expected in FY 2022. These savings will offset any anticipated escalation costs in other leased properties in FY 2022.

COMMUNICATIONS (+\$2,858,000) — The communications base supports the operations of the Institution’s voice and data telecommunications infrastructure upgrade and maintenance. Also, there are required upgrades to the trunked radio system used by the Smithsonian Office of Protection Services and staff at the National Zoo for emergency communications. In addition, this request funds key infrastructure items for our network that will be at the end of their life expectancy and require replacement to avoid outages caused by equipment failures, and will also cover increases in the cost of software maintenance and subscription fees.

The requested increases will enable high-tech solutions which have been implemented to support enhanced telework for staff and distance education for the public as well as staff. The increases will allow business-critical systems to remain current and enable vendors to continue supporting them, as well as enhance operations to improve and streamline business workflows. The mandatory transition of data/Internet-leased lines will allow the Institution to replace outdated telecommunications technologies and capitalize on new options to provide faster connectivity and reduce system redundancies.

OTHER SUPPORT (+\$393,000) — An additional \$393,000 is requested to offset the effects of inflation and to cover other fixed costs. The Smithsonian Libraries and Archives requires additional funding to adequately address inflationary increases in library subscriptions (+\$300,000). This increase will enable the Libraries to cover the extraordinary inflation costs of purchasing journals and electronic databases, which are essential to support the Institution’s many research programs and scientists.

The Institution also requests an increase (+\$93,000) to support the mandatory, contractually required inflation costs for the annual audit of the Smithsonian’s financial statements and personal property inventory.

SUMMARY OF FY 2022 S&E PROGRAM CHANGES

| | FY 2021 Base (\$000s) | FY 2022 Program Changes (\$000s) | FY 2022 FTE Changes |
|--|-----------------------------|---|---------------------------|
| New Museums | | +4,000 | +25 |
| • National Museum of the American Latino | 1,307 | +2,000 | +12 |
| • Smithsonian American Women's History Museum | 500 | +2,000 | +13 |
| Enhanced Interdisciplinary Research | | +9,000 | +15 |
| • Research Program Initiatives | 0 | +5,000 | 0 |
| • Biodiversity Research | 8,000 | +4,000 | +15 |
| Expand Digital Technologies | | +6,500 | +16 |
| • Digital Support and Programming | 40,285 | +6,500 | +16 |
| Understand and Impact 21st Century Audiences | | +1,135 | +8 |
| • Visitor Engagement | 30,737 | +635 | +5 |
| • Exhibit Support | 65,758 | +500 | +3 |
| Preserve Our Natural and Cultural Heritage | | +10,565 | +37 |
| • Collections Support (excludes Zoo) | 66,002 | +1,865 | +13 |
| • National Zoo — Animal Welfare | 9,628 | +700 | +5 |
| • Facilities Operations Support | 165,254 | +4,000 | +10 |
| • Security | 88,108 | +4,000 | +9 |
| Enable Cost-Effective and Responsive Administration | | +2,000 | +6 |
| • Information Technology | 46,221 | +1,500 | +3 |
| • Management Operations | 92,762 | +500 | +3 |
| Total S&E Program Increases | | +\$33,200 | +107 |

Note: For a complete list of program categories, see page 41.

NEW MUSEUMS

National Museum of the American Latino

Public Law 116-260, signed by the President on December 27, 2020, established the National Museum of the American Latino (NMAL) within the Smithsonian Institution. The mission of the NMAL is to give voice to the richness and the challenges of the Latino American experience, make it possible for all people to understand the depth, complexity, and promise of the American experience, and serve as a national forum for collaboration on and the celebration of Latino American history and culture for educational and social institutions.

More specifically, the National Museum of the American Latino will be the keystone for people in the United States and visitors worldwide to learn about Latino contributions to life, art, history, and culture in the United States; and will serve as a gateway for visitors to

view other Latino exhibitions, collections, and programming at other Smithsonian Institution facilities and museums throughout the United States.

For fiscal year (FY) 2021, resources from the Smithsonian Latino Center (\$807,000 and 5 FTEs) were redirected to the new NMAL line item, along with \$1,000,000 from the Latino Initiatives Pool to the new Museum line item and the Administration line item for required staff to support the new Museum.

In FY 2022, the estimate includes an initial program request of 12 FTEs and \$2,000,000 to begin recruitment and selection of initial personnel; formation of planning and coordination teams to develop exhibitions, public programs, education, research, collections acquisition, technology, and capital fund raising; implementation of a site-selection evaluation process; and the development of a capacity for administrative operations. Additional details are provided in the unit narrative section of this budget submission.

Smithsonian American Women's History Museum

Public Law 116-260, signed by the President on December 27, 2020, established the Smithsonian American Women's History Museum (SAWHM) within the Smithsonian Institution.

Currently, there is no national museum in the United States devoted to the documentation of women's contributions throughout the nation's history. On December 19, 2014, Congress created a commission to study the potential for an American museum of women's history. The bipartisan commission unanimously concluded that the United States needs and deserves a national museum dedicated to showcasing the historical experiences and impact of women in the United States. A comprehensive women's history museum would document the full spectrum of the experiences of women in the United States, represent a diverse range of viewpoints, experiences, and backgrounds, more accurately depict the history of the United States, and add value to the Smithsonian Institution for the American people.

For FY 2021, resources from the American Women's History Initiatives pool (\$1,000,000) were redirected to the SAWHM line item and to the Administration line item for required staff to support the new Museum.

In FY 2022, the estimate includes an initial program request of 13 FTEs and \$2,000,000 to begin recruitment and selection of initial personnel; formation of planning and coordination teams to develop exhibitions, public programs, education, research, collections acquisition, technology, and capital fund raising; implementation of a site-selection evaluation process; and the development of a capacity for administrative operations. Additional details are provided in the unit narrative section of this budget submission.

ENHANCED INTERDISCIPLINARY RESEARCH

The Smithsonian’s FY 2022 budget submission supports the programs described below to advance science, technology, and innovation within the Institution to achieve high-return benefits from the investment in research. The Smithsonian will continue implementing its Strategic Plan, with the following requested increases for Enhanced Interdisciplinary Research:

| <u>Category</u> | FY 2021 Base (\$000s) | FY 2022 Program Increase (\$000s) | FY 2022 FTEs Increase |
|--|-----------------------------|--|-----------------------------|
| ENHANCED INTERDISCIPLINARY RESEARCH | | | |
| • Research Program Initiatives | 0 | +5,000 | 0 |
| ▪ Biodiversity Research | 8,000 | +4,000 | |
| ▪ Global Earth Observatories | 8,000 | +3,000 | +13 |
| ▪ Climate Change Monitoring | 0 | +1,000 | +2 |
| Total Increases | | +\$9,000 | +15 |

Research Program Initiatives — FY 2022 Increase: (+\$5,000,000)

The funding requested will support an innovative and emerging research pool of funds to be managed by the Under Secretary for Science and Research. The pool will foster a research environment conducive to scientific innovation and provide the critical financial support necessary to execute world-class science. Priority will be given to high-risk, high-reward activities that simultaneously build technical capabilities within the Smithsonian’s established areas of research. This program will help recruit and retain the finest scientific talent, support postdoctoral researchers, and help build a diverse science, technology, engineering, and mathematics (STEM) workforce.

The funding criteria will be flexible enough to respond to unique research opportunities that could change our understanding of earth systems (e.g., extreme ground-level weather events, volcanic eruptions). The funds will be distributed by both competitive and more focused, targeted efforts. We expect to allocate the funding in several tracks; for example, internally competitive seed grants and innovation grants, start-up funds for new researchers, and targeted funding to address diversity and inclusion to include addressing the impact of COVID-19 telework on early career researchers, especially women.

Examples of relevant research we expect to fund include: One Health (interactions between human, animal, plant, and ecosystem health, including climate change); biodiversity genomics (answering questions about ecology and evolution, including impacts of climate change); movement of animals across landscapes (including impacts of climate change); and studying endangered and invasive species and how climate change is impacting all of these areas. In addition, in the area of astronomy and planetary science, the research would include how will we find evidence of life on other planets, what conditions lead to habitability, and what physical-chemical

processes lead to the great diversity among planets in our solar system and beyond. Additional information is provided in the Institution-wide section of this budget submission.

Biodiversity Research — FY 2022 Increase: (+\$4,000,000, +15 FTEs)

The Smithsonian is well known for our research products that help sustain biological diversity, assess the effects of climate change and resilience strategies, and understand and manage invasive pests and infectious diseases. Our assets include one of the world's largest groups of scientists working on the biology of whole plants and animals (i.e., we don't compete broadly in cellular biology), a network of Earth Observation platforms and field stations, and huge collections of specimens and libraries of resources. Additional information is provided in the Enhanced Research Initiatives section of this budget submission.

- **Global Earth Observatories, ForestGEO and MarineGEO — FY 2022 Increase: (+\$3,000,000, +13 FTEs)**

The mission of our Global Earth Observatory (GEO) networks is to accelerate understanding of the diversity and functioning of forest and marine ecosystems to predict their futures and sustain their vital roles in supporting life on Earth. The world's forest and marine ecosystems support all aspects of life on Earth: everything from providing food, medicines, and building materials to regulating climatic and carbon cycles. They have never been under more pressure through the dual threats of climate and land-use changes. Research-based global solutions are required to mitigate these risks and increase ecosystem resilience. The Smithsonian GEOs have developed globally distributed *in-situ* monitoring and experimental observatories on land (ForestGEO) and in the sea (MarineGEO) that, coupled with new global scientific capacity, will transform our understanding of these ecosystems and provide policy makers with a basis for their future sustainable management.

For FY 2022, the Institution requests funding (+\$1,500,000 and +5 FTEs) for the Forest Global Earth Observatories. ForestGEO provides long-term scientific data about biodiversity and the ecological, hydrological, soil, and meteorological processes associated with climate change at local, regional, and global scales.

The requested resources will: (i) expand ForestGEO to better represent all major forest types globally, transforming the network into a permanent global observation system for the world's forests; (ii) broaden the scientific disciplines addressing forest response to climate change through strategic appointments in genomics, microbial ecology, and ecosystem modeling; (iii) ensure the long-term sustainability of ForestGEO science by strengthening the coordination and management of ForestGEO sites and future data collection; and (iv) increase the role of ForestGEO in science capacity development through Fellowships and training designed to build the human resources needed to solve the global forest crisis. Together, these developments will provide an extraordinary opportunity to revolutionize our understanding of one of Earth's most biologically complex and important systems.

In addition, the Institution requests funds (+\$1,500,000 and +8 FTEs) for the Marine Global Earth Observatories, or MarineGEO. MarineGEO is dedicated to understanding changes in the structure and function of coastal marine ecosystems, monitoring, forecasting, and enhancing resilience to climate change. These funds will efficiently build on existing Smithsonian federal and trust investments, collaboration with the National Oceanic and Atmospheric Administration and the National Science and Technology Council (NSTC) Subcommittee on Ocean Science and Technology (SOST), and leverage in-kind support from a range of academic partners to allow expansion of the network beyond the initial sites.

- **Climate Change Coordination and Monitoring — FY 2022 Increase: (+\$1,000,000, +2 FTEs)**

The funding requested will support internal research and communications in climate change and related fields, and enable coordination with other national and international efforts. In addition, the new funding will provide research and monitoring infrastructure and support personnel across Smithsonian facilities and programs, allowing the Institution to be nimble in meeting evolving needs and priorities. Uses include bolstering existing monitoring networks and implementing new field sites. More information on this request can be found in the Enhanced Interdisciplinary Research section of this budget submission.

EXPAND DIGITAL TECHNOLOGIES

| <u>Category</u> | FY 2021 Base (\$000s) | FY 2022 Program Increase (\$000s) | FY 2022 FTEs Increase |
|--|--------------------------------------|--|--------------------------------------|
| Digital Support and Programming | | | |
| • Digital Support Pool | 0 | +2,850 | 0 |
| • Digital Unit Support | 17,174 | +1,650 | +12 |
| • Education Initiatives Pool | 0 | +1,500 | 0 |
| • Education Unit Support | 23,111 | +500 | +4 |
| Total Increase | | +\$6,500 | +16 |

Digital Support and Programming — FY 2022 Increase: (+\$6,500,000, +16 FTEs)

A key pillar of the Secretary’s strategic framework has been the continued development of the “Virtual Smithsonian,” which leverages the latest digital capabilities and platforms to reach expanded audiences in the United States and around the globe.

In 2020, that priority shifted rapidly from “important and ongoing” to “urgent” as the COVID-19 pandemic caused us to close our museums — making an online visit the only way for the public to access the national treasures in the Smithsonian’s care — and as educators across the country voiced the need for more digital resources to use in online instruction. In addition, a heightened national focus on racial inequities and a recommitment to science as our guide for addressing threats to the planet — from the

control of infectious disease to sustainability — has called the Smithsonian to fulfill its historic roles as trusted educators and consensus builders on issues affecting American society and as a global leader in scientific research.

The Smithsonian is special because of our 155 million objects which have been assembled during our 175 years of history. These iconic collections, especially when digitized for broader access and contextualized by our expert personnel, will offer our staff and the public a powerful resource to research, “increase and diffuse knowledge,” and share with the world.

The Smithsonian’s ambitious Strategic Plan includes two goals: (1) reaching a billion people through a Digital First strategy; and (2) driving large, visionary, interdisciplinary research and scholarly projects by emphasizing genomics, data science, and data analytics. Both goals are more important than ever, as demonstrated during the recent public health crisis in which our citizens, and especially the educational sector, depended heavily on Smithsonian online content.

Our focus on programming and content is essential to fulfill our responsibilities on all these fronts. When the COVID-19 crisis occurred last year, educators and other digital practitioners across the Smithsonian were able to respond quickly, delivering informative and age-appropriate content and programming for learners at every grade level and even beyond classroom walls. The crisis accelerated some digital initiatives already planned or under way and highlighted new opportunities. Offerings that were previously only available in person, which limited their reach to primarily local audiences, became virtual and available to national and international audiences. For example, the Earth Optimism Summit — which included discussions on the speed of global climate change — went virtual in 2020 and reached more than 19 million people in 170 countries. This shows us that, to realize the potential of what is possible, we must continue to shift our focus to providing content most relevant to the issues of today.

In particular, one of the Institution’s strengths that we want to leverage during this national reckoning on race and identity, and in the years ahead, is our ability to engage people in meaningful dialogue where they live. Accordingly, we have launched several initiatives to help us grapple with the nation’s racial divide. “Our Shared Future: Reckoning with Our Racial Past,” the first coordinated Smithsonian effort to explicitly address racism and racial equity, will explore how Americans confront race, its impact on communities, and the way it shapes our nation’s future. In addition, the National Museum of African American History and Culture’s “Talking About Race” portal offers a wealth of resources to inform and contextualize discussions about race in keeping with its original charter to serve as a place for learning and reconciliation.

As a leader in the scientific, cultural, and educational fields, it is essential for the Smithsonian to exercise our power to bring people together to share big ideas and conflicting perspectives, especially about important topics that touch all aspects of society such as race relations, a deadly virus, or sustainability in the face of global climate change. The Smithsonian has the unique ability and an obligation to increase the public’s ability to understand our universe, our history, and our shared future, and to work for the common good.

Digital Support — FY 2022 Increase: (+\$4,500,000 and +12 FTEs)

The Institution is requesting an increase of **\$4,500,000 and 12 FTEs** to achieve our goals to continue developing the “Virtual Smithsonian” and leveraging digital capabilities and platforms to reach expanded audiences. The funding will support key Institution priorities, such as addressing racial equity and climate change. The increase includes a combination of a digitization pool (\$2,850,000) and additional staff embedded in key units (\$1,650,000 and 12 FTEs) to support our key priorities and digital efforts.

- **Digital Support Pool**

Specifically, to expand digitization and open access, and to increase the type and volume of content we manage and make available to the world, the Smithsonian is requesting that a Digital Support Pool (**+\$2,850,000**) be established in the Institution-wide line item, details on which can be found in the Institution-wide Programs section of this budget submission. The funding requested will provide for digital platform and software development in addition to supporting the ramp-up of mass digitization, informatics, and expansion of the 3D digitization infrastructure with the necessary staffing of key developers and program managers. This request will also support the central digital transformation function, digital platforms which support the sharing of our collections, our successful Open Access Initiative, our digitization program, and the Transcription Center, a pilot project that has blossomed into a highly publicized program and draws thousands of digital volunteers worldwide. In addition, the funding will support data science by expanding the information management infrastructure.

- **Digital Unit Support**

The Institution is also requesting additional staff embedded in key units (**\$1,650,000 and 12 FTEs**) to support our digitization efforts. This will enhance the capabilities of several units so they can participate in digital content production and more effectively transform their workflows to reach expanded and underserved audiences. The following are the units that are requesting digitization support: Cooper Hewitt, Smithsonian Design Museum (1 FTE); Hirshhorn Museum and Sculpture Garden (1 FTE); National Museum of American History (3 FTEs); National Air and Space Museum (2 FTEs); National Portrait Gallery (1 FTE); Smithsonian American Art Museum (1 FTE); Smithsonian Libraries and Archives (1 FTE); and the National Museum of African Art (2 FTEs). Additional justification for this request is provided in the respective unit budget submissions.

Education Support — FY 2022 Increase: (+\$2,000,000 and +4 FTEs)

The Institution also requests funding to support our educational outreach, including programs to address racial equity and sustainability issues. In response to the COVID-19 pandemic, the Smithsonian ramped up its commitment and access to a wide array of our virtual assets, educational tools, and digital platforms.

Some of the educational tools and resources include Learning Lab, our website that allows educators, parents, and students to access high-quality learning resources and interactive tools to create lesson plans aligned with the curricula of many states. In the first month of school closures last spring, the website saw a 346 percent increase in traffic compared to the same time the previous year, providing even more people with lesson plans, materials, and activities in arts, history, design, and science, technology, engineering, and mathematics (STEM). The Smithsonian Open Access platform allows people to download, create, and reuse nearly three million 2D and 3D digital items from Smithsonian collections. *Sidedoor*, our Webby-nominated podcast, tells special behind-the-scenes Smithsonian stories of interest to learners of all ages.

With our keen focus on K–12 education, the Smithsonian seeks to continue developing online materials and educational content that bring the depth and breadth of the Institution to classrooms across America. We will harness the power of information technology to increase the volume of digital content and offer resources on topics like the civil rights movement, human origins, conservation, sustainability, and responsible environmental stewardship.

This digital engagement will also help document present-day life in the United States. As COVID-19 becomes a defining moment for the country and the world, we stand ready to assist our nation with trying to better understand the aftereffects of living through a pandemic. By adopting a holistic approach that encompasses multiple museums, online educational materials, the national collections, and exhibits, the Smithsonian will help the public comprehend how the virus surfaced, the short- and long-term impacts it has on the country, and what it means for the future of global health and the need to expand educational opportunities for everyone.

One of the primary ways the Smithsonian achieves a profound impact is by reaching students, teachers, and scholars with our educational resources. Today, we have many education, learning, and discovery spaces in our museums and research centers. Smithsonian education providers such as the Smithsonian Science Education Center, Smithsonian Affiliate museums, and the Smithsonian Institution Traveling Exhibition Service work diligently to bring virtual educational offerings in art, history, culture, and STEM to every state nationwide and countries around the world.

However, we cannot rely on digital learning alone. Many young people, especially those who have been underserved, lack access to a computer or reliable internet service. Starting in 2020, the Smithsonian committed to bridging the digital divide, providing no-tech educational resources to people across the country. By partnering with *USA Today*, we created a series of learning packets which offer hands-on activities to help children and adults explore STEM, the arts, and history. Distributed through public libraries and schools, Boys and Girls Clubs of America, our affiliate museums, and directly through newspaper subscriptions, they reached nearly two million households last year, with more editions planned.

Building on our history and respected reputation, the Institution plans to apply innovative thinking to ensure our position as a national leader, not only in lifelong learning, but also in pre-K–12 education. Our goal is for the Smithsonian to reach every classroom in America. As we have proven during this difficult time, educational

materials based on our science and scholarship can enhance the ways students and teachers engage in 21st-century learning. At the local level, we are continuing to develop a model of the future of education and museums through a collaboration with the Washington, DC public school system. Sharing that work nationwide and abroad, while drawing on best practices and lessons learned, will expand our impact and help us make the most effective use of our resources.

- **Education Initiatives Pool**

The Smithsonian requests **\$1,500,000** to establish an Education Initiatives Pool and continue providing high-quality educational resources, as detailed below and in the Institution-wide section of this budget submission.

- **Learning Lab**

The Smithsonian's Learning Lab is a free, online platform for educators and learners to access the millions of digitized Smithsonian resources and support teaching and learning. Smithsonian educators and experts can use this platform to co-create content with pre-K–12 teachers from around the country. Free tools like the Learning Lab help extend the reach of the Smithsonian to communities nationwide and make high-quality and relevant content accessible to all. The pool funds will be used to support the integration of the Learning Lab with learning management systems used by schools.

- **Equity and Access**

As a strong proponent of expanding opportunities for underserved audiences, the Smithsonian is committed to making equal access to high-quality educational resources. The pool funds will be used to create educational resources and tools in a variety of low-tech and highly tactile formats. The funds requested will also support enhancements for learning tools to make content accessible to individuals with disabilities and communities needing bilingual content.

- **Distance Learning**

The Smithsonian Institution is the nation's knowledge partner and has been engaging in distance learning since well before the pandemic struck, serving learners beyond the walls of our museums and research centers through virtual tours, webinars, distance-learning classes at America's military bases around the globe, recorded videos, podcasts, and more. These funds would be used to create new distance-learning resources and add content to existing, popular Smithsonian platforms to address the nation's distance-learning needs in school, after school, and at home.

- **Education Unit Support**

The Institution is also requesting **\$500,000 and 4 FTEs** to support the Education Initiatives Pool that will be strategically placed in the office of the Under Secretary for Education and in the National Museum of African American History and Culture. These resources will play an essential role for administering these

programs and in serving schools and educators nationwide. Additional justification is provided in the respective budget submissions for the units involved in these Institution-wide education initiatives.

UNDERSTAND AND IMPACT 21st CENTURY AUDIENCES

| <u>Category</u> | FY 2021 Base (\$000s) | FY 2022 Program Increase (\$000s) | FY 2022 FTEs Increase |
|--------------------------------------|--------------------------------------|--|--------------------------------------|
| IMPACT 21st CENTURY AUDIENCES | | | |
| • Visitor Engagement | 30,737 | +635 | +5 |
| • Exhibit Support | 65,758 | +500 | +3 |
| Total Increase | | +\$1,135 | +8 |

Visitor Engagement — FY 2022 Increase: (+\$635,000, +5 FTEs)

One of the Institution’s top priorities is to ensure the safety and security of the millions of visitors who come to our museums. It is also equally important to provide a meaningful experience to all those who visit our facilities.

The Smithsonian receives millions of visits a year at its high-visibility museums, galleries, and research centers. The Institution has a fundamental responsibility to provide a safe and secure environment for the public while protecting the nation’s priceless collections.

One of the Institution’s goals is to increase access to the Smithsonian and enhance the experience of visitors, both online and in person. Our museums serve a vast global audience through their physical and digital initiatives to deliver on our mission to generate and diffuse knowledge. All Smithsonian public programs (including exhibitions, events, websites, apps, and social media) must be accessible to people with disabilities to the fullest extent possible and practicable. With 20 percent of our nation’s population identifying as having a disability (a percentage that is likely to rise as the U.S. population ages), it is increasingly important for the Smithsonian to more fully implement Americans with Disabilities Act (ADA) standards on public accommodations and improve access to its physical and digital environments.

While our museums provide baseline accessibility services, to make the Smithsonian more fully accessible to a broader population of Americans with disabilities, we are requesting additional resources to handle our growing number of elderly and disabled visitors. This includes providing auxiliary aids or services, such as American Sign Language interpretation, sighted guides, assistive listening systems, and Braille materials which will enhance the experiences of visitors with disabilities.

The funds requested will be used to support the following units: the Freer Galleries (+1 FTE); the office of the Assistant Secretary for Communications and External Affairs

(+2 FTEs); the National Portrait Gallery (+1 FTE); and the National Air and Space Museum (+1 FTE). Additional information is provided in the respective unit budget submissions.

Exhibit Support — FY 2022 Increase: (+\$500,000, +3 FTEs)

The Smithsonian has a long tradition of raising private funds to design and install new exhibitions. For generations, these exhibitions have been the reason why millions of visitors have come to the National Mall. However, the Institution requires federal funding to manage these exhibits and leverage the private funding necessary to install and maintain these exhibitions.

This budget request supports additional resources to continue to expand the Asian Pacific American Center (APAC) presence in the Smithsonian’s presentation of and research into the American experience. With the expected timeline for a dedicated Smithsonian Asian Pacific American gallery set for delivery in 2026, a director of exhibitions and programs is required to lead the exhibition development work.

The requested budget increase will also support the Institution’s traveling exhibitions, including the popular Museums on Main Street (MoMS) program. The MoMS program works with state humanities councils to bring traveling exhibitions, educational resources, and programming to small towns across America, especially to the underserved populations of rural America.

Specifically, funding would be provided to the Smithsonian Traveling Exhibition Service (+2 FTEs) and the Asian Pacific and American Center (+1 FTE). Additional information is provided in the respective unit budget submissions.

PRESERVE OUR NATURAL AND CULTURAL HERITAGE

| <u>Category</u> | FY 2021 Base (\$000s) | FY 2022 Program Increase (\$000s) | FY 2022 FTEs Increase |
|---------------------------------------|-----------------------|-----------------------------------|-----------------------|
| PRESERVE OUR CULTURAL HERITAGE | | | |
| • Collections Support | 66,002 | +1,865 | +13 |
| • Animal Welfare | 9,628 | +700 | +5 |
| • Facilities Operations and Support | 165,254 | +4,000 | +10 |
| • Security | 88,108 | +4,000 | +9 |
| Total Increase | | +\$10,565 | +37 |

Collections stewardship is a key component and core priority of the Smithsonian’s Strategic Plan. Assembled throughout the Institution’s 175-year history, Smithsonian collections are fundamental to carrying out the Institution’s mission and serving as the intellectual capital for scholarship, exhibition, and education. The proper management, documentation, preservation, and accessibility of collections are essential to the nation’s research and education infrastructure, enabling researchers to address such significant

challenges as the spread of invasive species and the loss of biological diversity and its impact on global ecosystems and human welfare.

Likewise, 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 for "the increase and diffusion of knowledge," there is a vital need for additional resources to accomplish the basic collections management activities for accountability, preservation, storage, digitization, and accessibility of the collections. The Institution must also substantially increase its staffing of collections managers to ensure that our vast collections are properly exhibited and interpreted for the Smithsonian's worldwide audiences, including the scientific community.

Collections Support — FY 2022 Increase: (+\$1,865,000, +13 FTEs)

Although the Institution has many staffing needs, curatorial and collections management staffing is one of the top priorities. Museums require additional staff to research and write educational materials which convey cultural context and meet curriculum standards, design curriculum and learning activities, and develop and maintain a dynamic and functional publications distribution system. This is particularly important now that the Smithsonian is expanding access to distance learning and education during the COVID-19 pandemic.

In pursuit of the requested funds, the Institution is following a balanced strategy, using both federal and trust support to begin rebuilding the curatorial staff. Even though it is difficult to raise private funds for this effort, each museum is committed to match the federal support with private resources for this essential program. We have had some success with this approach so far, and have funded some endowed curatorial positions as part of our national campaign. Our donors have expressed their support for this balanced strategy of leveraging their donations with an equal federal commitment to restore the scholarly foundation of the Institution.

Several recent Inspector General collections stewardship audit reports have identified a vital need to fill high-priority positions to care for and preserve collections, ensure full inventory control over collections, provide proper preservation of collections at risk, and support a robust digitization program to make collections available online to national and international communities. Museums also require additional staff to: assist with research and public collections inquiries; expand loan and digitization capacities to meet the growing demand for physical and digital access to collections; conserve fragile and at-risk collections, including time-based media and digital art; research and process new acquisitions and backlogs; meet the growing requirements of upcoming exhibitions; improve collections emergency management and professional development training; and achieve and sustain inventory and preservation controls to support proper collections stewardship.

In particular, museums and offices requesting collections support funding include: the Arts and Industries Building (+1 FTE); the Anacostia Community Museum (+1 FTE); Cooper Hewitt, Smithsonian Design Museum (+1 FTE); Hirshhorn Museum and Sculpture Garden (+2 FTEs); the National Museum of African American History and Culture (+1 FTE); the National Museum of Natural History (+3 FTEs); the National Postal Museum (+2 FTEs); the Smithsonian Libraries and Archives (+1 FTE); and Smithsonian Exhibits (+1 FTE).

This collections staffing request specifies the necessary federal support to begin recovering from the loss of curatorial and collections management staff in several of the Smithsonian's most popular museums and galleries. Additional information is provided in the respective unit budget submissions.

Animal Welfare — FY 2022 Increase: (+\$700,000, +5 FTEs)

The National Zoological Park (NZN) is requesting resources (+\$700,000 and +5 FTEs) to provide specialized animal care exhibits support. Living collections require specialized support that includes items for daily animal care, such as physical therapy blocks for the NZN's aging herd of Asian elephants, and for veterinary management, such as a training cage with a blood sleeve for giant pandas. This also includes specialized equipment for staff safety, such as a shift box for venomous snakes, and particular housing to support collection sustainability, such as nest boxes for Abyssinian ground hornbills. Most of the Smithsonian's living collections are housed indoors, but the Zoo's 163-acre park includes a significant number of outdoor habitats, and has special needs for its collection animals, such as shade structures for bison and climbing structures for great apes. Equally important, the Zoo has to maintain miles of animal containment, with standards which are often being improved and updated as they are tested by the animals themselves, resulting in increased height recommendations for cheetah fences or increased cabling to calf-proof the *Elephant Trails* exhibit.

Maintaining animal habitats and providing specialized items for the animals' health and well-being are not just recommended best practices but required by oversight and regulatory entities such as the Association of Zoos and Aquariums (AZA) and the U.S. Department of Agriculture (USDA). These standards are essential to safely and humanely house our living collections while safeguarding the public and staff. Without the additional resources and specialized exhibits support, the quality of both scientific research and animal care will be diminished.

Additional information is provided in the National Zoo's unit section of this budget submission.

Facilities Operations and Support — FY 2022 Increase: (+\$4,000,000, +10 FTEs)

The Institution requests additional funding to address high-priority operating and life-safety needs. Contracts for basic facility services, materials, and supplies have outpaced any budget growth the Smithsonian has seen. In addition, the Institution's operations and physical footprint have grown, further increasing requirements.

This increased funding will enable the Institution to effectively provide the proper cleaning and sanitizing services to approach APPA Level 2 cleaning. The funds will

support much-needed services to manage the growth in our building footprint and begin to address increasing workforce requirements.

Additional information is provided in the Facilities Operations, Security, and Support unit section of this budget submission.

Security — FY 2022 Increase: (+\$4,000,000, +9 FTEs)

As the physical footprint of the Smithsonian has increased and facilities are revitalized, the Institution's security and law-enforcement needs have also grown. This has caused the security base budget to not keep pace with increased demands. Consequently, to evaluate the effectiveness of existing security resources versus current requirements, the Smithsonian conducted a security staffing analysis for each of its major facilities. The facility analyses confirmed that the Smithsonian needs to provide a higher level of security around building perimeters and in interior public spaces such as galleries.

As a result, the Institution requests \$4.0 million to begin implementing a new screening system. The purchase of the screening technology will allow the Institution to elevate to an enhanced security posture during the visitor screening process and improve the visitor experience. The new technology will help detect prohibited weapons/items, identify the location of any prohibited weapons/items, and decrease the transmission of germs/disease by reducing the acts of physically touching items during the screening process and making it possible to increase social distancing. In summary, the security technology will improve the quality of the screening process, increase the safety of visitors and staff, and expedite the entry process. The new screening system has already been successfully deployed at several popular venues across the country.

The Office of Protection Services (OPS) also requests funding to support a medical professional position who will help the Smithsonian meet industry-minimum medical standards. This will ensure that new and current employees are physically fit to perform the vast range of security/law-enforcement-related functions. Security/law-enforcement agencies have established that medical standards are needed to ensure that the workforce is in a state of readiness and to provide a safe and secure environment. The increased funding requested will also support the security operations for the Arts and Industries Building during a temporary exhibition to be held through 2022.

Additional information is provided in the Facilities Operations, Security, and Support section of this budget submission.

ENABLE COST-EFFECTIVE AND RESPONSIVE ADMINISTRATION

| <u>Category</u> | FY 2021 Base (\$000s) | FY 2022 Program Increase (\$000s) | FY 2022 FTEs Increase |
|---|-----------------------------|--|-----------------------------|
| COST-EFFECTIVE/RESPONSIVE ADMINISTRATION | | | |
| • Information Technology (IT) | 46,221 | +1,500 | +3 |
| • Management Operations | | | |
| ○ Diversity Support | 1,791 | +200 | +1 |
| ○ Human Resources Support | 6,801 | +300 | +2 |
| Total Increase | | +\$2,000 | +6 |

Information Technology (IT) Security — FY 2022 Increase: (+\$1,500,000, +3 FTEs)

This funding request (+\$1,500,000) supports the upgrade and replacement of aging IT security infrastructure at the Smithsonian. The request includes funds for security monitoring, response, and assessment; maintenance of seven sites and the replacement of the Internet firewall; recurring funds for the maintenance or replacement of outdated and inadequate intrusion-detection systems; and funds to maintain and replace outdated Web proxy servers.

The requested increase will enable the Institution to address several serious gaps in our security architecture. Specifically, these funds will allow us to: (1) improve our ability to detect and respond to increasingly sophisticated threats; (2) enhance our ability to prevent and defend against malware and other host- and network-based attacks; (3) provide better visibility into the devices, software, and traffic in our environment; (4) implement an identity and access management (IAM) system to automate user-account management and protections; (5) detect and prevent the inappropriate disclosure or distribution of personal and other sensitive information; (6) enhance security training and awareness of Smithsonian personnel; (7) improve monitoring capabilities; (8) perform additional monitoring to ensure compliance with internal policies and procedures; (9) address Inspector General audit recommendations on IT Security; and (10) improve compliance with payment card industry data security standards.

These security devices perform a vital role to detect malicious activity, monitor and protect sensitive Smithsonian data, protect personnel from malicious websites and content, and control access between the Smithsonian's many security zones in both public and staff-only areas. The failure to replace and upgrade the firewall and intrusion-detection and Web proxy hardware will put Smithsonian servers and workstations at unacceptable risk of attacks from malware, and expose the Institution's valuable computer systems to increased vulnerabilities in an ever-changing threat environment.

Additional information is provided in the Office of the Chief Information Officer's unit section of this budget submission.

Management Operations — FY 2022 Increase: (+\$500,000, +3 FTEs)

- **Diversity Support (+\$200,000, +1 FTE)** — Diversity is one of the expressed values in the Smithsonian Strategic Plan. The ongoing success of the Supplier Diversity Program has Institution units, small businesses, and congressional representatives seeking more information and assistance on how the Smithsonian can continue to improve its supplier diversity status. Veteran-owned and other firms in Historically Underutilized Business (HUB)-Zones have poor representation in our base of suppliers and interest in how the Smithsonian is doing in these business communities remains a constant refrain for these small businesses and Congress. These requirements and concerns can only be addressed by increased staff and accompanying resources. In support of this funding request, the Institution's Office of Equal Employment and Supplier Diversity issued its revised [Smithsonian Directive \(SD\) 216, Supplier Diversity Program](#), to better coordinate contracting and procurement operations between our central and branch units and small businesses.
- **Human Resources Support (+\$300,000, +2 FTEs)** — This request supports Human Resources (HR) staff required to facilitate internal and external strategic change; adequately address hiring timeliness goals; provide high-quality, timely advice and services to Smithsonian units; minimize risks; and improve the response time for answering requests for guidance or information. Resources are also needed to adequately address safety, security, and telework issues resulting from the COVID-19 pandemic. The request also provides for centralized training in the areas of supervision, compliance with the Fair Labor Standards Act (FLSA), human resources, and Smithsonian leadership, and supports course development and delivery for employees.

Additional information is provided in the Administration's unit section of this budget submission.

NO-YEAR FUNDING — The following table provides the FYs 2021 and 2022 Salaries and Expenses requests for No-Year Funding.

No-Year Funding Request
(Dollars in Thousands)

| Salaries and Expenses | FY 2021 Enacted | FY 2022 Request | Change from FY 2021 |
|---|------------------------|------------------------|----------------------------|
| No-Year Funds | | | |
| National Museum of the American Latino | 0 | 3,324 | +3,324 |
| Smithsonian American Women’s History Museum | 0 | 2,500 | +2,500 |
| National Museum of Natural History | | | |
| Exhibition Reinstallation | 954 | 954 | 0 |
| Repatriation Program | 1,435 | 1,467 | +32 |
| Major Scientific Instrumentation | 4,118 | 4,118 | 0 |
| Collections Acquisition | 435 | 435 | 0 |
| Total, No-Year Funds | \$6,942 | \$12,798 | +\$5,856 |

OBJECT-CLASS FUNDING — 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 2021 Enacted | FY 2022 Request | Change from FY 2021 |
|--|------------------------|------------------------|----------------------------|
| Salaries and Benefits | 494 | 526 | +32 |
| Travel and Transportation | 3 | 3 | 0 |
| Rent, Utilities, Communications, and Other | 98 | 103 | +5 |
| Other Services | 178 | 188 | +10 |
| Supplies and Materials | 20 | 21 | +1 |
| Equipment | 21 | 27 | +6 |
| Land and Structures | 4 | 4 | +0 |
| Total, Object-Class Funds | \$818 | \$872 | +\$54 |

FEDERAL RESOURCE SUMMARY BY PERFORMANCE OBJECTIVE AND PROGRAM CATEGORY

The Smithsonian has developed its FY 2022 budget request by reviewing and prioritizing all resources and identified increases or decreases, in relation to the Institution's performance plan and overall Strategic Plan.

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 Smithsonian to clearly demonstrate the relationship between dollars budgeted and results achieved.

The table below summarizes the request by program category and details the pay increases and program changes. The table on the following page summarizes the Institution's FY 2021 and FY 2022 estimates and the proposed changes by strategic goal, performance objective, and program category.

FY 2022 Congressional Budget Federal Resources by Program Category (\$s in 000s)

| Federal Resources by Performance Objective and Program Category | | | | | | | | | | | | | |
|---|--------------|----------------|--------------|----------------|------------|---------------|---------------|------------------------------|-----------------|-------------------|---------------|--------------|---------------|
| Salaries and Expenses (\$'s in thousands) | | | | | | | | | | | | | |
| Performance Objective and Program Category | FY 2021 | | FY 2022 | | Change | | Pay \$000s | Rent/ Utilities \$000s | Other \$000s | Program Change | | Total Change | |
| | FTEs | \$000s | FTEs | \$000s | FTEs | \$000s | | | | FTEs | \$000s | FTEs | \$000s |
| Enhanced Interdisciplinary Research | 558 | 98,176 | 573 | 109,502 | 15 | 11,326 | 2,026 | 0 | 300 | 15 | 9,000 | 15 | 11,326 |
| Expand Digital Technologies | 256 | 40,285 | 277 | 48,672 | 21 | 8,387 | 1,237 | 0 | 0 | 21 | 7,150 | 21 | 8,387 |
| <i>Digitization and Web Support</i> | 103 | 17,174 | 119 | 24,269 | 16 | 7,095 | 495 | | | 16 | 6,600 | 16 | 7,095 |
| <i>Education</i> | 153 | 23,111 | 158 | 24,403 | 5 | 1,292 | 742 | | | 5 | 550 | 5 | 1,292 |
| Understand and Impact 21st Century Audiences | 574 | 96,495 | 588 | 100,565 | 14 | 4,070 | 2,385 | 0 | 0 | 14 | 1,685 | 14 | 4,070 |
| <i>Public Programs</i> | 134 | 30,737 | 144 | 32,378 | 10 | 1,641 | 786 | | | 10 | 855 | 10 | 1,641 |
| <i>Exhibitions</i> | 440 | 65,758 | 444 | 68,187 | 4 | 2,429 | 1,599 | | | 4 | 830 | 4 | 2,429 |
| Preserve Our Natural and Cultural Heritage | 2,301 | 444,253 | 2,340 | 464,695 | 39 | 20,442 | 7,541 | 1,836 | 0 | 39 | 11,065 | 39 | 20,442 |
| <i>Collections</i> | 452 | 75,630 | 472 | 80,521 | 20 | 4,891 | 1,826 | | | 20 | 3,065 | 20 | 4,891 |
| <i>Facilities Operations</i> | 657 | 165,254 | 667 | 173,107 | 10 | 7,853 | 2,017 | 1,836 | | 10 | 4,000 | 10 | 7,853 |
| <i>Maintenance</i> | 492 | 115,261 | 492 | 116,917 | 0 | 1,656 | 1,656 | | | 0 | 0 | 0 | 1,656 |
| <i>Security</i> | 700 | 88,108 | 709 | 94,150 | 9 | 6,042 | 2,042 | | | 9 | 4,000 | 9 | 6,042 |
| Enable Responsive Administration | 589 | 138,983 | 607 | 148,566 | 18 | 9,583 | 2,332 | 0 | 2,951 | 18 | 4,300 | 18 | 9,583 |
| <i>New Museums (25 FTEs and \$4M) included</i> | | | | | | | | | | | | | |
| Total | 4,278 | 818,192 | 4,385 | 872,000 | 107 | 53,808 | 15,520 | 1,836 | 3,251 | 107 | 33,200 | 107 | 53,808 |

| Federal Resources by Performance Objective and Program Category | | | | | | |
|--|--------------|----------------|--------------|----------------|------------|---------------|
| Salaries and Expenses (\$'s in thousands) | | | | | | |
| Performance Objective and Program Category | FY 2021 | | FY 2022 | | Change | |
| | FTEs | \$000 | FTEs | \$000 | FTEs | \$000 |
| Enhanced Interdisciplinary Research | | | | | | |
| Research | | | | | | |
| Engage in impactful scientific research and discovery | 425 | 73,845 | 440 | 84,631 | 15 | 10,786 |
| Engage in vital arts and humanities research | 133 | 24,331 | 133 | 24,871 | 0 | 540 |
| Expand Digital Technologies | | | | | | |
| Digitization and Web Support | | | | | | |
| Provide improved digitization and Web support | 103 | 17,174 | 119 | 24,269 | 16 | 7,095 |
| Education | | | | | | |
| Provide education support to engage and inspire diverse audiences | 153 | 23,111 | 158 | 24,403 | 5 | 1,292 |
| Understand and Impact 21st Century Audiences | | | | | | |
| Public Programs | | | | | | |
| Provide relevant reference services and disseminate information to the public | 134 | 30,737 | 144 | 32,378 | 10 | 1,641 |
| Exhibitions | | | | | | |
| Offer compelling, first-class exhibitions | 440 | 65,758 | 444 | 68,187 | 4 | 2,429 |
| Preserve Our Natural and Cultural Heritage | | | | | | |
| Collections | | | | | | |
| Improve the stewardship of the national collections | 452 | 75,630 | 472 | 80,521 | 20 | 4,891 |
| Facilities and Safety | | | | | | |
| Improve Smithsonian facilities operations and provide a safe and healthy environment | 657 | 165,254 | 667 | 173,107 | 10 | 7,853 |
| Deliver an aggressive and professional maintenance program | 492 | 115,261 | 492 | 116,917 | 0 | 1,656 |
| Security | | | | | | |
| Provide world-class protection for Smithsonian facilities, collections, staff, visitors and volunteers | 700 | 88,108 | 709 | 94,150 | 9 | 6,042 |
| Enable Cost-Effective and Responsive Administration | | | | | | |
| Management Operations | | | | | | |
| Enable efficient and responsive administrative infrastructure | 486 | 92,762 | 501 | 97,507 | 15 | 4,745 |
| Information Technology | | | | | | |
| Improve the Institution's information technology systems and infrastructure | 103 | 46,221 | 106 | 51,059 | 3 | 4,838 |
| Total | 4,278 | 818,192 | 4,385 | 872,000 | 107 | 53,808 |

ENHANCED 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 2020 ENACTED | 0 | 3,119 | 0 | 0 | 0 | 0 | 0 | 0 |
| FY 2021 ENACTED | 0 | 3,119 | 0 | 0 | 0 | 0 | 0 | 0 |
| FY 2022 REQUEST | 15 | 7,119 | 0 | 0 | 0 | 0 | 0 | 0 |

Federal Resource Summary by Performance Objective and Program Category

| Performance Objective/ Program Category | FY 2021 | | FY 2022 | | Change | |
|---|----------|--------------|-----------|--------------|-----------|--------------|
| | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| Enhanced Interdisciplinary Research | | | | | | |
| <i>Research</i> | | | | | | |
| Engage in impactful scientific research and discovery | 0 | 1,727 | 15 | 5,727 | 15 | 4,000 |
| Engage in vital arts and humanities research | 0 | 792 | 0 | 792 | 0 | 0 |
| | | | | | | |
| Understand and Impact 21st Century Audiences | | | | | | |
| <i>Public Programs</i> | | | | | | |
| Provide relevant reference services and disseminate information to the public | 0 | 600 | 0 | 600 | 0 | 0 |
| | | | | | | |
| Total | 0 | 3,119 | 15 | 7,119 | 15 | 4,000 |

BACKGROUND AND CONTEXT

The Smithsonian's enhanced research initiatives provide an overarching framework for the Institution's programs and operations. Meeting these challenges will enable the Smithsonian to integrate the work of many disciplines within our many museums and cultural and research centers, as well as broaden external collaborations. The programs are grounded in research and emphasize complementary education and outreach; together, they influence how the Smithsonian directs its resources and focuses its energies. The Smithsonian has developed and implemented initiatives to advance cross-disciplinary, integrated scholarly efforts across the Institution. Using a competitive internal process, the Smithsonian distributes externally raised funds for the purpose of advancing research, broadening access, revitalizing education, and encouraging new ways of thinking that involve emerging technology. The funding may also help to leverage additional resources, both internal and external, thereby amplifying the scope and breadth of cross-cutting research initiatives. Funds are distributed through existing Smithsonian units with subject-matter expertise to make the most cost-effective use of the actual expenditures in the areas being supported.

Although there are no specific units primarily associated with these initiatives, all Smithsonian museums, research centers, and offices will look for opportunities to integrate the Institution’s research goals and objectives into their activities and programs.

The FY 2022 budget request includes an increase of \$4,000,000 to support specific biodiversity research. Below is a summary of the FY 2022 Enhanced Interdisciplinary Research budget.

| Programs | FY 2021 Enacted \$000s | FY 2022 Request \$000s |
|-----------------------|-------------------------------|-------------------------------|
| Universe | 184 | 184 |
| Biodiversity Research | 1,543 | 5,543 |
| World Cultures | 792 | 792 |
| American Experience | 600 | 600 |
| Total | \$3,119 | \$7,119 |

EXPLANATION OF CHANGE

The Institution’s FY 2022 budget submission requests an additional **\$4,000,000** to increase rigor, focus, and relevance of research in important societal issues. The budget also continues support for the Smithsonian’s efforts to modernize and manage our research infrastructure and applies to our scientific collections, biological field stations, as well as interagency partnerships, such as those with the National Ecological Observatory Network (NEON) and its relationship with our Forest and Marine Global Earth Observatories.

While some research institutions work in fields similar to those of the Smithsonian, we fulfill our mission in a way that complements the work of our federal agency and university partners. The federal appropriation we receive enables us to approach research from a long-term perspective. We can establish observatories that allow data collection for many decades, enabling studies to keep acquiring collections and data for use by scientists and citizens nationwide and throughout the world. The Smithsonian is also uniquely well-positioned to communicate these research results to the public.

Our scientific research enhances but does not duplicate that of our partner federal agencies such as the U.S. Departments of Agriculture, Interior, Commerce, and Defense, all of which have staff in residence at our facilities; or our contracted partners such as the United States Navy, United States Air Force, Federal Aviation Administration (FAA), Environmental Protection Agency (EPA), and the Bureau of Ocean Energy Management (BOEM), for whom we develop the national collections and share our expertise to boost the quality and impact of federally funded science for natural resource management. Our exceptional scientific staff collaborates regularly with research universities in the United

States and beyond, as faculty benefit from participating in our long-term research studies and we recognize the expertise these scientists bring to our programs. This mutually beneficial arrangement adds value to the research conducted by both public- and private-sector participants and results in a more efficient, symbiotic, coordination of our respective resources.

The programs described below will continue to advance science, technology, and innovation within the Institution to achieve high-return benefits from the investment in research. The Smithsonian will keep implementing its Strategic Plan, with the following requested increases for Enhanced Interdisciplinary Research:

| <u>Category</u> | FY 2022 Program Increase (\$000s) | FY 2022 FTEs Increase |
|--|-----------------------------------|-----------------------|
| ENHANCED INTERDISCIPLINARY RESEARCH | | |
| ▪ Biodiversity Research | +4,000 | +15 |
| ○ Global Earth Observatories | +3,000 | +13 |
| ○ Climate Change Monitoring | +1,000 | +2 |
| Total Increases | +\$4,000 | +15 |

Biodiversity Research — FY 2022 Increase: (+\$4,000,000, +15 FTEs)

The Smithsonian has a special role nationally and globally in not only carrying out biodiversity research, but also training the next generation of scientists and providing infrastructure and information which enable research by others. Everything the Smithsonian does in biology — from acquiring collections and conducting research to advancing education and outreach — is potentially useful to the *bioeconomy*, which represents the infrastructure, innovation, products, technology, and data derived from biologically-related processes. The biological sciences also drive economic growth, promote public health, and increase social benefits.

Much of the Smithsonian’s research as part of the U.S. Global Change Research Program (USGCRP) is directly relevant to *biosecurity*, for example, keeping diseases and pests away from animals, people, and property; and *biosurveillance* monitoring that detects and prevents the spread of pests and diseases and contributes to long-term public-health security goals.

The Smithsonian is well known for our research products that help sustain biological diversity, assess the effects of climate change and resilience strategies, and understand and manage invasive pests and infectious diseases. Our assets include one of the world’s largest groups of scientists working on the biology of whole plants and animals (although we do not compete broadly in cellular biology), a network of Earth Observation platforms and field stations, and huge collections of specimens and libraries of resources.

In many ways, the species that share our planet are still poorly understood in terms of where they live and what they do, how their dynamics vary with climate change, and why it matters to us. For example, the capacity of the Federal Government to identify potentially invasive pest species and diseases has major gaps, which hamper our ability to respond to those threats. Communities of species in temperate and tropical forests and coral reefs respond to climate change in varied and presently unpredictable ways, once again limiting our options for planning and response.

- **Global Earth Observatories, ForestGEO and MarineGEO — FY 2022 Increase: (+\$3,000,000, +13 FTEs)**

The mission of our Global Earth Observatory (GEO) networks is to speed understanding of the diversity and functioning of forest and marine ecosystems to better predict their futures and sustain their critical roles in supporting life on Earth. The world's forest and marine ecosystems support all aspects of life on Earth: everything from providing food, medicines, and building materials to regulating climatic and carbon cycles. They have never been under more pressure through the dual threats of climate and land-use changes. Research-based global solutions are required to mitigate these risks and increase ecosystem resilience. Earth observations using remote sensing have been prioritized by many governments, including the United States; however, we must complement these remote data with a vastly improved understanding of the processes which regulate these ecosystems on the ground. The Smithsonian GEOs have developed globally distributed *in-situ* monitoring and experimental observatories on land (ForestGEO) and in the sea (MarineGEO) that, coupled with new global scientific capacity, will transform our understanding of these ecosystems and provide policy makers with options for their future sustainable management.

The Smithsonian provides the essential foundation for these networks, based on: 1) long-term global leadership and workforce development in biodiversity science; 2) multi-disciplinary science spanning Smithsonian units which include the Tropical Research Institute (STRI), Environmental Research Center (SERC), Conservation Biology Institute (SCBI), and the National Museum of Natural History (NMNH); 3) inter-agency collaborations, including the National Science Foundation (NSF), Aeronautics and Space Administration (NASA), Oceanic and Atmospheric Administration (NOAA), Department of Energy (DOE), NEON, Long-Term Ecological Research (LTER), and BOEM; 4) scientific and educational partnerships with diverse U.S. universities; 5) leadership in open science and information and knowledge dissemination; 6) programs for strengthening scientific capacity nationally and internationally; and 7) enhancing international partnerships built through diplomacy based on science.

For FY 2022, the Institution requests funding (+\$1,500,000 and +5 FTEs) for the Forest Global Earth Observatories, or ForestGEO. ForestGEO provides long-term scientific data about biodiversity and ecological, hydrological, soil, and meteorological processes associated with climate change at local, regional, and

global scales. This research platform enables Smithsonian scientists and their university and federal agency partners to better understand the storage and movement of carbon and water in tropical and temperate forests, as well as the impacts of climate change on the relationships of forests with wildlife, the atmosphere, and sources of fresh water. We coordinate with the NSF's LTER and NEON programs through multiple shared sites.

While ForestGEO has successfully established 71 forest research sites in 27 countries, this is not sufficient to represent the biotic and abiotic conditions under which the world's forests grow, and consequently is insufficient to model forest functioning on a global scale. Furthermore, critical ecological processes controlling forest function, such as soil microbial activity, are not included in the ForestGEO protocols.

The requested resources will: (i) expand ForestGEO to better represent all major forest types globally, transforming the network into a permanent global observation system for the world's forests; (ii) broaden the scientific disciplines addressing forest response to climate change through strategic appointments in genomics, microbial ecology, and ecosystem modeling; (iii) ensure the long-term sustainability of ForestGEO science by strengthening the coordination and management of ForestGEO sites and future data collection; and (iv) increase the role of ForestGEO in science capacity development by offering Fellowships and training designed to recruit the best minds needed to solve the global forest crisis. Together, these developments will provide an extraordinary opportunity to revolutionize our understanding of one of the Earth's most biologically complex and important ecosystems.

In addition, the Institution requests funds (+\$1,500,000 and +8 FTEs) for the Marine Global Earth Observatories, or MarineGEO. MarineGEO is dedicated to understanding changes in the structure and function of coastal marine ecosystems, monitoring, forecasting, and enhancing resilience to climate change. MarineGEO focuses on collecting, analyzing, and making publicly available data "that improves understanding of changes in the ocean system." The request includes funding for the initial operational expenses of a field station in Coibita in Panama, which will enable Smithsonian scientists to make important comparisons between the Atlantic and Pacific Ocean coastal ecosystems. These oceans differ in physical and biological characteristics, making them excellent natural experiments to understand the effects of changing environments on marine organisms. These funds will efficiently build on existing Smithsonian federal and trust investments and collaboration with NOAA and the National Science and Technology Council (NSTC) Subcommittee on Ocean Science and Technology (SOST), and leverage in-kind support from a range of academic partners to allow expansion of the network beyond the initial sites. This comprehensive approach will provide a new, fundamental understanding of our oceans, their sustainability, and their importance to human life and society, as well as different alternatives policy makers may consider to better manage our impact on these vital ecosystems.

For both GEOs, the budget request funds executive directors, research scientists, and the necessary staff to build the network and provide a stable core for research, training, and information management which will focus on improvements in science, monitoring, and cooperative research. For MarineGEO, special attention will be given to research on how to make fisheries and protected resources more resilient to the effects of climate change.

- **Climate Change Coordination and Monitoring — FY 2022 Increase: (+\$1,000,000, +2 FTEs)**

The funding requested will support internal research and communications in climate change and related fields such as One Health, and enable coordination with the USGCRP and GEOs to more efficiently coordinate with other national and international efforts. The requested increase will fund a senior program officer and program assistant, in the office of the Under Secretary for Science and Research, to manage these inter-related activities.

In addition, the new funding will provide research and monitoring infrastructure and support personnel across Smithsonian facilities and programs, allowing the Institution to be more nimble in meeting evolving needs and priorities. Uses include: bolstering existing monitoring networks; implementing new field sites, especially related to ForestGEO and MarineGEO; enhancing existing field sites (such as Barro Colorado Island at STRI, Rhode River, Indian River, and Mpala); long-term experiments (such as BiodiversiTree and Agua Salud); establishing training programs; and support for the human, physical, and technological infrastructure that will improve science, monitoring, and cooperative research.

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 2020 ENACTED | 151 | 20,110 | 79 | 7,819 | 32 | 10,068 | 3 | 640 |
| FY 2021 ENACTED | 151 | 20,945 | 104 | 38,732 | 40 | 52,909 | 1 | 225 |
| FY 2022 REQUEST | 154 | 21,960 | 104 | 38,732 | 40 | 46,779 | 1 | 351 |

Federal Resource Summary by Performance Objective and Program Category

| Performance Objective/ Program Category | FY 2021 | | FY 2022 | | Change | |
|--|------------|---------------|------------|---------------|----------|--------------|
| | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| Enhanced Interdisciplinary Research | | | | | | |
| Research | | | | | | |
| Engage in impactful scientific research and discovery | 9 | 1,540 | 9 | 1,585 | 0 | 45 |
| Engage in vital arts and humanities research | 24 | 3,884 | 24 | 3,997 | 0 | 113 |
| | | | | | | |
| Expand Digital Technologies | | | | | | |
| Digitization and Web Support | | | | | | |
| Provide improved digitization and Web support | 2 | 376 | 4 | 657 | 2 | 281 |
| | | | | | | |
| Understand and Impact 21st Century Audiences | | | | | | |
| Public Programs | | | | | | |
| Provide relevant reference services and disseminate information to the public | 15 | 1,784 | 15 | 1,836 | 0 | 52 |
| Exhibitions | | | | | | |
| Offer compelling, first-class exhibitions | 28 | 3,308 | 28 | 3,404 | 0 | 96 |
| Education | | | | | | |
| Engage and inspire diverse audiences | 7 | 1,031 | 8 | 1,198 | 1 | 167 |
| | | | | | | |
| Preserve Our Natural and Cultural Heritage | | | | | | |
| Collections | | | | | | |
| Improve the stewardship of the national collections | 45 | 4,755 | 45 | 4,893 | 0 | 138 |
| Facilities and Safety | | | | | | |
| Improve Smithsonian facilities operations and provide a safe and healthy environment | 2 | 326 | 2 | 335 | 0 | 9 |
| | | | | | | |
| Enable Cost-Effective and Responsive Administration | | | | | | |
| Management Operations | | | | | | |
| Enable efficient and responsive administrative infrastructure | 13 | 3,243 | 13 | 3,337 | 0 | 94 |
| Information Technology | | | | | | |
| Improve the Institution's information technology systems and infrastructure | 6 | 698 | 6 | 718 | 0 | 20 |
| | | | | | | |
| Total | 151 | 20,945 | 154 | 21,960 | 3 | 1,015 |

BACKGROUND AND CONTEXT

The Smithsonian's National Air and Space Museum (NASM) collects, preserves, studies, and exhibits artifacts and works of art related to the history, culture, and science of aviation and spaceflight and the study of the universe. Its cutting-edge research and outreach activities serve multiple audiences within and increasingly beyond its walls. The Museum commemorates the past, looks at current and future developments in aerospace, and educates and inspires the next generation of innovators and explorers to study and apply science, technology, engineering, art, and math (STEAM) to create the future.

NASM is administered as one Museum with multiple locations: the National Mall Building (NMB); the Steven F. Udvar-Hazy Center (UHC) in Chantilly, Virginia; and the Paul E. Garber Facility (Garber) in Suitland, Maryland, a non-public facility. Construction of the first module of the Dulles Collections Center, adjacent to the UHC, was completed in January of 2019 and the new facility is providing state-of-the-art storage for NASM collections.

NASM provides access to the nation's and the world's aviation and spaceflight history to millions of on-site guests from all parts of the globe each year, making it among the most visited museums in the world. In March of 2020, the Museum was forced to close both of its public facilities (NMB and UHC) due to the COVID-19 pandemic. A shift to providing digital resources through the Air and Space Anywhere and the K-12 Learning Resources portals brought more than 10 million virtual guests to its website, broadcast/webcast educational programming, and social media. From July 24 to November 23, 2020, the UHC was able to reopen with health protocols in place and safely welcomed more than 100,000 visitors.

In FY 2022, NASM is continuing to collect and preserve key national and international aviation and space artifacts and archival material, and to perform original research and provide reference support in aviation and space history and planetary science to further develop its broad array of exhibitions, programs, publications, and education and outreach activities. Within weeks of shutdowns related to the COVID-19 pandemic, NASM shifted its programming focus to digital/online content that offers educational resources and engaging content students, teachers, and caregivers to study and work from home. To accomplish its public service mandate and reach diverse audiences, the Museum draws upon a mixture of in-house and contracted resources as well as a large corps of volunteers and docents. As NASM pursued these projects, the Museum has continued its complete renovation of the NMB. We are transforming all exhibits and public spaces of America's favorite Museum to make NASM more than a destination to visit. In Museum exhibits, we will immerse visitors in the stories of the people of all backgrounds who broke barriers, defied what was thought possible, and changed the world to inspire a new generation to accomplish the previously unimaginable. Beyond the walls, digital offerings will allow anyone, anywhere to take a path that leads through the Museum's collections and stories, provides resources to students, teachers, and researchers, and integrates with the in-Museum experience to amplify its impact. As the late Apollo 11 astronaut

and first director of NASM, Michael Collins, once said, “It’s human nature to stretch, to go, to see, to understand. Exploration is not a choice, really; it’s an imperative.”

The primary focus for the Museum in FY 2022 and the coming years is on the ongoing revitalization of the NMB and the transformation of all NMB exhibits. Despite the COVID-19 pandemic that closed our facilities to the public and required most of our workforce to telework, construction at the NMB continued through FYs 2020 and 2021, although at a slower pace mainly because of the pandemic. Planning for artifact movement as part of the revitalization and transformation resulted in a detailed plan to relocate and conserve/preserve more than 4,000 artifacts. This involves moving artifacts to the Mary Baker Engen Restoration Hangar and Emil Buehler Conservation Lab at the UHC for treatment. The gallery spaces on the west end of NMB have been prepared and will include the installation of large artifacts; lighting; exhibit walls; cases; and a variety of media such as large projection screens, immersive experiences, and computer interactives. Simultaneously, artifacts are being removed from the other half of the building in preparation for the transformation of those exhibitions for which designs are being finalized and initial components built off site.

The FY 2022 budget request includes an increase of \$1,015,000 that provides \$607,000 for necessary pay and other related salary costs for existing staff funded under this line item, and a programmatic increase of 3 FTEs and \$408,000 for digitization and visitor engagement.

MEANS AND STRATEGY

Public Engagement — NASM sparks curiosity and empowers learners to imagine the possibilities of our future. We continue our efforts to reach diverse audiences in meaningful ways through exhibitions, educational programming, research reference support, publications, and electronic outreach. In FY 2022, we will use our continuing transformation to redefine and strengthen NASM’s role as a learning facilitator and convener through the exploration of new initiatives that place the audience at the center of the experience. Inspired by the emergent and promising practices the Museum developed throughout the duration of the COVID-19 pandemic, senior leadership has launched an education engagement cycle that embraces both digital and onsite learning, ultimately increasing NASM’s ability to engage a national audience. This strategy will prepare the Museum to be a key stakeholder in helping build a nation of innovators and explorers via immersive experiences, inspired by real-world issues, rooted in national learning standards, and fostering critical thinking skills. For the next 20 years, NASM will develop these STEAM skills to ensure a strong, forward-thinking and diverse workforce that not only further advances America’s legacy as home to the world’s greatest innovators, but also recruits an equally diverse workforce that reflects of our population.

As both a national and a community museum, in FY 2022 NASM will continue to add programs and products to our arc of engagement for learners, beginning at pre-kindergarten and extending through to adulthood. We will continue

to work with educators to build their capacity and comfort in teaching science and science-related concepts through high-quality professional development opportunities and the Teacher Innovation Institute (TII). We will expand upon our camp offerings and recent student-focused challenges to develop a slate of moonshot-inspired design and engineering challenges rooted in the potential to solve real-world problems. The Museum will also build upon the success of our virtual and onsite student-focused programs and resources to inspire the next generation of innovators and explorers. Through the recently developed digital components of *Soar Together @ Air and Space Family Days*, NASM invites families nation-wide to dive into our content and create lifelong relationships, give learners the opportunity to see themselves in the aerospace field, and bring relevance to the generations who did not experience many key aviation and space milestones in their lifetimes.

In FYs 2021 and 2022, NASM staff and volunteers will continue to provide a wide variety of Museum programs. The NASM education department provides daily activities - such as audio tours, hands-on science activities, science demonstrations, virtual planetarium shows, live virtual chats with experts, and resources for learners with autism and sensory perception disorders which reach hundreds of thousands of guests. The Museum also facilitates large, multi-faceted, day-long events to reach tens of thousands of diverse visitors in one day. In FY 2020, NASM virtually hosted its third TII – traditionally, a residential teacher professional development opportunity that is completely free to teachers. The FY 2020 event was made up of a series of online sessions that leveraged platforms and tools teachers could use in their classroom practice with students. Additionally, the FY 2020 program included peer-to-peer learning and introduced a mentoring component for new teachers.

NASM continues to evolve its programming to embrace digital engagement nationwide while also reflecting the physical transformation of the Museum. On-site events span from evening lectures to innovative collaborations with external partners.

The Museum continues to advance the two strategic goals of Preserving Our Natural and Cultural Heritage and Understanding and Impacting 21st Century Audiences by making collections, archival documents, and images available via publicly accessible websites. The NASM collections and archives databases contain extensive information on the history and provenance of each artifact and are an effective way to offer in-depth information to the public through electronic or digitized assets. NASM's electronic resources also encourage more researchers to request access to the Museum's archives and collections, and to make in-person visits to follow-up on initial online research efforts. The NASM Archives set up workflows for attaching digital assets to the Smithsonian Online Virtual Archives (SOVA). More than 379,411 digital assets were attached to SOVA in FY 2020, resulting in a total of 629,359 digital assets currently available to the public.

In FY 2022, NASM will continue to build on the success of its digitization program by making high-resolution images and information about our collections

available to the public online. As part of the Smithsonian's Open Access Initiative, the Museum will expand the number of collections and digital assets freely available to the public for any use. NASM open access items were viewed more than four-million times and downloaded several hundred thousand times in FY 2020. NASM will continue to conduct audience research and evaluate the impact of our online collections content with online visitors, making iterative enhancements to improve the user experience. The Museum will also continue to share behind-the-scenes views of our transformation process, panoramic looks inside famous aircraft and spacecraft, and pursue partnerships and digital storytelling efforts to engage a broader and more diverse audience.

Exhibitions — In FY 2022, the Museum will continue to ensure stewardship of and access to its peerless collection of aerospace artifacts and archival materials, and to produce expert scholarship and research, while also guiding the fabrication of new exhibitions at the NMB. These exhibits will offer a fresh interpretation of the stories that the artifacts represent. During FY 2022, NASM will be finishing up installation of eight new exhibits in the west end of the building which include the *Wright Brothers; America by Air; Early Flight; We All Fly; A Nation of Speed; Exploring the Planets; Destination Moon; and One World Connected*. Additionally, the Museum will feature a rotating exhibit, *the Allan and Shelley Holt Innovations Gallery*, with the first exhibit being about *Climate Change*. On the east end of the building, NASM is finishing up the designs and starting fabrication for 10 new exhibitions including the space exhibitions *At Home in Space; Explore the Universe; Living in the Space Age; and The Future of Spaceflight*. Also, the interactive science and the military aviation galleries will present *World War I, World War II, and Modern Military Aviation*, and the *Art Gallery*. The *Barron Hilton Pioneers of Flight Gallery* will feature the *Spirit of St. Louis* airplane.

Collections — NASM plans to enhance collaboration with private collectors and other Smithsonian museums by requesting loans of key artifacts to share with the public in new exhibits on the inspiring stories of America's role in pioneering aeronautics and space exploration. While NASM has a substantial number of artifacts currently on loan to other museums, it is expected that additional outgoing loans will need to be limited during the revitalization of the NMB, due to the sheer volume of work that this effort represents. NASM has refined tools and processes to coordinate loan transactions in support of transformation, which will also make the Museum's loan program more effective in the future. On the receiving end, in FY 2020, NASM got a major acquisition by adding a U.S. Navy Blue Angels F-18C Hornet to its collection.

Artifact logistics is one of the biggest challenges throughout the revitalization of the NMB and transformation of NASM exhibits. The Museum has more than 4,000 artifacts affected during these moves. The reimagined NMB exhibits will require artifact relocation to and from multiple NASM locations (that is, Garber, the UHC, and the NMB), and will also include returning loaned objects, new loans from other institutions, and managing objects of all sizes. Approximately 3,300 objects will be re-installed into the Museum as part of the transformation, including many artifacts not currently on display at the NMB. Of the artifacts

presently in the NMB, about 1,300 are not coming back into the building. Some will go into long-term storage in the new Dulles Collections Center (DCC) Storage Module or will be exhibited at the UHC.

Most of the artifacts will require some type of preservation or conservation efforts, and the collections staff has estimated how long the treatment times will be for each artifact. Total treatment of all the artifacts is estimated to take approximately 15,000 workdays, including conservation and preservation. This work is progressing with hundreds of artifacts already moved, treated, or in treatment. For example, the Wright Military Flyer was relocated from the NMB to the UHC and is undergoing cleaning and conservation.

In addition, NASM will continue to relocate artifacts from the outdated, inadequate storage facilities at Garber to the UHC, including documentation, digital imaging, and re-housing for each artifact, as well as conserve those collections as necessary.

Facilities — The Smithsonian is fully utilizing the first state-of-the-art storage module at the DCC. This building is serving as swing space for storing artifacts from the NMB as the Museum undergoes renovations. NASM filled the available storage for medium-size artifacts at the UHC in FY 2020. After the NMB revitalization is completed, this storage module will support the continued move of artifacts from Garber until more such buildings are available to store those objects.

In late 2021 and into 2022, staff members will relocate into renovated spaces in the west half of the NMB.

Scientific Research — NASM's Center for Earth and Planetary Studies (CEPS) will help achieve the strategic goal of Enhanced Interdisciplinary Research by conducting original research related to planetary exploration, with an emphasis on the evolution of solid surfaces throughout our solar system. CEPS also curates galleries and offers public programs in the planetary sciences. NASM scientists currently work as science team members for the Mars Reconnaissance Orbiter, Mars Express, Curiosity Mars rover, InSight Mars lander, Lunar Reconnaissance Orbiter, JUPiter ICy moons Explorer (JUICE), Europa Clipper, and Dragonfly missions. NASM researchers also analyze the data from these and other missions and convey this exciting information to the public. Original research and publications in scientific literature concentrate on the National Research Council and National Aeronautics and Science Administration (NASA) priorities to determine the origin of solar system bodies and habitable planets, and focus on the past climate of Mars and icy moons with subsurface water in the outer solar system.

Historical Research — NASM continues to lead in the field of aerospace history by producing books, scholarly articles, and other publications, and by making presentations at professional conferences on the history of aerospace technology, aviation, aerodynamics, spaceflight, space sciences, and aviation and space art. The Museum's archives and curatorial staff will continue to evaluate

potential acquisitions for the national collections and respond to public inquiries. NASM will also continue to upgrade exhibitions dealing with aviation and spaceflight, thereby ensuring that current materials are available to the public.

NASM scientists and curators continue to lead the way in impactful and significant engagement and discussion, producing an average of more than 50 publications each year, many award-winning. For example, in FY 2020, the book, *Reinventing the Propeller: Aeronautical Specialty and the Triumph of the Modern Airplane*, by curator Jeremy Kinney, won the American Institute of Aeronautics and Astronautics' Gardner-Lasser Aerospace History Literature Award. Bruce Campbell, senior scientist in the NASM CEPS, received a Smithsonian Secretary's Research Prize for his career-spanning research on the planet Venus. Curators Cathleen Lewis and Margaret Weitekamp contributed chapters to the edited volume, *NASA and the Long Civil Rights Movement*, that received the Eugene M. Emme Astronautical Literature Award from the American Astronautical Society. Other significant publications by NASM scholars in FY 2020 included *Through Astronaut Eyes: Photographing Early Human Spaceflight*, by Jennifer Levasseur; the revised edition of *Only the Wing: Reimar Horten's Epic Quest to Stabilize and Control the All-Wing Aircraft*, by Russ Lee; and *British Imperial Air Power: The Royal Air Forces and the Defense of Australia and New Zealand Between the World Wars*, by Alex Spencer.

In addition, curator Martin Collins was one of the main organizers for "Earth Optimism," an ongoing Smithsonian/NASA initiative to address the pressing problems of the climate crisis and environmental disaster by focusing on solutions and successes. Despite having to adopt an online format due to the global pandemic, the 2020 Earth Optimism Summit attracted more than 19 million people and reached in excess of 55,000 devices in more than 170 countries, with 102 hours of live-streaming content.

Digital, Social Media, and Media Outreach – NASM continues to expand its use of digital and social media outreach to share educational, collections and research information with the public. Across all platforms, followers of the Museum increased by more than 22 percent in FY 2020, to more than a million, with more than 155 million impressions, an increase of more than 50 percent. Website visits increased by 10 percent to 11 million. In FYs 2021 and 2022, the Museum will broaden its use of analytic data so it can better target content for students, teachers, and other key audiences to ensure they have access to NASM's educational resources. These efforts will help the Museum reach visitors to and residents of the region to provide timely information on visitation and programs.

NASM also engages with local, national, and international media to ensure potential visitors are aware of the collections, educational offerings, research findings, and Museum events. In FY 2020, those efforts generated more than 9,000 print and online stories which reached a potential audience of 15.9 billion.

Management — NASM will continue pursuing the strategic goal of Enabling Cost-Effective and Responsive Administration. In FY 2020, the Museum issued a

new strategic plan to ensure NASM can maximize the opportunities provided by the revitalization and transformation of the NMB. As a companion document, the Museum also published a diversity, equity, accessibility and inclusion strategic implementation plan that forms the cornerstone of our initiatives to ensure that the Museum, its galleries, staff and volunteers reflect the population of the United States and the world. To assist with these efforts, NASM has chartered a Diversity, Equity, Accessibility, and Inclusion Employee Resource Group to give Smithsonian staff a voice and enlist them as partners in the Museum's efforts.

EXPLANATION OF CHANGE

The FY 2022 budget request includes an increase of \$1,015,000. The request includes an increase of \$607,000 for necessary pay and other related salary costs for existing staff funded under this line item, and a programmatic increase of 3 FTEs and \$408,000 for digitization and visitor engagement.

Digitization (+\$270,000, +2 FTEs)

This budget request includes an increase of \$270,000 and 2 FTEs to hire audio visual and information technology (IT) staff. Due to building closures required by the COVID-19 pandemic, NASM made a significant pivot to digital programming and needs specialized technical support for those efforts. The audio visual and IT staff will cover these increased requirements and maintain the necessary equipment for digital programming in the Museum.

Visitor Engagement (+\$138,000, +1 FTE)

This budget request also includes an increase of \$138,000 and 1 FTE to hire a data management evaluator. NASM supports adopting a standard process of audience research and evidence-based decision making to assess exhibits, digital offerings, programs, and Museum operations. This evaluator will oversee data collection and management, analysis, and interpretation.

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. A \$250 million campaign to support the transformation of the NMB and the reimagination of the 23 exhibits and presentation spaces is underway with \$145 million already secured. Private-sector support is also used to fund educational initiatives and public programs. Government grants, and contracts support research and other scientific activities. However, the extended closures of the NMB and the UHC due to the COVID-19 pandemic have undercut NASM's revenue-generating activities and this will impact programming and operations at the Museum for years.

SMITHSONIAN ASTROPHYSICAL OBSERVATORY

| | APPLICATION OF OPERATING RESOURCES | | | | | | | | | |
|-----------------|------------------------------------|--------|---------------|--------|--------------------------|-------|--------------|--------|-------------|-------|
| | FEDERAL APPROPRIATIONS | | GENERAL TRUST | | DONOR/SPONSOR DESIGNATED | | GOV'T GRANTS | | INTERAGENCY | |
| | FTE | \$000 | FTE | \$000 | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| FY 2020 ENACTED | 99 | 24,745 | 95 | 22,546 | 13 | 4,515 | 235 | 75,850 | 1 | 220 |
| FY 2021 ENACTED | 99 | 25,226 | 91 | 23,814 | 13 | 5,000 | 235 | 76,249 | 1 | 220 |
| FY 2022 REQUEST | 99 | 25,733 | 91 | 23,814 | 13 | 5,000 | 235 | 76,249 | 1 | 220 |

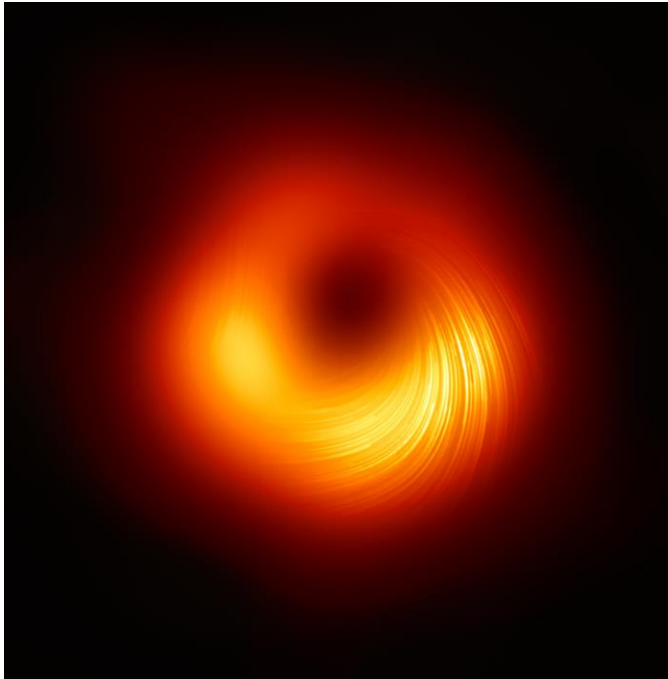
Federal Resource Summary by Performance Objective and Program Category

| Performance Objective/ Program Category | FY 2021 | | FY 2022 | | Change | |
|--|-----------|---------------|-----------|---------------|----------|------------|
| | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| Enhanced Interdisciplinary Research | | | | | | |
| <i>Research</i> | | | | | | |
| Engage in impactful scientific research and discovery | 90 | 20,018 | 90 | 20,479 | 0 | 461 |
| Engage in vital arts and humanities research | | | | | | |
| Understand and Impact 21st Century Audiences | | | | | | |
| <i>Public Programs</i> | | | | | | |
| Provide relevant reference services and disseminate information to the public | 1 | 196 | 1 | 201 | 0 | 5 |
| <i>Facilities and Safety</i> | | | | | | |
| Improve Smithsonian facilities operations and provide a safe and healthy environment | 0 | 312 | 0 | 312 | 0 | 0 |
| Enable Cost-Effective and Responsive Administration | | | | | | |
| <i>Management Operations</i> | | | | | | |
| Enable efficient and responsive administrative infrastructure | 8 | 4,500 | 8 | 4,541 | 0 | 41 |
| <i>Information Technology</i> | | | | | | |
| Improve the Institution's information technology systems and infrastructure | 0 | 200 | 0 | 200 | 0 | 0 |
| TOTAL | 99 | 25,226 | 99 | 25,733 | 0 | 507 |

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 an extraordinary record of achievement in developing and successfully implementing large, complex, and innovative observational and theoretical research projects. Additionally, SAO carries out investigative research performed by individual researchers and small groups. This broad range of activities creates the distinctive, fertile research environment that drives SAO's success and makes the Observatory a recognized leader in the global astrophysical field of science.



No event better illustrates the strength of SAO's science than the extraordinary image of a supermassive black hole caught by the Event Horizon Telescope (EHT) in April of 2019 (followed up in March of 2021 with a surprising detection of polarization in the image). That iconic picture is probably the most seen scientific image in history. The EHT team was led by SAO astronomer Sheperd Doeleman and many of the key sub-elements were led by junior scientists at SAO. Hundreds of researchers from the United States, Europe, and Asia contributed to this project under SAO's leadership. Doeleman now leads the *Next*

Generation EHT, which will greatly expand the telescope's capabilities.

SAO's work directly supports the Smithsonian Strategic Plan goal to "Drive large, visionary, interdisciplinary research and scholarly projects." Within this goal, SAO drives the Grand Challenge of "Unlocking the Mysteries of the Universe," by calling 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 mysteries of 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) and the Very Energetic Radiation Imaging Telescope Array System (VERITAS) in Arizona; as well as the specialized telescopes at the Fred Lawrence Whipple Observatory. 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 Hinode Telescope, the Solar Dynamics Observatory, and the Parker Solar Probe); 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 Center for Astrophysics | Harvard and Smithsonian.

For more than 63 years, SAO astronomers and their colleagues have made revolutionary discoveries which 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, most 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 kind of 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 our 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 continues to use advanced technologies to make new discoveries, leading to a coherent story of the cosmos from the Big Bang to the origins of life 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 which 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 and the sharing of ideas.

SAO’s pre-eminence is underscored by the prominent role its scientists take in the consideration and establishment of national policy for astrophysics. For instance, Alexey Vikhlinin is co-chair of NASA’s Science and Technology Definition Team for the Lynx Mission Concept, one of four contenders for the highest-level recommendation in the upcoming National Academies of Science Decadal Survey of Astronomy and Astrophysics. SAO scientists and engineers are engaged in key roles for two other mission concepts: the Origins Space Telescope, and the Large, Ultraviolet, Optical and Infrared telescope. In addition, SAO offers key advice and reviews to NASA for the James Webb Space Telescope.

Together with its partner, the Harvard College Observatory (HCO), SAO is the top choice of graduate- and postdoctoral-level young scientists for astrophysics. In fact, HCO contributed directly to the EHT project, primarily with its *Black Hole Initiative*, for

which Doeleman is a founding principal investigator. Continued federal support makes this leadership possible.

The FY 2022 budget request includes \$507,000 for necessary pay and other related salary costs for existing staff funded under this line item.

MEANS AND STRATEGY

To achieve the goal of Enhanced Interdisciplinary 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, NASA's Solar Dynamics Observatory, and the Parker Solar Probe. 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 using the VERITAS telescope in southern Arizona to carry out a vital scientific research program in very high-energy astrophysics. These facilities enable SAO scientists to make substantial progress in answering fundamental questions about the origin and nature of the universe, including efforts to understand more about dark energy and dark matter, as well as questions about the formation and evolution of the 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 are taking the lead in expanding the international EHT, which draws radio telescopes around the globe into one network, including SAO's critically important SMA, to operate as one gigantic radio observatory to study the physics of the supermassive black holes at the centers of two galaxies: our own Milky Way and the giant galaxy M87. SAO now leads the *Next Generation* EHT and continues to be the most significant contributor to that first-generation telescope.

SAO is also collaborating with Taiwan's Academia Sinica, Institute of Astronomy and Astrophysics, to establish radio observatories in Greenland. A 12-meter-diameter telescope was delivered to Thule in 2016 and came online in 2018. Plans are being developed to include a 3-meter dish at Summit Station, the NSF's site high on the ice plateau. These additional capabilities will play a crucial role in enabling new, more detailed EHT observations of M87, with the prospect of producing "black-hole cinema" a real possibility in the future.

SAO scientists and engineers also play lead roles in developing new techniques and instrumentation for astronomy. Much of this effort is now directed toward enabling technologies for the next generation of major telescopes. SAO scientists and engineers took the lead in designing critical elements of the Giant Magellan Telescope's (GMT) wavefront control system that allows the seven huge mirrors to work as a single optical element. SAO also continues to lead in 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.

In addition, the SAO team now operates a major instrument on NASA's Parker Solar Probe mission. The Solar Wind Electrons, Alphas and Protons (SWEAP) is the only instrument on this mission that looks directly at the sun as the spacecraft approaches closer to the sun than any previous scientific instrument. The Parker Solar Probe was launched from Cape Canaveral on August 12, 2018, and the mission and SWEAP are delivering exceptional scientific results as Parker orbits ever closer to the sun.

SAO scientists 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 recognized as a world leader in the dissemination of scientific literature about the cosmos.

SAO will achieve the strategic goal to Understand and Impact 21st Century Audiences by delivering educational services and products rooted in SAO research to meet the educational needs of the Observatory's learners. This sustained outreach effort gives SAO increased publicity and recognition.

The strategic goal of Enabling Cost-Effective and Responsive Administration will be achieved by making SAO's information technology (IT) infrastructure robust, reliable, and secure; maintaining a cooperative environment through communication and activities which underscore SAO's special mission and each staff member's contribution to its success; evaluating managers 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 operations 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 Proposal submitted to the Department of the Interior, as required by 2 *Code of Federal Regulations* 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards. Donor/sponsor-designated funds come primarily from restricted gifts from individuals, foundations, and corporations, which are earmarked for specific 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 2020 ENACTED | 0 | 4,118 | 0 | 0 | 0 | 0 | 0 | 0 |
| FY 2021 ENACTED | 0 | 4,118 | 0 | 0 | 0 | 0 | 0 | 0 |
| FY 2022 REQUEST | 0 | 4,118 | 0 | 0 | 0 | 0 | 0 | 0 |

Federal Resource Summary by Performance Objective and Program Category

| Performance Objective/ Program Category | FY 2021 | | FY 2022 | | Change | |
|---|----------|--------------|----------|--------------|----------|----------|
| | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| Enhanced Interdisciplinary Research | | | | | | |
| Research | | | | | | |
| Engage in impactful scientific 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 origins and prevalence of life in the universe, 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 Smithsonian Strategic Plan's goal to "Drive large, visionary, interdisciplinary research and scholarly projects." Within this goal, SAO drives the Grand Challenge of "Unlocking the Mysteries of the Universe," which calls on the Smithsonian to "advance knowledge at the forefront of understanding the universe and solid Earth."

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 significant contribution; and 3) the science enabled by the innovative instruments significantly advances 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

articles 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 involved 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.

Innovative instrumentation has enabled astronomers to make fundamental discoveries about the universe, such as the existence of more than 4,000 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 tell 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 2022 MSI line item: the Greenland Telescope; the Submillimeter Telescope Array (SMA) on Mauna Kea, Hawaii; and the Advanced Telescope Instrumentation for the Giant Magellan Telescope (GMT) and the Magellan Clay Telescope, both located at the Las Campanas Observatory in northern Chile.

MEANS AND STRATEGY

SAO’s mission is to engage in astrophysical research and discovery. Observational astrophysics is the basic science responsible for understanding 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 expansion of the universe is accelerating; 2) the discovery of enormous filamentary 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 for the existence of dark matter; 6) the discovery of planets orbiting other stars; and 7) the spectacular image of the supermassive black hole at the center of the galaxy M87, released by the SAO-led Event Horizon Telescope (EHT) team. 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 prominent role its scientists take in the consideration and establishment of national policy for astrophysics. For instance, Alexey Vikhlinin is co-chair of the National Aeronautics and Space Administration’s (NASA) Science and Technology Definition Team for the Lynx Mission Concept, one of four contenders for the highest-level recommendation in the upcoming National Academies of Science Decadal Survey of Astronomy and Astrophysics. In addition, SAO scientists and

engineers are engaged in key roles for two other NASA mission concepts, the Origins Space Telescope and the Large, Ultraviolet, Optical and Infrared Telescope. SAO also offers key advice and reviews to NASA for the James Webb Space Telescope.

Together with its partner, the Harvard College Observatory, SAO is the top choice of graduate- and postdoctoral-level young scientists for astrophysics. Continued federal support makes this leadership possible.

SAO's strength in observational astrophysics depends on its major ground-based facilities, the SMA, the Multiple Mirror Telescope (MMT), the GMT (under development), and the NASA space-based facilities, including the Chandra X-ray Observatory, the Spitzer Space Telescope, the Solar Dynamics Observatory, and the Parker Solar Probe. 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 depends entirely on equipping the Submillimeter Array and its optical telescopes with powerful new instruments and establishing the new Greenland Telescope. This leadership, in turn, depends on developing specialized instruments and facilities which do not yet exist. A team of talented scientists and engineers must work together to develop these tools with support from multi-year MSI funding.

Greenland Telescope (\$500,000)

The Greenland Telescope was originally a National Science Foundation (NSF) prototype for the Atacama Large Millimeter Array (ALMA). It was transferred to SAO from NSF Astronomy, and has been retrofitted for cold-weather operation by SAO's partner institution, the Academia Sinica Institute for Astronomy and Astrophysics (ASIAA) in Taiwan. These investments by NSF and our Taiwanese collaborators will be greatly leveraged by the SAO contribution.

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.

The Greenland Telescope serves as the critical northernmost node of the EHT network, operated jointly with SAO's SMA (Hawaii), the international ALMA telescope array (Chile), and other telescopes, 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 Very Long Baseline Interferometer (VLBI) network, it will exploit its high, dry location and stable atmosphere to

make sensitive measurements of molecules in space at the highest frequencies accessible from the ground.

In FY 2018, SAO, with its partner ASIAA, achieved first light with the telescope in Thule, at the United States Air Force base in Greenland, and in FY 2019 connected the antenna with the SMA and other EHT instruments to make unprecedented observations of the event horizon of the black hole at the heart of galaxy M87; these studies were recently published and reveal the twisted structure of the magnetic field near the black hole. The telescope will continue to be a key resource for the next set of observations of M87 in FY 2021.

Finally, the SAO has worked with the NSF Division of Polar Programs to identify a high, dry, northern site on the Greenland ice sheet as the ideal place for high-frequency radio astronomical observations that require excellent atmospheric transmission and exceptional atmospheric stability. The NSF is redeveloping the Greenland Summit Station to better conduct this research. The development of astronomical activities at the site is a key element of the redevelopment plans; SAO is evaluating the feasibility of installing a smaller, 3-meter dish at the Summit Station as a pathfinder before the larger 12-meter dish is relocated from Thule to the Summit Station.

Submillimeter Telescope Array (\$1,617,900)

The SMA is a pathfinder instrument operating between radio and infrared wavelengths and has a major impact in exploring the cool universe. In recent years, scientific studies have continued to focus on the study of the distant universe, planet-forming disks, and star formation, including the important role that magnetic fields play in star formation and the dynamics of molecular clouds. In this last area, the SMA leads the field due to polarimetry instrumentation developed at SAO, which the Observatory plans to further enhance in coming years.

The SMA is the only submillimeter instrument in the world that can respond rapidly to alerts of rare or unique events detected by other observatories. When NASA's Fermi and Swift satellites detected unusual activity in the transient black hole binary in V404 Cygni, the SMA formed part of a worldwide observing campaign to monitor the outburst. V404 Cygni was briefly the brightest object in the x-ray sky, and the SMA captured a corresponding increase in the submillimeter brightness by more than a factor of 50 in less than an hour.

The SMA is also a key element of the EHT, as discussed above.

The capacity to conduct scientific observations with the SMA depends on the collecting area or size of the telescope array, the weather, and the sensitivity and number of receivers in operation during an observation. The collecting area of the telescope array is fixed at 8 x 6-meter antennas and cannot be augmented without significant additional funding.

The sensitivity of the SMA depends on the instrumentation that processes the incoming signals. SAO is developing new capabilities that will ultimately make the entire SMA 12 to 24 times more sensitive than it was when commissioned. (This is as though each of the telescopes became 12–24 times larger. Note that the range of enhancement depends on the operational model of the array.) Funds were requested in FY 2020 to enable the array to become 6–12 times more sensitive, a significant step toward the full enhancement.

Advanced Telescope Instrumentation for the Optical Telescopes (\$2,000,100)

SAO's expertise in building large and powerful instruments is a crucial capability in this era of extremely large telescopes. Continued MSI funding will enable SAO to conduct this research and maintain the United States' lead in this important scientific field.

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. In the 1990s, SAO and the University of Arizona 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 capacity of the telescope, and a set of large corrector lenses, built with MSI funding, has since 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. To this end, SAO has built increasingly sophisticated instruments to exploit the MMT's potential, starting with Megacam in 2003 and continuing with the Binospec instrument commissioned in FY 2019.

Binospec is a "game-changer," enabling the MMT to compete on an equal footing with the largest telescopes in the world. Binospec's huge light grasp enables 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 allows Smithsonian scientists to lead in observing transient events, such as supernova explosions and gamma-ray bursts, to map the geometry of the universe, and accurately detect objects at the farthest reaches of the cosmos. The scientific opportunities opened by Binospec are attracting the next generation of astrophysicists who will exploit the power of the telescope for the next 20 to 30 years.

The GMT is being developed by SAO in partnership with 10 other research institutions in the United States, Australia, Brazil and South Korea. When the GMT starts scientific operations in 2029, it will be the largest optical telescope in the world, with a 24.5-meter (83-foot)-diameter primary mirror. This larger aperture will allow SAO to peer back in time and explore the earliest phases of the known universe, and to take much sharper images than those obtainable with the Hubble Space Telescope or the James Webb Space Telescope.

SAO leads the design, development, and manufacture of the first scientific instrument that will be used with the GMT — the GMT- Consortium Large Earth Finder (or G-CLEF). G-CLEF will be used to search for planets that are “Earth Twins” orbiting other stars, and to hunt for evidence of life on those planets. G-CLEF is the only instrument in development for the coming generation of extremely large telescopes which will be capable of detecting signs of biological activity (life) in exoplanet atmospheres.

The MMT is a superb platform on which to develop innovative technologies for the new generation of extremely large telescopes such as the GMT. In addition to work on G-CLEF, SAO scientists are developing a novel instrument that is designed specifically to enhance G-CLEF’s ability to detect breathable diatomic oxygen in exoplanet atmospheres. Breathable oxygen is the strongest indicator of life on an exoplanet. A small, prototype instrument is being built for operation on the MMT to validate and optimize the underlying concept before a similar GMT-scale instrument is built.

In FY 2022, MSI funds will be used to advance the design of G-CLEF and develop prototypes of the high-risk subsystems needed to use the instrument to its full potential. MSI funds will also be used to evaluate the potential for installing G-CLEF on the 6.5-meter Magellan Clay Telescope, located near the GMT site in Chile, to test the instrument while the GMT is still being built, and to exploit it scientifically for several years on the Clay Telescope. SAO’s ability to use the Clay Telescope for this purpose is facilitated by its partnership with the Harvard College Observatory.

NATIONAL MUSEUM OF NATURAL HISTORY

| | APPLICATION OF OPERATING RESOURCES | | | | | | | | | |
|-----------------|------------------------------------|--------|---------------|-------|--------------------------|--------|--------------|-------|-------------|-------|
| | FEDERAL APPROPRIATIONS | | GENERAL TRUST | | DONOR/SPONSOR DESIGNATED | | GOV'T GRANTS | | INTERAGENCY | |
| | FTE | \$000 | FTE | \$000 | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| FY 2020 ENACTED | 315 | 49,789 | 19 | 4,136 | 49 | 11,974 | 10 | 2,550 | 8 | 863 |
| FY 2021 ENACTED | 317 | 51,551 | 20 | 4,250 | 50 | 12,300 | 11 | 3,000 | 8 | 900 |
| FY 2022 REQUEST | 320 | 53,435 | 21 | 4,450 | 52 | 12,850 | 11 | 3,100 | 8 | 910 |

Federal Resource Summary by Performance Objective and Program Category

| Performance Objective/ Program Category | FY 2021 | | FY 2022 | | Change | |
|--|------------|---------------|------------|---------------|----------|--------------|
| | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| Enhanced Interdisciplinary Research | | | | | | |
| <i>Research</i> | | | | | | |
| Engage in impactful scientific research and discovery | 104 | 17,749 | 104 | 18,181 | 0 | 432 |
| Expand Digital Technologies | | | | | | |
| <i>Digitization and Web Support</i> | | | | | | |
| Provide improved digitization and Web support | 4 | 512 | 4 | 529 | 0 | 17 |
| Understand and Impact 21st Century Audiences | | | | | | |
| <i>Public Programs</i> | | | | | | |
| Provide relevant reference services and disseminate information to the public | 13 | 1,798 | 13 | 1,852 | 0 | 54 |
| <i>Exhibitions</i> | | | | | | |
| Offer compelling, first-class exhibitions | 47 | 7,248 | 47 | 7,443 | 0 | 195 |
| <i>Education</i> | | | | | | |
| Engage and inspire diverse audiences | 28 | 3,673 | 28 | 3,789 | 0 | 116 |
| Preserve Our Natural and Cultural Heritage | | | | | | |
| <i>Collections</i> | | | | | | |
| Improve the stewardship of the national collections | 88 | 15,408 | 91 | 16,341 | 3 | 933 |
| <i>Facilities and Safety</i> | | | | | | |
| Improve Smithsonian facilities operations and provide a safe and healthy environment | 4 | 859 | 4 | 876 | 0 | 17 |
| <i>Security</i> | | | | | | |
| Provide world-class protection for Smithsonian facilities, collections, staff, visitors and volunteers | 1 | 185 | 1 | 189 | 0 | 4 |
| Enable Cost-Effective and Responsive Administration | | | | | | |
| <i>Management Operations</i> | | | | | | |
| Enable efficient and responsive administrative infrastructure | 14 | 1,824 | 14 | 1,882 | 0 | 58 |
| <i>Information Technology</i> | | | | | | |
| Improve the Institution's information technology systems and infrastructure | 14 | 2,295 | 14 | 2,353 | 0 | 58 |
| Total | 317 | 51,551 | 320 | 53,435 | 3 | 1,884 |

BACKGROUND AND CONTEXT

The mission of the National Museum of Natural History (NMNH) is to understand the natural world and our place in it. We seek to inspire curiosity, discovery, and learning about nature and culture through outstanding research, collections, exhibitions, and education.

Building upon our unique and vast collections and associated data, field research stations, specialized laboratories, and an internationally recognized team of researchers, the Museum and the knowledge it generates serve a wide array of constituencies ranging from federal agencies to the public.

The Museum's scientific research focuses broadly on discovering, documenting, and understanding biodiversity; studying the formation and evolution of the Earth and other planets; exploring human diversity and cultural change; and investigating evolutionary patterns and processes throughout the history of life on Earth. This research is closely linked to important societal issues such as climate change, biodiversity loss, cultural conflict, environmental justice, invasive species, and natural hazards.

NMNH science has global impact and is widely cited by the greater scientific community. Our scientists discover new species and document and analyze how species arise, evolve, persist, diversify, and interact with each other and with the environment, as well as how they migrate and go extinct. Our earth and planetary scientists contribute to our understanding of Earth's history as well as the effects of geologic and meteoritic phenomena on Earth's atmosphere and biosphere. They study the dynamic planet we inhabit in all its aspects, from its surface to its core. NMNH anthropologists use collections and field-based studies to help understand the continually evolving story of our species and our interactions with other life and with the planet. Our Museum's science staff also translates science to society through their diverse and dedicated outreach efforts and invests heavily in training and mentoring the next generation of new scientists.

Our physical collection, consisting of more than 146 million specimens and objects, and our collections expertise are at the core of our mission as well as fundamental to science. The scope and breadth of the NMNH collections provide a vast research infrastructure that supports our scientific mission. NMNH scientists work with their professional colleagues in the United States and around the world to further build and draw on these collections, make new discoveries, and test new theories. The NMNH collections also represent a valuable historical archive, documenting billions of years of planetary, geological, organismal, and cultural changes.

The NMNH collections provide vital information and are a dynamic resource used by researchers, educators, and policy makers worldwide. They serve as essential reference materials for U.S. Government agencies. These resources are actively and collaboratively used by staff members for the Departments of Defense, Commerce, and Agriculture, who are housed in NMNH facilities. For example, tens of

thousands of insects urgently requiring identification are sent to the Museum from ports of entry each year. Scientists at the 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 potentially invasive species. The NMNH collections also serve repository functions for several agencies, including the National Cancer Institute, the Department of the Interior, and the National Aeronautics and Space Administration (NASA). The FBI also uses the Museum's human skeletal collections to assist in its criminal investigations.

The NMNH's first-class research and collections are at the heart of its exhibitions and educational outreach. As one of the most visited museums in the world, the Museum provides diverse public audiences with presentations on every aspect of life on Earth. Through its many affiliations and partnerships, the NMNH takes its science exhibitions and public programs to other museums and non-traditional exhibition venues, such as libraries, parks, schools, and universities across the country. With a growing body of digital data, network of interactive websites (which host more than 12 million unique visitors annually), distance-learning experiences, and social media, the Museum is transforming itself into a true digital classroom that is accessible to everyone — free of charge.

The FY 2022 budget request includes an increase of \$1,884,000. The increase includes \$1,317,000 for necessary pay and other related salary costs for existing staff funded under this line item, and a programmatic increase of 3 FTEs and \$567,000 for collections support.

MEANS AND STRATEGY

During the next five years, the Museum will implement its new strategic plan — *Our World, Our Future*. At the heart of this plan is a recognition that the NMNH has a central role to play in tackling some of the biggest issues of our time by using its research, outreach, and efforts to inspire and train the next generation of natural history scientists. Through this effort, the NMNH will align itself with the broader Smithsonian objectives of embracing the Museum's potential as a convenor of national and international conversations, reaching Americans in their own communities by bolstering a digital presence, and seizing opportunities to partner with other Smithsonian units to maximize our collective impact on the public.

The plan is centered around the following four “Big Idea” initiatives which will be supported with a combination of federal and privately raised funding:

- Our Unique Planet will combine our Earth science assets and a NASA mission to understand the origin of the Earth's oceans, continents, and the geologic conditions that allowed for the evolution of life.
- The Ocean Science Center will consolidate the Museum's vast marine portfolio and create a suite of new tools, techniques, and collections that will enable rapid measurement of marine biodiversity.

- Our World will be an immersive Museum experience that uses big data and stunning visualizations to drive home the reality and urgency of the climate and biodiversity crises while focusing on success stories to help visitors understand the possibility of contributing to positive outcomes.
- The Inclusive Science Initiative will focus on youth from underserved communities and under-represented groups and train them to be the next generation of scientists and science-savvy citizens.

Toward this end, the NMNH has a long history of training future scientists. In FY 2022, the Museum will continue combining federal and private funding to invest in the next generation of scientists and researchers, with an emphasis on opportunities for individuals from diverse backgrounds. Through the Museum's academic programs, it will continue to create a staircase of academic opportunity to mentor the next generation of museum scientists and professionals. These programs take students and young professionals from the early stages of scientific exploration in high school to the postdoctoral peak of stepping into the role of being professional researchers, by offering various Fellowship and internship programs for undergraduates, graduates, and postgraduates.

An essential element of the NMNH's plans to achieve the strategic goal of Preserving Our Natural and Cultural Heritage in FY 2022 is the Museum's commitment to the stewardship of its federal scientific 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. The NMNH will continue its strong 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 ongoing research.

The Museum's collections are the bedrock of its scientific enterprise. The scientific research staff is organized into seven departments: anthropology; botany; entomology; mineral sciences; invertebrate zoology; paleobiology; and vertebrate zoology. NMNH programs address current topics, such as biological diversity, global climate change, molecular systematics for enhancing the understanding of the relationships between living things, ecosystem modeling, and the documentation and preservation of human cultural heritages. In 2020, the Museum's scientific staff authored more than 700 scholarly publications. On an annual basis, they typically contribute to the discovery and description of hundreds of species new to science.

In FY 2022, the NMNH will continue using federal funds to achieve the strategic goal of Understanding and Impacting 21st Century Audiences by maintaining and upgrading permanent exhibitions, replacing outdated exhibits with multi-disciplinary, interactive exhibitions on the Mall, and in other venues through traveling exhibits, and expanding our digital reach across the country.

The COVID-19 pandemic and the resulting closure of the Museum to the public required significant adjustments to our special exhibits calendar, but the NMNH will have a full slate available to our visitors once we reopen and throughout FY 2022.

The Museum's timely exhibition, *Outbreak: Epidemics in a Connected World* (on view into 2022), continues to be popular with the NMNH's audiences and members of the global health community. Support for the exhibit and an extensive slate of related programming has come from many agencies, including the Centers for Disease Control and Prevention and the National Foundation for Infectious Diseases, as well as foundations and individuals. The print-on-demand poster version of the exhibit, Outbreak DIY, is carrying crucial messages on human, animal, and environmental health to schools, libraries, clinics, and other locations around the globe. As of December 2020, the Outbreak DIY poster has been displayed in more than 200 locations, in 40 countries, and 28 states, including Washington, DC and Puerto Rico, and is now available in 10 different languages. In early 2020, the Museum developed a Web platform to simplify distribution and help meet an increase in demand. When the NMNH reopens, visitors will find the exhibit updated with current information on the COVID-19 pandemic and vaccination efforts.

Unsettled Nature: Artists Respond to the Age of Humans will run from the fall of 2021 into 2022. This exhibition will feature eight artists who raise awareness of and encourage reflection on the role of humans in shaping Earth's recent past, present, and future. With curatorial supervision from the Smithsonian American Art Museum, the NMNH expects *Unsettled Nature* to be an exhibition of innovative and thought-provoking art in a variety of media, and to spark conversation around Anthropocene topics. The exhibit is supported in part by the Windland Smith Rice Fund.

FY 2022 will bring two additional special exhibits. First, *Genome: Unlocking Life's Code* returns after a successful national tour, with new information on human genetic research, including how genetic research aids the rapid development of vaccines. Also, in the summer of 2022, the Museum will open *Lights Out: Recovering Our Night Sky*. Developed in conjunction with the Smithsonian Astrophysical Observatory and with contributions from NASA, *Lights Out* will explore how the sight of the night sky — and its disappearance due to light pollution — affects all life on Earth, from natural ecosystems to human cultures.

In FY 2022, the NMNH will continue to inspire public appreciation of, and engagement with, science and the natural world through efforts in our education, outreach, and visitor experience programs. The Museum will initiate a phased reopening to on-site visitors that ensures safety for all. The NMNH will also continue to improve the accessibility of exhibits and programs and focus on reaching underserved audiences and people from under-represented communities.

To achieve the strategic goal of Understanding and Impacting 21st Century Audiences, in FY 2022 the NMNH will study the effectiveness of its programs and activities and how they impact audiences, both at the Museum and nationwide. The studies will include evaluative as well as research-based inquiries which can inform learning about science, technology, engineering, and mathematics (STEM) topics. The

NMNH will also convene a national (virtual) conference of evaluators, researchers, and informal science educators as part of a multi-year project to measure the impacts of informal science programs and experiences within and across organizations.

Q?rius, The Coralyn W. Whitney Science Education Center — the Museum’s interactive STEM learning facility — brings NMNH research and collections to the forefront for visitors and learners. Q?rius programs inspire, nurture, grow, and diversify the next generation of STEM professionals by helping citizens become aware of their connection to current issues affecting the natural and cultural world. In FY 2022, the NMNH will launch a Web-based app for visitors’ phones that will give audiences greater control over their own learning experiences as they explore the collections within the Museum.

In FY 2022, the NMNH will once again make available the Museum’s science experts and collections from behind the scenes and provide the public with opportunities to engage with scientists, their research, collections, and research-grade scientific equipment, with programs such as “The Expert Is In” series, both online and on site, when the Museum can safely reopen. In addition, the Museum will host special online events and virtual festivals that bring the public and NMNH science experts together to focus on a specific area of natural history and science, such as Teen Earth Optimism, National Fossil Day, and World Ocean Day.

Additional outreach activities will include traveling exhibitions, distance learning, and in-depth, online resources for teachers and parents, including virtual K–12 school programs, pre-K family programs, the award-winning *Smithsonian Science How* webinars for classrooms, online science summer “camps” for youth, the *Ocean Portal* and *Human Origins* websites, and the *Encyclopedia of Life*, as well as digitized collections and longstanding programs of lectures, films, and teacher support.

These NMNH programs and resources will continue to 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, Museum staff are focusing their efforts on building new youth audiences and increasing youth participation in a continuum of opportunities to inspire, nurture, grow, and diversify the next generation of STEM professionals.

EXPLANATION OF CHANGE

The FY 2022 budget request includes an increase of \$1,884,000. The increase includes \$1,317,000 for necessary pay and other related salary costs for existing staff funded under this line item, and a programmatic increase of 3 FTEs and \$567,000 for collections support.

Collections Support (+\$567,000, +3 FTEs)

The NMNH requests three new permanent science and collections staff and \$567,000 to advance the digital collections' accessibility and research readiness of biological, cultural, and geological collections and collections data in service of the nation's needs. Specifically, these positions will lead mass-digitization projects for difficult-to-digitize, fluid-preserved invertebrate animals and pinned insects, transform analog data from across the NMNH collections, perform data cleaning and standardization work, and build data science tools to enable the NMNH to include its data in national big data initiatives or for educational use in schools.

Digitization of collections data that contributes to understanding climate and environmental changes will be prioritized. The new staff will use contemporary methods and skills to rapidly contribute NMNH data to national and international data portals and aggregators so that information flows to broad audiences, communities, and users quickly and accurately. Digitization methods will leverage the Smithsonian's existing investments and lessons learned but will also deploy new processes and technologies.

NONAPPROPRIATED RESOURCES — General trust funds support salaries and benefits of administrative personnel, advancement and business activities, and other program-related costs. The Museum raises funds from private sources to support research, exhibitions, public programs, and administrative functions. Donor/sponsor-designated funds are vital to support exhibition hall renovations and offer educational activities and programs. In addition, significant endowment gifts support internships and Fellowships which introduce more students to the natural sciences, underwrite field research, and help the Museum maintain and expand its educational programs.

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 2020 ENACTED | 215 | 28,066 | 42 | 8,418 | 42 | 10,885 | 8 | 1,517 |
| FY 2021 ENACTED | 217 | 32,221 | 30 | 8,500 | 45 | 11,500 | 11 | 3,000 |
| FY 2022 REQUEST | 222 | 33,755 | 39 | 9,587 | 40 | 5,596 | 6 | 2,018 |

Federal Resource Summary by Performance Objective and Program Category

| Performance Objective/ Program Category | FY 2021 | | FY 2022 | | Change | |
|--|------------|---------------|------------|---------------|----------|--------------|
| | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| Enhanced Interdisciplinary Research | | | | | | |
| <i>Research</i> | | | | | | |
| Engage in impactful scientific research and discovery | 45 | 4,617 | 45 | 4,790 | 0 | 173 |
| Understand and Impact 21st Century Audiences | | | | | | |
| <i>Exhibitions</i> | | | | | | |
| Offer compelling, first-class exhibitions | 106 | 16,084 | 106 | 16,491 | 0 | 407 |
| <i>Education</i> | | | | | | |
| Engage and inspire diverse audiences | 1 | 133 | 1 | 137 | 0 | 4 |
| Preserve Our Natural and Cultural Heritage | | | | | | |
| <i>Collections</i> | | | | | | |
| Improve the stewardship of the national collections | 56 | 9,688 | 61 | 10,603 | 5 | 915 |
| <i>Facilities and Safety</i> | | | | | | |
| Improve Smithsonian facilities operations and provide a safe and healthy environment | 2 | 325 | 2 | 333 | 0 | 8 |
| Enable Cost-Effective and Responsive Administration | | | | | | |
| <i>Management Operations</i> | | | | | | |
| Enable efficient and responsive administrative infrastructure | 5 | 958 | 5 | 977 | 0 | 19 |
| <i>Information Technology</i> | | | | | | |
| Improve the Institution's information technology systems and infrastructure | 2 | 416 | 2 | 424 | 0 | 8 |
| Total | 217 | 32,221 | 222 | 33,755 | 5 | 1,534 |

BACKGROUND AND CONTEXT

In FY 2022, the Smithsonian's National Zoological Park and Conservation Biology Institute (NZP/SCBI) will continue to implement its strategic plan (2020–2025) with the following focus:

- **Fortify and Focus Science, Animal Care, and Collections Management to Advance Global Conservation and Sustainability**

The life, safety, and health of the animals in our care is core to the Zoo's mission of "saving species," and federal funding is vital to fully meet the costs for animal care, increases in basic standards of care, including those required by the Association of Zoos and Aquariums (AZA) accreditation standards, as well as increases in federal requirements. In short, federal funding is essential to meet the fundamental, minimal needs of the endangered animals in our care — resources that cannot be secured through philanthropy, grants, or partnerships. Costs of animal care, drugs and medicines, animal food, as well as the resources needed to maintain or replace equipment, generally increase faster than the annual rate of inflation.

As the Nation's Zoo, the NZP is a leader within the AZA community and among all accredited zoos in North America. For our living collections, standards of care are continually updated as we apply modern management strategies, including intensive animal quarantine and screening procedures, to prevent disease transmission, and implement newly developed veterinary medical procedures, diagnostics, and testing to keep animals healthy and able to breed. Ever more sophisticated medical equipment is being used and new, labor-intensive approaches are increasingly deployed to deliver world-class veterinary care to some of the rarest animals on earth. NZP/SCBI develops and shares this expertise, as well as breeding and research protocols, with the global zoo and animal conservation community.

NZP/SCBI is world-renowned for its efforts to research, care for, breed, and reintroduce some of the world's most critically endangered species. More than 300 species are exhibited at the Zoo's Rock Creek Park campus, including giant pandas, Panamanian golden frogs, Sumatran tigers, and Asian elephants. One of NZP/SCBI's key contributions to ensuring the survival of endangered species is the work that occurs at the Institute's 3,200-acre site in Front Royal, Virginia. There, our scientists study and supervise the breeding of more than 26 species, including some that were once extinct in the wild, like black-footed ferrets and the scimitar-horned oryx. Both locations house and care for some of the world's most endangered animals, such as kiwis, clouded leopards, red pandas, and cheetahs, among others.

National Zoo scientists and animal care experts collaborate with colleagues in more than 30 countries, working to identify solutions to threats facing endangered animal populations. Additionally, NZP/SCBI staff continually set high standards for medical care, nutrition, husbandry, reproduction, and safety for Zoo animals that are

adopted by other zoos worldwide. NZP/SCBI's accomplishments range from protecting elephants and their caretakers, and understanding the specifics of cheetah reproduction, to the reintroduction of the scimitar-horned oryx to the wild in Chad. Highlights from past years include an SCBI scientist being named species survival plan or (SSP) coordinator for cheetahs in all accredited zoos in North America, and our team's efforts have resulted in increased cheetah reproduction.

In addition to groundbreaking science to save wildlife, Zoo scientists are developing new and advanced analytical tools to study and model how ecosystems and species interact with their environment and how these systems respond to global climate changes. In particular, our Global Health Program (GHP) veterinarians have worked for a decade to build a One Health platform, which recognizes that the health of all species — both humans and nonhuman animals — is inextricably linked to one another and to the environments they share. The GHP team works with international partners and a broad range of experts to combat threats to wildlife and human and ecosystem health by addressing these challenges at their source: the human-wildlife-livestock interface.

- **Expanding Our Reach and Impact**

Center for Learning Innovation. Science alone cannot solve the planet's extinction crisis. NZP/SCBI has an important role in teaching the public about its role in saving species. With the COVID-19 shutdown, NZP/SCBI lost its long-time educational partner, the Friends of the National Zoo. In response, the Zoo transitioned educational resources and created a new Center for Learning Innovation (CLI). The focus in FY 2021 was to create digital-friendly experiences, which were very well received by diverse audiences nationwide.

The CLI seeks to develop a passionate global community that celebrates their connection to nature, takes meaningful action to protect it, and inspires others to do the same. The Center uses the latest knowledge in learning sciences and conservation psychology to empower all audiences to perform conservation actions. In addition, the CLI team has developed guiding principles that reflect the latest scientific approaches for learning in informal environments outside of schools. CLI's priority audiences include children, teenagers, citizen-scientists, and conservation professionals who help optimize the Center's resources to achieve high impact with the public.

Exhibits. Throughout the pandemic (in FYs 2020 and 2021), NZP/SCBI's animal cams offered intimate access to the Zoo's animals. Additionally, several times a week, NZP/SCBI created special content shared on all its social media platforms. The Zoo continues to leverage digital visitation to raise public awareness of species under threat. Of note, the giant panda cub, Xiao Qi Ji (XQJ), born in August of 2020, presented an unprecedented opportunity for the Zoo to use this iconic animal to garner public support and inspire conservation of that species and their habitat, and by

doing so appointed the panda as a wildlife ambassador to help protect other species sharing the same habitat or vulnerable to the same threats.

The Zoo continues to expand its on-site efforts to engage all visitors. In FY 2021, NZP is taking strides to put accessibility at the forefront of exhibit design. For example, the Zoo's **Coral Lab** (inside the Zoo's Amazonia building) is being upgraded to include a collection of sensory elements, such as an immersive underwater video projected on the walls, with soothing aquatic sounds, and 3D coral models to provide our guests with a tactile experience. Signage and interactive elements are being added to the Zoo's **Kids' Farm** to enhance accessibility. Additionally, construction and exhibit design of the Bird House continued in FY 2021 (with completion expected in FY 2022), and the Zoo's *Asia Trail* has been enhanced to improve visitor safety and include a new *Snakehead* exhibit that addresses the harmful impacts of invasive species.

External Communications. NZP/SCBI deploys multiple outreach channels to further engage the public upon arrival at the Zoo. For pandemic safety reasons, NZP has limited direct visitor contact with staff and volunteers. As safety restrictions evolve, NZP will restore its successful keeper demonstration and volunteer programs. Since the COVID-19 closures and the birth of panda cub QXJ in August of 2020, 13.2 million people visited the Zoo's website, more than 30 million times, racking up more than 58 million pageviews. This was the highest volume of users to the website since data has been collected. The ever-popular Giant Panda Cam brought in 18.6 million pageviews, up 622 percent from the previous year. The Zoo has also added the Cheetah Cub Cam and Black-footed Ferret Cam, which drew nearly 2.6 million and 400,000 pageviews, respectively — both of which NZP/SCBI wants to bring back in FY 2022 along with more animal cam offerings. As funding allows, NZP/SCBI will train volunteers to provide specialized narration for the visually impaired.

In addition to its website, NZP/SCBI has a robust social media presence with more than 1.4 million fans and followers across the Zoo's Facebook, Instagram, and Twitter accounts. Digital outreach through social media includes livestream broadcasts, original videos, and thoughtfully developed content that connects online visitors to the Zoo's animals and raises awareness of NZP/SCBI's conservation research and programs. Original video content created in FY 2021 on key conservation programs included coral reefs and *in-situ* research on America's prairie species and ecosystems. In FY 2022, the Zoo will continue to use funds to grow digital outreach and provide engaging content that includes coverage of SCBI research *in situ*.

The FY 2022 budget request includes an increase of \$1,534,000 that provides \$834,000 for necessary pay and other related salary costs for existing staff funded under this line item, and a programmatic increase of \$700,000 and 5 FTEs for animal welfare.

MEANS AND STRATEGY

The health, well-being, and safety of both the animals and staff of the NZP/SCBI are its highest priority. The Zoo is world-renowned for its efforts to research, breed, and reintroduce into the wild some of the world's most critically endangered species, including the scimitar-horned oryx, Przewalski's horse, the golden-lion tamarin, black-footed ferret, red-crowned cranes, and many others. Accepted standards or best industry practices for medical care, husbandry, and safety for Zoo animals are continually increasing. For example, federal and state regulations require intensive animal quarantining and screening procedures to prevent disease transmission to livestock, people, and other animals in the living collection. COVID-19 requirements have increased costs of operations (for animal food, medicine and testing, personal protective equipment, and wayfinding/signage) and reduced the Zoo's access to vital, private-sector support for NZP/SCBI operations and programs.

EXPLANATION OF CHANGE

The FY 2022 budget request includes an increase of \$1,534,000 that provides \$834,000 for necessary pay and other related salary costs for existing staff funded under this line item, and a programmatic increase of \$700,000 and 5 FTEs for animal welfare.

Collections Support (+\$700,000, +5 FTEs)

The NZP is requesting a funding increase (+\$700,000 and +5 FTEs) to provide specialized support for its living and biological materials and collections, and for educating the next generation about the importance of sustaining biodiversity and saving species from extinction. Unlike Smithsonian museums, the Zoo cares for living animals, some of which are among the rarest species on Earth. Animals in our care require specialized support to meet certain mandatory standards for species as varied as Asian elephants, giant pandas, endangered corals, and extinct-in-the-wild frogs. Required support ranges from the need to provide adequate shelter, food, and clean, accessible water to specialty care for aged or sick animals. Despite the increase in federal funding received in FY 2021, the Zoo still has many vacancies in critical care positions, including animal keepers, curators, and scientists. NZP/SCBI also remains short-staffed in other operational positions in finance, information technology (IT), communications, and exhibits, all of which can directly or indirectly have an impact on the welfare of animals in the Zoo's care.

Most Smithsonian collections are housed indoors. The Zoo's 163-acre park in Washington, DC and its 3,200-acre campus in Front Royal, Virginia include many outdoor habitats and complex, specialized facilities designed to care for wildlife. For example, shade structures for bison and climbing structures for great apes require routine maintenance, and specialized barn and handling facilities are needed to properly ensure animal welfare. Of note, the Zoo maintains miles of animal containment, with standards continually being improved and updated in response to

testing by the animals themselves. Maintaining animal habitats and providing specialized items for their health and well-being are not just recommended best practices, but required by oversight and regulatory entities such as the AZA and the U.S. Department of Agriculture (USDA). Most importantly, animal care staff, including keepers, curators, veterinarians, and scientists, must possess specialized knowledge and training, and staffing must be maintained at appropriate levels to ensure the life, safety, and health of both animals and people.

The needs and standards for animal and veterinary care increase as our understanding of the challenges of caring for critically endangered species increases and regulations concerning animal health and welfare change. The need for additional resources also changes in response to the fluctuating diversity and size of the living collection.

Finally, although we have maintained minimal care standards, without the funds requested, the size of the living collection may have to be reduced — meaning that species at risk today will not benefit in the way that other critically endangered species have — and both Zoo operations and visitors' experiences will be put at risk.

NONAPPROPRIATED RESOURCES — General trust funds, including earned revenue (such as parking, food, and retail sales), support salaries and benefits of the Zoo director and general operational requirements not fully covered by federal funds (for example, education, professional training, animal acquisitions, finance and administration, IT, communications, exhibits, and animal care).

Donor/sponsor-designated funds support the costs related to specific programs and projects for critically endangered species (including antelopes, amphibians, cheetahs, giant pandas, Asian elephants, and tigers). Private donations help the Zoo implement multiple small- to medium-sized projects 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 wildlife species.

The Zoo was closed for six months during FY 2021 due to the COVID-19 pandemic, and the prolonged closure led to the dissolution of the Zoo's 63-year partnership with the Friends of the National Zoo (FONZ). As a result, the Zoo has taken over the membership program (with 20,000 households) and the guest services and public education functions previously supported by FONZ.

SMITHSONIAN ENVIRONMENTAL RESEARCH CENTER

| | APPLICATION OF OPERATING RESOURCES | | | | | | | | | |
|-----------------|------------------------------------|-------|---------------|-------|--------------------------|-------|--------------|-------|-------------|-------|
| | FEDERAL APPROPRIATIONS | | GENERAL TRUST | | DONOR/SPONSOR DESIGNATED | | GOV'T GRANTS | | INTERAGENCY | |
| | FTE | \$000 | FTE | \$000 | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| FY 2020 ENACTED | 34 | 4,472 | 9 | 950 | 14 | 1,972 | 26 | 2,775 | 24 | 2,101 |
| FY 2021 ENACTED | 34 | 4,616 | 5 | 840 | 14 | 1,600 | 25 | 3,000 | 25 | 2,910 |
| FY 2022 REQUEST | 34 | 4,759 | 7 | 1,400 | 14 | 2,000 | 25 | 3,000 | 25 | 3,000 |

Federal Resource Summary by Performance Objective and Program Category

| Performance Objective/ Program Category | FY 2021 | | FY 2022 | | Change | |
|---|-----------|--------------|-----------|--------------|----------|------------|
| | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| Enhanced Interdisciplinary Research | | | | | | |
| <i>Research</i> | | | | | | |
| Engage in impactful scientific research and discovery | 23 | 3,232 | 22 | 3,390 | -1 | 158 |
| | | | | | | |
| Expand Digital Technologies | | | | | | |
| <i>Digitization and Web Support</i> | | | | | | |
| Provide improved digitization and Web support | 1 | 128 | 0 | 0 | -1 | -128 |
| | | | | | | |
| Understand and Impact 21st Century Audiences | | | | | | |
| <i>Public Programs</i> | | | | | | |
| Provide relevant reference services and disseminate information to the public | 2 | 218 | 4 | 321 | 2 | 103 |
| | | | | | | |
| Enable Cost-Effective and Responsive Administration | | | | | | |
| <i>Management Operations</i> | | | | | | |
| Enable efficient and responsive administrative infrastructure | 8 | 1,038 | 8 | 1,048 | 0 | 10 |
| | | | | | | |
| Total | 34 | 4,616 | 34 | 4,759 | 0 | 143 |

BACKGROUND AND CONTEXT

The Smithsonian Environmental Research Center (SERC) is a leader in research and public programs on ecosystems in the coastal zone, where most of the world's population lives and most of our economy is based. SERC's innovative research and unique setting advance basic environmental science to inform wise policy management decisions for the coast's many natural resources. SERC's wide array of hands-on and virtual programs provide the public with the knowledge to solve the environmental challenges of the 21st century.

Research and discovery are the core activities at SERC. Scientists use the Center's 2,650-acre site on the shore of Chesapeake Bay as a model system for long-term research and one-of-a-kind experiments. SERC researchers also use other sites, including the Smithsonian Marine Science Network, to investigate the ecological connections among aquatic, terrestrial, and atmospheric components of complex landscapes, with comparative studies on regional, continental, and global scales. In addition, SERC is a partner in the Institution's key research initiatives, including the Conservation Commons, ForestGEO, and MarineGEO, our Global Earth Observatories. SERC also leads collaborations with other federal research networks, such as the National Ecological Observatory Network (NEON) that is funded by the National Science Foundation (NSF), and the National Ballast Information Clearinghouse (NBIC) funded by the U.S. Coast Guard.

SERC is diversifying and expanding programs for public engagement. Public outreach programs connect thousands of people to a suite of activities, including virtual evening lectures, Science Saturdays for families, nature hikes, and tours of facilities. In 2021, SERC finished restoring the historic 1735 Woodlawn House to provide a welcome center and public exhibit on the archaeology and history of land use at the Rhode River site. Science, technology, engineering, and mathematics (STEM) programs in environmental science provide thousands of school children with hands-on and virtual school field trips. STEM training for teachers builds their confidence to lead students in informal learning. SERC's highly successful citizen-science program engages more than 500 volunteers across a spectrum of research projects. The Center's vigorous professional training program for interns, graduate and postdoctoral Fellows, and visiting scientists produces the next generation of scientists and natural resource managers. SERC's strategic plan mobilizes the Smithsonian Institute for the Environment to convene teams of the best minds in on-site and virtual workshops to solve difficult environmental problems and to catalyze visionary research.

In addition, SERC continues to update and advance its Facilities Master Plan. SERC is a Smithsonian leader in sustainability through energy conservation and shifting to renewable solar energy, with the goal of achieving net-zero carbon emissions by 2024. For example, improved water reuse and recycling systems eliminate waste at the site. In FY 2021, SERC completed restoration of the Woodlawn House — the oldest building in the Smithsonian still in its original location — to serve

as welcome center. The Center also began building the Green Village to provide short-term housing for visiting researchers and a space for workshop groups. In FY 2022, SERC will consolidate and update its Facilities Maintenance shops and equipment storage for improved safety and efficiency.

The FY 2022 budget request includes an increase of \$143,000 for necessary pay and other related salary costs for existing staff funded under this line item.

MEANS AND STRATEGY

SERC's research, education, and outreach activities are closely aligned with the Smithsonian's Strategic Plan to inform environmental resource management and conservation, and to engage the public in hands-on science. SERC also achieves competitive success for extramural grants and contracts in five key areas: climate change; pollution from nutrient runoff and heavy metals; land use; overfishing; and monitoring changes in biodiversity from invasive species which contribute to the loss of native species. SERC stewards its 2,650-acre Chesapeake site as a model for long-term research and experiments on land-sea interactions. The site's topography of streams, shorelines, forests, and agricultural fields now provide 50-year datasets on the effects of climate change on aquatic, terrestrial, and atmospheric components of complex landscapes. The Center's large-scale experiments measure the effects of land use, habitat restoration, and climate change on complex landscapes. SERC also supports the efforts of other collaborators and agencies (such as the U.S. Department of Agriculture, the U.S. Geological Survey, the National Oceanic and Atmospheric Administration, the U.S. Fish and Wildlife Service, the U.S. Coast Guard, and many universities and state agencies). SERC also leads in the development of MarineGEO to track changes in near-shore marine ecosystems. At the same time, SERC leads in studying the temperate zone plots of the ForestGEO terrestrial biomes. As a partner site in the NSF-funded NEON, the Center's mapped forest plot is the base for a forest tower and a ground-based sampling array to observe and interpret changes in terrestrial environments.

Looking ahead, SERC uses its Chesapeake base to test new approaches to habitat restoration of forests, streams, wetlands, and shorelines. Along with detailed chemical and biological measurements, the Center's model site deploys instrument arrays and remote sensing to track responses to climate change, biodiversity, and the complex interactions among connected ecosystems. SERC restoration experiments indicate improvements to restoration strategies. These experiments and observations serve as a teaching platform for students of all ages and natural resource managers nationally and internationally. The Center uses the Smithsonian Conservation Commons as a powerful communications tool to disseminate its research results and applications and engage the public and policy makers. The SERC site is planned as a primary facility to convene diverse teams of business leaders, policy makers, educators, and scientists to find innovative solutions to the difficult environmental problems facing us.

SERC also continues to strengthen its professional training, public education, and citizen-science programs. In addition to providing a public lecture series, workshops, and numerous volunteer opportunities, the Center also offers expert consultation for the public, including teachers and public officials. SERC is open to the public six days a week for visitors to explore the Center's many trails through forests and fields, as well as more than 15 miles of shoreline along the Chesapeake Bay.

SERC's comprehensive Facilities Master Plan projects controlled and operationally sustainable growth during the next decade to significantly improve public access and engagement. The plan emphasizes decreasing energy and water consumption to reduce operating costs across the campus, as well as to highlight conservation lessons.

Finally, SERC management controls ensure proper accounting for its research activities, including indirect cost recovery in its sponsored research program. Moreover, the staff maintains an excellent record of safety and protection for all employees and visitors. With the assistance of the Institution's central administrative offices, SERC maintains its excellent record of property management and protection of sensitive information and data.

NONAPPROPRIATED RESOURCES — Extramural Government grants, contracts, and interagency agreements of approximately \$6 million annually support most (70 percent) of SERC's scientific research program, including the NBIC as established by Congress as part of the National Invasive Species Act of 1996. In addition, indirect cost recovery derived from these extramural research and education awards provide core administrative support. Other resources include donor/sponsor-designated funds that provide essential operating support for specific programs and projects in research, public education, and professional training.

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 2020 ENACTED | 191 | 14,702 | 31 | 1,989 | 36 | 4,933 | 7 | 726 |
| FY 2021 ENACTED | 191 | 15,266 | 21 | 1,219 | 33 | 3,067 | 4 | 259 |
| FY 2022 REQUEST | 191 | 15,643 | 21 | 1,225 | 33 | 3,528 | 4 | 285 |

Federal Resource Summary by Performance Objective and Program Category

| Performance Objective/ Program Category | FY 2021 | | FY 2022 | | Change | |
|---|------------|---------------|------------|---------------|----------|------------|
| | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| Enhanced Interdisciplinary Research | | | | | | |
| <i>Research</i> | | | | | | |
| Engage in impactful scientific research and discovery | 114 | 10,159 | 114 | 10,383 | 0 | 224 |
| Expand Digital Technologies | | | | | | |
| <i>Digitization and Web Support</i> | | | | | | |
| Provide improved digitization and Web support | 3 | 174 | 3 | 180 | 0 | 6 |
| Understand and Impact 21st Century Audiences | | | | | | |
| <i>Public Programs</i> | | | | | | |
| Provide relevant reference services and disseminate information to the public | 5 | 380 | 5 | 390 | 0 | 10 |
| <i>Education</i> | | | | | | |
| Engage and inspire diverse audiences | 2 | 344 | 2 | 348 | 0 | 4 |
| Preserve Our Natural and Cultural Heritage | | | | | | |
| <i>Facilities and Safety</i> | | | | | | |
| Improve Smithsonian facilities operations and provide a safe and healthy environment | 1 | 130 | 1 | 132 | 0 | 2 |
| <i>Security</i> | | | | | | |
| Provide world-class protection for Smithsonian facilities, collections, staff, visitors, and volunteers | 18 | 713 | 18 | 749 | 0 | 36 |
| Enable Cost-Effective and Responsive Administration | | | | | | |
| <i>Management Operations</i> | | | | | | |
| Enable efficient and responsive administrative infrastructure | 40 | 2,756 | 40 | 2,835 | 0 | 79 |
| <i>Information Technology</i> | | | | | | |
| Improve the Institution's information technology systems and infrastructure | 8 | 610 | 8 | 626 | 0 | 16 |
| Total | 191 | 15,266 | 191 | 15,643 | 0 | 377 |

BACKGROUND AND CONTEXT

In 1910, Smithsonian Secretary Charles Walcott received a request 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 more than a century later continues to be a remarkable scientific resource for both countries and the wider world. The Smithsonian Tropical Research Institute (STRI) is now the principal U.S. organization dedicated to advancing fundamental scientific discovery and understanding of biological and cultural diversity in the tropics, and its contribution to human welfare. STRI plays an important role for the U.S. Government and the Smithsonian by maintaining world-class research facilities in Panama, where each year approximately 1,400 resident and visiting international scientists and university students 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, as ratified by the U.S. Senate in April of 1941 and codified in the Panama Canal Treaties. The BCNM is the only mainland tropical reserve under U.S. stewardship and served as the original base of operations for the 1910 expedition. Coibita Island was bequeathed to STRI to preserve and use for research, and is part of Panama's Coiba National Park, a UNESCO World Heritage Site.

Why is the Smithsonian in Panama? What is now Panama was under water until about three 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 a global change that dramatically impacted marine and terrestrial life. STRI has been located at the heart of this event for more than a century. Its 13 research facilities and field stations, 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. Furthermore, the 1,400 resident and visiting scientists and students hosted by STRI each year make it a vital teaching and research platform for the nation.

Scientific Productivity

A Visiting Committee of outside experts regularly evaluates the relevance, quality, and performance of STRI scientists. 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 another annual measure of the relevance and quality of STRI science to the future of tropical biology and policy.

STRI's 35 staff scientists and more than 200 research assistants-in-residence share the science platform with scientists from the United States and international

organizations. Each year, approximately 1,400 visiting scientists conduct research at STRI facilities with scientists who are leaders in their fields. This collaborative effort has produced more than 14,613 scientific publications to date, and currently results in an average of one new scientific publication every day.

However, FY 2020 was a challenging year and the measures needed to contain the COVID-19 pandemic required the closure of STRI facilities for most of that time. A lack of access to laboratory facilities and field sites led to a reduction in STRI's scientific research projects and publications. Numerous studies were halted or cancelled, and several long-term experiments were discontinued as well. Despite the closures, STRI's scientific achievements include the following:

- The Institute hosted 633 scientific visitors, down from the 1,172 scientific visitors in FY 2019, due to the COVID-19 closures.
- In FY 2020, STRI processed a total of 146 academic appointments, of which 82 (56 percent) were women and 64 (44 percent) were men. Of these, 71 (49 percent) were from Latin America. They received 34 internships, 26 predoctoral Fellowships and 11 postdoctoral Fellowships. (There were 241 academic appointments in FY 2019.)
- The Institute hosted nine field courses in FY 2020 compared to 16 field courses in FY 2019.
- In total, STRI's contributions to the Smithsonian Research Online bibliography included 566 publications by STRI-affiliated scientists for FY 2020: one book, four book sections, 198 online data sets, 361 journal articles, and two reports. This brings the total number to 14,613 STRI publications in the Smithsonian Research Online bibliography.

Scientific Directions

The long-term research conducted by STRI scientists and collaborators is an essential contribution to the Smithsonian Institution's Strategic Plan. STRI's strategic plan is closely aligned with the Smithsonian Strategic Plan, particularly with regard to the following: Goal 2: Catalyze new conversations and address complex challenges; Goal 4: Understand and impact 21st century audiences; Goal 5: Drive large, visionary, interdisciplinary research and scholarly projects; and Goal 6: Preserve natural and cultural heritage while optimizing our assets. STRI has invested for the long term in several core research directions. These include:

Environmental Health

The Panama Canal Watershed provides drinking water for more than one million Panama residents and sustains the Panama Canal, which is essential to maintaining U.S. trade and commerce. One-half 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 when compared with other types of land cover, presenting rigorous quantitative data on an important topic much debated by policy makers. The hydrology portion of the project focuses on how forests help sustain water-related ecosystems by mitigating the effects of droughts and floods and purifying water.

Monitoring Forest Health and the Global Carbon Cycle: ForestGEO

Combining private and federal support, STRI collaborates with the Smithsonian Environmental Research Center (SERC), National Zoo/Smithsonian Conservation Biology Institute (SCBI), 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 (NSF), National Aeronautics and Space Administration, National Oceanic and Atmospheric Administration, the U.S. Department of Agriculture Forest Service, U.S. Department of Energy, 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, now named ForestGEO, coordinates research activities in 27 countries on 71 standardized forest parcels to examine changes in forests, climate, and the interactions linking the two, as well as how these factors influence carbon sequestration.

Monitoring the Oceans: MarineGEO

The great success of ForestGEO led to the creation of MarineGEO, a cross-agency program that is developing a network of marine data-collection sites studying near-shore environments. MarineGEO is the first long-term, international research program to focus on understanding coastal marine life and its role in maintaining resilient ecosystems. With its strategic location, STRI is unique in its capability to provide facilities on two tropical oceans to continue this important research.

Marine Invasions

Trade through the Panama Canal increased dramatically since the June 2016 completion of the canal lock expansion project. As a result, STRI scientists and colleagues at SERC, in Maryland, are documenting the distribution of invasive marine organisms, providing an unparalleled platform to understand the biology and impact of invasive species. This research has profound implications for mitigating the problems of invasive species, such as emerging aquatic diseases in the great seaways of the world, from the Panama Canal to the Great Lakes of North America.

Marine Mammal Conservation

STR I scientists are radio-tracking humpback whales and other marine mammals, and revealed that the whales — notably mothers with calves — were at high risk of being struck by ships entering or exiting the Panama Canal. With support from Panama's maritime and Canal authorities, the International Maritime Organization approved a traffic separation scheme (TSS) in 2014, and officially implemented it as international policy. This type of marine conservation work is a U.S. State Department priority and demonstrated that the TSS could reduce potential collisions between ships and whales by 95 percent.

Panama Amphibian Rescue Conservation Project

Amphibians are disappearing around the world. A systematic global assessment of all 5,743 known amphibian species determined that one-third of all species surveyed are in danger of extinction. The main cause of this massive extinction is the pathogenic chytrid fungus *Batrachochytrium dendrobatidis* (Bd), which causes a disease called

Chytridiomycosis. In response to the massive loss of Panama's amphibian biodiversity, due mainly to the chytrid fungus, STRI has partnered with African Safari, the Houston Zoo, the Cheyenne Mountain Zoo, Zoo New England, Defenders of Wildlife, and the SCBI to found the Panama Amphibian Rescue Conservation (PARC) project. To date, the project has built two *ex-situ* facilities in Panama, and successfully bred more than 10 endangered amphibian species, including the Panamanian Golden Frog, a conservation flagship species now extinct in the wild.

Microbial Biology Research Program

As part of their core missions, SCBI, STRI, and SERC will establish tropical and temperate microbial biology research programs to fill significant gaps in knowledge and complement current data on ecosystem and species biodiversity and health in tropical and temperate ecosystems. Microbial biology is an important field of study because small life forms such as microbes, viruses, and microfungi constitute key branches of the Tree of Life, yet the overwhelming majority of their biodiversity has never been documented, and in most cases their contributions to sustaining ecosystem functions and the health of animals are unknown. Microbes help maintain the health of the biosphere in general, and human health in particular. Malevolent microbes challenge our public health systems, threaten agricultural, marine, and terrestrial ecosystems, and attack corals, plants, fish and other animals, as well as vulnerable human populations. Microbial pressures from human activities are most intense in coastal ecosystems, where most humans live. The increasing contact between humans, our livestock, and wild animals threatens to unleash new microbes as emerging agents of infectious disease. Recognizing the potential of this research, STRI recently received substantial funding from the Moore and Simons foundations to develop programs in microbial ecology on land and in the sea. This initiative also received funding from the Rohr Foundation to study how microbes can influence the resilience of dying coral reefs.

This FY 2022 budget request includes an increase of \$377,000 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 center to locate modern scientific instrumentation and facilities at the edges of tropical forests and coral reefs. STRI staff lead internationally recognized research programs and assist scientific visitors with obtaining visas, collecting permits, transportation, housing, computing, and library needs. STRI staff are also mentors for students from universities across the United States and around the world. Panamanian staff and the support of the Government of Panama, including rent-free use of multiple properties, have fostered Smithsonian research in Panama for more than a century and STRI 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. This will be accomplished through novel research, educating the next generation of scientists, and disseminating scientific findings to its global audiences.

Policy makers and scientists need long-term data on fluctuations in the primary productivity of forests and reefs 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 micro-organisms, in addition to the trees in the ForestGEO plots that scientists have monitored for more than three decades.

In addition, STRI shares knowledge, experience, and expertise with the next generation of tropical scientists. In particular, STRI typically hosts more than 800 pre- and postdoctoral students each year, half of whom come from the United States. For many, their experience at STRI is their first real opportunity to be scientists. The experience is transformational. As mentors, the Institute's researchers guide these future investigators, encouraging their scientific development and challenging them to develop the scientific rigor required to make new discoveries, and to share them for the welfare of humanity.

STRI also supports education by continuing 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 explains field and laboratory science and makes environmental research accessible to teachers and students.

ENABLING STRI's MISSION THROUGH ORGANIZATIONAL EXCELLENCE

STRI continues to advance the vision detailed in the decadal plan for upgrading its facilities, some of which date back to the pre-World War II era of Panama Canal defense. STRI is also developing its Coibita facilities as required by its benefactors. The 10-year STRI facilities plan represents an important opportunity for the Smithsonian to provide its tropical scientists with the modernized, sustainable, and state-of-the-science facilities needed to study and brainstorm solutions to the environmental challenges of the 21st century.

STRI also offers important facility resources for federal agencies and universities. For terrestrial research, STRI serves as the headquarters for ForestGEO. For coastal areas, the USGS partnered with STRI to establish seismic monitoring equipment on BCNM as part of its Caribbean Tsunami Warning System. In addition, the Continuously Operating Caribbean GPS Observational Network (COCONet) project, funded by the NSF, has partnered with STRI to develop large-scale geodetic and atmospheric monitoring infrastructure in the Caribbean. STRI's two marine facilities in the Atlantic (Bocas del Toro and Galeta) and two in the Pacific (Naos and Coibita Island) permit scientists to move between experiments in the eastern Pacific Ocean and the Caribbean Sea in a few hours. This 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 the NSF and the National Institutes of Health

for the ecologically guided discovery of new pharmaceutical compounds. STRI's direct access to two oceans takes on increased importance as experimental platforms to study the impact of climate change and ocean acidification on coastal coral reefs, sea grasses, and mangroves. In support of this vital research, the Institute's facilities on Coibita Island provide a new MarineGEO platform in the Pacific.

FY 2022 will be another year in which STRI continues to more efficiently use its available resources while at the same time adapting its work to be more cost-effective in the ever-expanding economy of Panama. STRI's organizational efforts will include continued upgrades of its physical plant by seeking to reduce deferred maintenance and to conduct more design planning. In addition, STRI will rely on its restructured organization, including its Information Technology department and finance and administration areas, to better and more efficiently meet the needs of its scientific computing community as well as the business needs of the Institute.

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.

More specifically, donor-designated support also includes an endowed chair for the director of STRI, an endowed staff position in tropical paleoecology, an endowed chair for the director of ForestGEO, and private funds for a staff position in terrestrial microbiology provided by the Simons Foundation. In addition, with private funds from the Moore Foundation, STRI has launched a new initiative to understand the important role played by microbes in marine ecosystems and hosts a series of postdoctoral Fellows. STRI is also leveraging private funds to support a new staff scientist and conduct research to better understand the vital role microbes play in determining the health of forest ecosystems.

Recent funding from the Rohr Foundation has enabled the Reef Resilience Program, including four new postdoctoral Fellows. Donor-designated support also funds postdoctoral studies of the relationship between organism 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 Laboratories and Coibita Island field station in the eastern Pacific Ocean.

Unfortunately, all of this private-sector support has been undercut by STRI's significant loss of trust funding as a result of the COVID-19 pandemic closures, with nearly all revenue-generating activities having been cancelled in FY 2020. This has required STRI to realign its expenses to maintain financial stability during the ongoing closures.

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 2020 ENACTED | 45 | 6,273 | 4 | 1,848 | 54 | 9,999 | 0 | 184 |
| FY 2021 ENACTED | 45 | 6,461 | 4 | 1,983 | 62 | 13,809 | 0 | 237 |
| FY 2022 REQUEST | 46 | 6,829 | 4 | 2,042 | 62 | 14,223 | 0 | 244 |

Federal Resource Summary by Performance Objective and Program Category

| Performance Objective/ Program Category | FY 2021 | | FY 2022 | | Change | |
|---|-----------|--------------|-----------|--------------|----------|------------|
| | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| Enhanced Interdisciplinary Research | | | | | | |
| <i>Research</i> | | | | | | |
| Engage in impactful scientific research and discovery | 6 | 1,471 | 6 | 1,501 | 0 | 30 |
| | | | | | | |
| Expand Digital Technologies | | | | | | |
| <i>Digitization and Web Support</i> | | | | | | |
| Provide improved digitization and Web support | 1 | 65 | 1 | 70 | 0 | 5 |
| | | | | | | |
| Understand and Impact 21st Century Audiences | | | | | | |
| <i>Public Programs</i> | | | | | | |
| Provide relevant reference services and disseminate information to the public | 3 | 274 | 4 | 429 | 1 | 155 |
| | | | | | | |
| <i>Exhibitions</i> | | | | | | |
| Offer compelling, first-class exhibitions | 15 | 2,268 | 15 | 2,345 | 0 | 77 |
| | | | | | | |
| <i>Education</i> | | | | | | |
| Engage and inspire diverse audiences | 5 | 480 | 5 | 505 | 0 | 25 |
| | | | | | | |
| Preserve Our Natural and Cultural Heritage | | | | | | |
| <i>Collections</i> | | | | | | |
| Improve the stewardship of the national collections | 12 | 1,447 | 12 | 1,508 | 0 | 61 |
| | | | | | | |
| Enable Cost-Effective and Responsive Administration | | | | | | |
| <i>Management Operations</i> | | | | | | |
| Enable efficient and responsive administrative infrastructure | 3 | 456 | 3 | 471 | 0 | 15 |
| | | | | | | |
| Total | 45 | 6,461 | 46 | 6,829 | 1 | 368 |

BACKGROUND AND CONTEXT

On May 9, 1923, the Freer Gallery of Art quietly opened its doors to the public as the first fine arts museum on the National Mall, embodying the fulfillment of Charles Lang Freer's dream to make his collection of nearly 10,000 Asian and American works of art available to the nation. Almost 65 years later, on September 28, 1987, the Arthur M. Sackler Gallery opened, adding another 1,000 works of Asian art and more than 40,000 square feet of public space.

The Freer and Sackler Galleries that, together, constitute the National Museum of Asian Art, now house one of the world's finest collections of these precious cultural artifacts and objects. Some 44,000 objects range from the Near East, through South and southeast Asia, to East Asia, and from the Neolithic period to the 21st century. Connected physically and unified administratively, the Galleries are dedicated to increasing our understanding of the arts and cultures of Asia through a broad portfolio of exhibitions, publications, conservation, research, and education.

Based on broad consultation, and fully aligned with the Smithsonian's overall Strategic Plan, the Galleries' new strategic plan, adopted in June of 2019, charts a path that is as faithful to our past as it is ambitiously future-oriented. The vision, values, and goals that it sets out promise a more creative, engaged, and efficient Museum; one that celebrates art and addresses essential questions about culture. Above all, it aims to do full justice to the extraordinary art it houses and the public trust it holds.

The FY 2022 budget request includes an increase of \$368,000 that includes \$228,000 for necessary pay and other related salary costs for existing staff funded under this line item, and a programmatic increase of 1 FTE and \$140,000 for visitor engagement.

MEANS AND STRATEGY

The Galleries will advance both Institution-wide and internal goals by continuing to execute their 2020–2025 strategic plan to guide operations, planning, and decision making. The plan's four goals are both practical and ambitious. They are as follows:

- Goal 1: To expand, preserve, and celebrate our collections;
- Goal 2: To identify, attract, and serve new audiences through both our physical and digital spaces;
- Goal 3: To foster an object-inspired understanding of the arts communities, cultures, and societies of Asia; and
- Goal 4: To build a Museum culture that is creative, collaborative, transparent, and resourceful.

In FY 2022, the Galleries intend to:

- ensure the integrity of our collection by enhancing the Galleries' excellence in conservation and scientific research;

- implement a digital plan that extends our reach and impact to national and international audiences;
- raise our local, national, and international profile through a coordinated campaign of communications, partnerships, and programming to attract audiences interested in understanding and celebrating Asian art and culture;
- better address visitor needs;
- build substantive and funded collaborations with the Smithsonian, selected museums, universities, and other non-profit partners to broaden our expertise and impact in fostering an understanding of Asian arts, cultures, and societies;
- build relationships with Asian and Asian American communities, including organizations that represent them, by enhancing our outreach and programming through formal partnerships and informal synergies;
- advance our centennial planning to ensure that we are prepared for this significant Smithsonian and Museum milestone; and
- advance a fundraising strategy to support the Galleries' priorities.

The Museum will monitor progress on these focused plans and other daily operations through its cross-departmental implementation team. This team provides regular oversight of our action plans and tracks our progress on key performance indicators. These metrics allow the Galleries to take advantage of emerging opportunities and adjust to revenue fluctuations but also provide the focus needed to ensure that the four goals of the plan are achieved.

In addition, the Museum has a longstanding commitment to education, scholarship, and research, which will continue to be advanced by sharing knowledge with our student audiences through deep digital engagement and online programming that bring our collections and research to the public.

In FY 2022, the Galleries will pay special attention to programming, visitor services, communications, research, and advancement. We will also increase our commitment to visitor accessibility in the following areas:

- Formalize plans for a centennial year celebration in 2023;
- Continue to operate under the constraints of the Smithsonian's response to COVID-19. This response has required a rethinking of our in-house operations. We have strengthened our visitor services team and operations plans to meet nearly \$1 million in operational costs;
- Build upon audience research, including the results of the study supported by a grant from the Smithsonian's Asian American Pacific Islander Center, to help Museum leadership better understand how the Galleries are viewed by Asian American communities;
- Capitalize on a digital-first approach that puts the Galleries at the forefront of the Smithsonian's open-access effort by executing the Museum's digital strategic plan developed in collaboration with an Institution-wide team of digital experts;

- Plan for a new Center for Asian Art Conservation, Research, and Education that builds upon the Museum’s unrivalled expertise in Asian art conservation and both broadens and deepens our impact as a leading educational resource for visitors, both in person and online;
- Transform the Galleries’ current laboratory into an active site of participation in and collaboration on conservation and scientific research. By expanding our digital reach, the Museum will engage current and new audiences more deeply in conservation work, sharing knowledge and stimulating new ideas; and
- Continue to implement a set of digital solutions which infuse features and functionality into core activities and better serve the needs of internal and external users.

The FY 2022 exhibition schedule and complementary public programs will offer opportunities for audience engagement with both historical and contemporary topics and provide access to some of the finest works of art from Asia.

As we continue to build a Museum culture that is creative, collaborative, transparent, and resourceful, we will assess and enhance staff development, the efficacy of our organizational structure, and oversight of internal controls, in the following ways:

- Maintain fiscal discipline in support of our strategic plan and take advantage of opportunities for investments in infrastructure and new partnerships;
- Recruit new talent in the areas of curation, research, visitor services, and administration, In FY 2022, we will work with our colleagues to ensure their successful transition to the Smithsonian and to provide the mentorship and resources they will need to advance our mission. This infusion of new thinking, talent, and enthusiasm will also allow Museum leadership to assess operations and ensure that the Galleries are nimble, collaborative, and well-positioned to meet the challenges of the next century; and
- Continue dedicating funds to leadership and supervisory training to equip managers and supervisors with the information, skills, and tools needed to make effective decisions.

EXPLANATION OF CHANGE

This budget request includes an increase of \$368,000 that includes \$228,000 for necessary pay and other related salary costs for existing staff funded under this line item, and a programmatic increase of 1 FTE and \$140,000 for visitor engagement.

Visitor Engagement (+\$140,000, +1 FTE)

The Galleries need a visitor services staffer to manage the visitor count system and provide the analytics required to deepen our understanding of visitors' journeys through our public spaces and improve visitor wayfinding, including signage and maps printed in multiple languages. The recent COVID-19 pandemic has made this need even more pressing because volunteers previously formed the foundation of our visitor services pool. This position is essential to enable the Museum to safely and reliably deliver on the Smithsonian's promise to ensure access for all, especially those with disabilities, and to support efforts to meet one of the most important operational challenges in visitor services.

NONAPPROPRIATED RESOURCES — General trust and donor/sponsor-designated funds are generated from memberships, revenue sharing from Museum shop sales and the Smithsonian Channel; participation fees from traveling exhibition venues; special events; unrestricted and restricted gifts and grants; and endowment income. The Freer and Sackler Galleries depend to a large extent on nonappropriated income sources 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 2020 ENACTED | 17 | 3,484 | 11 | 1,697 | 6 | 842 | 2 | 455 |
| FY 2021 ENACTED | 17 | 3,565 | 10 | 1,250 | 4 | 700 | 2 | 275 |
| FY 2022 REQUEST | 17 | 3,637 | 11 | 1,430 | 7 | 1,500 | 4 | 950 |

Federal Resource Summary by Performance Objective and Program Category

| Performance Objective/ Program Category | FY 2021 | | FY 2022 | | Change | |
|--|-----------|--------------|-----------|--------------|----------|-----------|
| | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| Enhanced Interdisciplinary Research | | | | | | |
| Research | | | | | | |
| Engage in vital arts and humanities research | 1 | 180 | 1 | 184 | 0 | 4 |
| Expand Digital Technologies | | | | | | |
| Digitization and Web Support | | | | | | |
| Provide improved digitization and Web support | 1 | 200 | 1 | 204 | 0 | 4 |
| Understand and Impact 21st Century Audiences | | | | | | |
| Exhibitions | | | | | | |
| Offer compelling, first-class exhibitions | 8 | 1,761 | 8 | 1,805 | 0 | 44 |
| Education | | | | | | |
| Engage and inspire diverse audiences | 1 | 205 | 1 | 209 | 0 | 4 |
| Preserve Our Natural and Cultural Heritage | | | | | | |
| Collections | | | | | | |
| Improve the stewardship of the national collections | 4 | 424 | 4 | 432 | 0 | 8 |
| Facilities and Safety | | | | | | |
| Improve Smithsonian facilities operations and provide a safe and healthy environment | 0 | 395 | 0 | 395 | 0 | 0 |
| Security | | | | | | |
| Provide world-class protection for Smithsonian facilities, collections, staff, visitors and volunteers | 0 | 100 | 0 | 100 | 0 | 0 |
| Enable Cost-Effective and Responsive Administration | | | | | | |
| Management Operations | | | | | | |
| Enable efficient and responsive administrative infrastructure | 2 | 300 | 2 | 308 | 0 | 8 |
| Total | 17 | 3,565 | 17 | 3,637 | 0 | 72 |

BACKGROUND AND CONTEXT

The Center for Folklife and Cultural Heritage (CFCH) is a research and education unit of the Smithsonian with the mission to increase understanding of the diverse, community-based cultural traditions found in the United States and around the world, aid their preservation and continuity, and strengthen the public's appreciation for our shared humanity. For more than five decades, the CFCH has accomplished this mission through scholarly research, public presentation — most dramatically through the Smithsonian Folklife Festival held annually on the National Mall — and widely distributed publications, as well as through Smithsonian Folkways Recordings, documentation, and archival preservation held in the Ralph Rinzler Folklife Archives and Collections and various other cultural heritage and sustainability projects. The Center has also developed a robust website and digital outreach presence that reaches an audience of hundreds of millions. The CFCH collaborates closely with Smithsonian museums, cultural and educational centers, and other federal partners — especially the Library of Congress' American Folklife Center and the National Endowment for the Arts' Folk and Traditional Arts program, in addition to hundreds of organizations in the United States and around the globe.

The CFCH is recognized as a national and world leader in the cultural heritage field. The award-winning Smithsonian Folklife Festival is a model for presenting living, community-based cultural heritage in U.S. states and other nations. The CFCH has repeatedly produced large, public educational events similar to the Festival and featuring cultural performances and demonstrations for presidential inaugurations, the opening of national museums and monuments such as the National Museum of African American History and Culture, the National Museum of the American Indian, the World War II Memorial, and the Olympics.

In the field of fine arts, Smithsonian Folkways Recordings has garnered critical acclaim, including 36 Grammy Award nominations, seven Grammys, and 26 Independent Music Awards for tradition-based musical recordings. Recognition of the CFCH's excellence includes Academy and Emmy Awards for documentary film, and awards from various educational organizations. Center staff have authored important books, been elected to the National Academies, led professional associations, and received top national and international honors. CFCH staff lecture at universities and museums and annually mentor more than 130 interns and Fellows from the United States and other nations. The CFCH consults with the U.S. Department of State on international cultural heritage policies and has partnered with the U.S. Agency on International Development (USAID) on many projects to encourage cultural enterprise and development.

The FY 2022 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

The CFCH accomplishes its mission through high-quality scholarship, educational productions, and project implementation which often involve collaborating with other Smithsonian and external partners. Toward this end, federal appropriations provide base-level support for research and education, archival and collections care, and Festival production, while also leveraging support from U.S. federal and state agencies, foreign nations, foundations, and philanthropic sources. Federal collections support is vital for research and educational purposes, and for Smithsonian Folkways Recordings, which generates \$3 million annually in earned revenue to support 20 staff salaries and operations from the proceeds of distributing and licensing music in the collections. Federal appropriations thus represent an investment that annually leverages about three times its value in nonappropriated funds and reaches an audience of more than 300 million a year, thereby also increasing public understanding of grassroots cultural traditions in the United States and abroad.

The CFCH's original signature production, the Smithsonian Folklife Festival, could not be held on the National Mall in 2021 due to the COVID-19 pandemic, but the Center replicated its success from 2020 by pivoting to an online presence that offers audiovisual musical performances, narrative sessions, crafts, and cooking demonstrations digitally. In 2022, the Festival will return to the National Mall for its two-week run, overlapping Independence Day celebrations with three programs: one focusing on American cultural traditions growing out of the nation's diverse religions; a second on the folklife of the United Arab Emirates; and a third on how local cultural traditions are applied to address environmental conservation. In 2023, the Festival is planning several programs, including one on the culture of the Ozarks and another on immigration and migration. In harmony with the Smithsonian's overall digital strategy to expand its reach, and applying lessons learned from digitally adapting to the pandemic, the Festival will offer more programmatic content online, extending its impact well beyond the two-week physical production on the National Mall.

Smithsonian Folkways Recordings — the Center's most broadly distributed signature product — extended its impact in 2021 with the continued success of three landmark music boxed sets: the New Orleans Jazz Festival; the Social Power of Music; and the Grammy-winning Pete Seeger collection. New releases in 2021 reflect the diversity of the collection, with recordings from artists such as Lucinda Williams, *Industrial Strength Blue Grass* from southwestern Ohio, and Miyamoto's *120,000 Stories* — music illustrating the experience of Japanese Americans and Asian Americans more broadly. Collaborations with the Smithsonian Latino Center have produced the *Tradiciones/Traditions* series, including a new recording by the Latino urban contemporary group Quetzal. *Songs of Our Native Daughters*, the latest offering in the *African American Legacy* series with the National Museum of African American History and Culture, formed the basis of a new television documentary for the Smithsonian Channel. *The Smithsonian Anthology of Hip Hop and Rap* will be the foremost product of that collaboration, a major production for release in late FY 2021 that will generate enormous attention with its nine CDs containing 129 tracks and a

well-illustrated, 300-page book. It is likely to become a benchmark publication, setting the standard for the field, much like prior Smithsonian anthologies of jazz and folk music. Numerous Smithsonian programs are scheduled to build off this boxed set in FY 2022. Additionally, about 15 new releases are planned for the coming year, including the first of those from the recently acquired Arhoolie Records collection.

Also in 2022, Folkways will continue to extend its reach to millions more listeners, distributing 65,000 tracks of audio recordings to teachers, students, scholars, and the public. Digital distribution will expand further via downloadable audio streams, podcast feeds, and multi-media video features. Folkways will continue to grow its 256 million-plus circulation of digital content through non-Smithsonian websites such as iTunes U, and SoundCloud, which will extend its reach to more than 100 countries. It will continue to expand its collaboration with private partners to deliver the entire Folkways collection to more than 560 libraries throughout the North American continent and beyond.

A third signature program, the Smithsonian Cultural Sustainability Initiative, invigorates the Center's long-established commitment to community engagement, cultural documentation, and support of cultural vitality. Four ongoing, five-year programs address the urgent need to save endangered languages and cultural expressions and the associated loss of their knowledge. This includes USAID-funded projects on preserving cultural heritage and connected livelihoods among Tibetan communities in China, and on linking cultural heritage preservation with sustainable tourism in Armenia. These philanthropically supported projects research ways to sustain minority languages in Europe and work with the Royal Textile Academy of Bhutan, a national center focused on preserving traditional weaving, and integrate such efforts with educational programs and economic development initiatives.

The Ralph Rinzler Folklife Archives and Collections contain the written and audiovisual documentation of more than 50 years of Festival research and planning, as well as the recordings of Folkways and 18 other labels and other projects. Recognized by the UNESCO Memory of the World Register, this is an extraordinary repository that documents humanity's grassroots cultural traditions and serves as a resource for scholars, artists, cultural workers, teachers, students, and the general public. In FYs 2021 and 2022, major tasks include the re-housing of the collections in expanded space and the digitization of audiovisual collections aided by funding from the Smithsonian's National Collections Program and the processing of materials from the Arhoolie Records collection. The Center will make these vast collections accessible to source communities and the public while ensuring their continued use as a "working archive" for CFCH staff who depend on them for ongoing productions.

Center curators and research staff will continue to publish books, articles, and Web features, and make professional presentations at gatherings of specialists. The CFCH's cultural heritage policy team will continue its vital participation in national and international cultural heritage policy formulation by consulting with the U.S. Department of State, cooperating with our national and

state folklife colleagues, and collaborating with other national and international organizations.

The CFCH continues to play a strong role in realizing the Smithsonian's Strategic Plan. It is a key collaborator with numerous museums and units for "One Smithsonian" initiatives. It led the Smithsonian Year of Music in 2019 and is working with the Smithsonian's Conservation Commons to help produce a major 2022 Festival program on the role of local community culture in environmental preservation. The CFCH works closely with the history, art, and culture museums and centers on public programs, Web features, and recordings. It has worked with colleagues in the National Museum of the American Indian and the National Museum of Natural History in organizing the annual Mother Tongue Film Festival. The Center also works with the National Museum of American History on the American Women's History Initiative. In addition, the CFCH plays a leadership role with programming for the Smithsonian Channel and regularly contributes stories to *Smithsonian* magazine. As the Smithsonian and the nation prepare for the 250th anniversary of U.S. independence, the CFCH expects to play a major organizing and coordinating role in those efforts as well.

NONAPPROPRIATED RESOURCES — General trust funds support salaries and benefits of approximately one-quarter of the CFCH's personnel, and revenues from Folkways Recordings pay about a third of all staff salaries and expenses. Donor and sponsor-designated funds cover costs related to specific projects such as the programmatic components of the Smithsonian Folklife Festival, some research efforts, and several other educational programs.

COOPER HEWITT, SMITHSONIAN 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 2020 ENACTED | 36 | 5,086 | 27 | 3,635 | 29 | 4,773 | 0 | 224 |
| FY 2021 ENACTED | 36 | 5,190 | 27 | 3,556 | 26 | 5,115 | 1 | 150 |
| FY 2022 REQUEST | 38 | 5,517 | 27 | 3,750 | 26 | 5,750 | 1 | 150 |

Federal Resource Summary by Performance Objective and Program Category

| Performance Objective/ Program Category | FY 2021 | | FY 2022 | | Change | |
|--|-----------|--------------|-----------|--------------|----------|------------|
| | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| Enhanced Interdisciplinary Research | | | | | | |
| <i>Research</i> | | | | | | |
| Engage in vital arts and humanities research | 4 | 364 | 4 | 375 | 0 | 11 |
| Expand Digital Technologies | | | | | | |
| <i>Digitization and Web Support</i> | | | | | | |
| Provide improved digitization and Web support | 1 | 108 | 2 | 216 | 1 | 108 |
| Understand and Impact 21st Century Audiences | | | | | | |
| <i>Public Programs</i> | | | | | | |
| Provide relevant reference services and disseminate information to the public | 1 | 128 | 1 | 131 | 0 | 3 |
| <i>Exhibitions</i> | | | | | | |
| Offer compelling, first-class exhibitions | 4 | 403 | 4 | 414 | 0 | 11 |
| <i>Education</i> | | | | | | |
| Engage and inspire diverse audiences | 3 | 270 | 3 | 278 | 0 | 8 |
| Preserve Our Natural and Cultural Heritage | | | | | | |
| <i>Collections</i> | | | | | | |
| Improve the stewardship of the national collections | 7 | 2,107 | 8 | 2,247 | 1 | 140 |
| <i>Facilities and Safety</i> | | | | | | |
| Improve Smithsonian facilities operations and provide a safe and healthy environment | 11 | 1,150 | 11 | 1,182 | 0 | 32 |
| Enable Cost-Effective and Responsive Administration | | | | | | |
| <i>Management Operations</i> | | | | | | |
| Enable efficient and responsive administrative infrastructure | 4 | 488 | 4 | 499 | 0 | 11 |
| <i>Information Technology</i> | | | | | | |
| Improve the Institution's information technology systems and infrastructure | 1 | 172 | 1 | 175 | 0 | 3 |
| Total | 36 | 5,190 | 38 | 5,517 | 2 | 327 |

BACKGROUND AND CONTEXT

Cooper Hewitt, Smithsonian Design Museum (CHSDM), in New York City, is one of two Smithsonian museums located outside of Washington, DC. CHSDM is the only museum in the nation dedicated exclusively to historic and contemporary design. Its collection is international in scope and encompasses 215,000 objects representing 30 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 educational programs, exhibitions, and publications. After a major renovation, CHSDM reopened in 2014, changing the way the Museum inspires, educates, and empowers people through design.

As the design authority of the United States, CHSDM's programs and exhibitions demonstrate how design shapes culture and history — past, present, and future. To achieve the Institution's strategic goal of Impacting 21st Century Audiences, 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 virtually and in venues outside the New York metropolitan area in 2022. Together, these programs will help CHSDM 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 FY 2022 budget request includes an increase of \$327,000. The increase includes \$110,000 for necessary pay and other related salary costs for existing staff funded under this line item and a programmatic increase of 2 FTEs and \$217,000 for collections and digital support.

MEANS AND STRATEGY

In FY 2022, CHSDM will continue to transform the Museum visit from passive to participatory with the most innovative, educational, immersive, and interactive exhibitions for the public, focusing on the design process. The Museum will present exhibitions on the 20th-century graphic design pioneer Edward McKnight Kauffer, *Design & Epidemics: Creativity Responds to Crisis*, which will focus on the innovative design work being done in response to the COVID-19 pandemic, and *Designing Peace*, which will explore how design can address some of our most vexing issues in society.

Building on the success of features such as the “interactive pen,” the Museum will continue to explore enhanced visitor experiences through the Interaction Lab, a new

kind of research and development space where we are reimagining the museum experience for the 21st century. With exhibits designed to keep pace with emerging technology, we are bringing a holistic, interactive design methodology to CHSDM's visitor experience.

CHSDM resources will continue to support our strategic goal to Enhance Disciplinary Research, thus ensuring the advancement of knowledge in the humanities through exhibition-related and collections-oriented scholarly research to create the most innovative and educational exhibitions for the public.

To achieve the goal of Preserving Our Natural and Cultural Heritage, the Museum continues to acquire objects for its internationally renowned permanent collection. With the digitization of the collection completed, CHSDM continues to expand its online programs and channels for all exhibitions. The Museum will continue its more than 30-year partnership with the New School/Parsons with an on-site graduate program focused on the history of design and curatorial studies, which will give students and scholars access to objects in CHSDM's collections.

In addition, CHSDM will inspire, educate, and empower audiences through design by offering educational programs and content in a variety of formats. The goal across all of the programming is to deliver content relevant to the program participant's level of understanding of design and design thinking. The Museum will engage inter-generational audiences that include students, educators, emerging designers, design professionals, and the general public, through beginning, intermediate, and advanced programs in design. Programs will focus on using objects in the collection or on view in an exhibition as points of inspiration and reference; with the broad goals of developing practical creative problem-solving and critical thinking that can be applied to any field. The Museum will also continue its traditional offerings such as design field trips, family programs, docent-led tours, and public programs. The Museum is committed to making its programs and content virtually accessible. Furthermore, CHSDM will continue to make its educational opportunities available to a much broader audience through online platforms such as the SI Learning Lab.

The Museum will also continue to offer nationally recognized design thinking-focused professional development workshops for K–12 educators across the country by leveraging its world-renowned design collection.

To advance the Smithsonian's goal of Enabling Cost-Effective and Responsive Administration, CHSDM 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, and increase the Museum's social media presence. CHSDM will maintain and cultivate substantive relationships with the public, its existing membership community, state and local governments, children, educators, business leaders, and designers.

EXPLANATION OF CHANGE

The FY 2022 budget request includes an increase of \$327,000. This includes \$110,000 for necessary pay and other related salary costs for existing staff and an increase (2 FTEs and \$217,000) for collections and digital support.

Collections and Digital Support (+\$217,000, +2 FTEs)

The programmatic increase of 2 FTEs will strengthen the Museum's support of its extensive collection and comprehensive digital initiatives. The collections database manager would develop consistent standards and improve data quality, efficiency, and workflows within the Museum's collections management system. This position is also key to the Museum-wide effort to unlock the collection, allowing CHSDM to make progress on tagging items in the extensive collection that are created by women and designers from under-represented groups, and making them easier to find. This position will also help propel increased use of the collection in all CHSDM's public-facing initiatives, which include open access and a new, more accessible online presence for the collection. The Museum's online collection is one of the most-visited pages on the website and one of the most popular collections within the Smithsonian's open access offerings, and is visited by local, national, and international audiences. With more support from a collections database manager, the online collection can continue to reach audiences around the world and help them discover the power of design.

The digital project manager will be responsible for ensuring that the digital projects are on schedule and facilitating clear communication between the many cross-department stakeholders responsible for the success of each project. Projects may be developed for individual exhibitions, public programs, publications, or in conjunction with the Museum's Interaction Lab. CHSDM is known for innovative digital initiatives, which require a great deal of internal project management to complete tasks in a timely manner. The position will play a crucial role in supporting the entire complex technical needs and executing the digital team's comprehensive roadmap. This will enable the Museum to continue its innovative digital work, which will make offerings more accessible and discoverable to audiences locally, nationally, and internationally, and allow our collections and scholarship to serve as an ongoing resource to educators, students, and design enthusiasts.

NONAPPROPRIATED RESOURCES — Nonappropriated resources support 60 percent of the Museum's operating budget. General trust funds are generated from memberships, Museum shop sales, admissions, special events, and unrestricted contributions. 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 contributions for new exhibitions, educational initiatives, and public outreach. Donor/sponsor-designated funds are essential to support exhibitions and educational initiatives. In addition, significant endowment gifts support research, exhibitions, public programs, and administrative functions.

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 2020 ENACTED | 37 | 4,544 | 7 | 2,840 | 19 | 8,153 | 0 | 13 |
| FY 2021 ENACTED | 41 | 5,007 | 7 | 4,223 | 24 | 12,000 | 0 | 30 |
| FY 2022 REQUEST | 44 | 5,479 | 7 | 4,223 | 24 | 8,000 | 0 | 0 |

Federal Resource Summary by Performance Objective and Program Category

| Performance Objective/ Program Category | FY 2021 | | FY 2022 | | Change | |
|---|-----------|--------------|-----------|--------------|----------|------------|
| | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| Enhanced Interdisciplinary Research | | | | | | |
| <i>Research</i> | | | | | | |
| Engage in impactful scientific research and discovery | 5 | 492 | 5 | 506 | 0 | 14 |
| | | | | | | |
| Expand Digital Technologies | | | | | | |
| <i>Digitization and Web Support</i> | | | | | | |
| Provide improved digitization and Web support | 1 | 133 | 2 | 276 | 1 | 143 |
| | | | | | | |
| Understand and Impact 21st Century Audiences | | | | | | |
| <i>Public Programs</i> | | | | | | |
| Provide relevant reference services and disseminate information to the public | 3 | 538 | 3 | 547 | 0 | 9 |
| <i>Exhibitions</i> | | | | | | |
| Offer compelling, first-class exhibitions | 15 | 1,696 | 15 | 1,738 | 0 | 42 |
| <i>Education</i> | | | | | | |
| Engage and inspire diverse audiences | 2 | 195 | 2 | 201 | 0 | 6 |
| | | | | | | |
| Preserve Our Natural and Cultural Heritage | | | | | | |
| <i>Collections</i> | | | | | | |
| Improve the stewardship of the national collections | 8 | 1,055 | 10 | 1,293 | 2 | 238 |
| | | | | | | |
| Enable Cost-Effective and Responsive Administration | | | | | | |
| <i>Management Operations</i> | | | | | | |
| Enable efficient and responsive administrative infrastructure | 7 | 898 | 7 | 918 | 0 | 20 |
| | | | | | | |
| Total | 41 | 5,007 | 44 | 5,479 | 3 | 472 |

BACKGROUND AND CONTEXT

The Hirshhorn Museum and Sculpture Garden is a leading voice for contemporary art and culture, providing 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 Hirshhorn enhances public understanding and appreciation of contemporary art through acquisitions, exhibitions, education and public programs, conservation, and research.

As the national museum for modern and contemporary art, the Hirshhorn is home to a collection of more than 12,000 artworks and objects which cover the broad sweep of visual culture of the last 150 years. Our extensive collection aligns with the Institution's goal to Preserve Our Natural and Cultural Heritage. While the initial collection was a gift from the Museum's founder, Joseph Hirshhorn, our collections acquisition efforts are ongoing. Our acquisition program focuses on artworks at the forefront of contemporary art, and we have increased efforts to prioritize greater diversity in our collection. For instance, nearly one-fifth of our acquisitions in the last five years were created by Black artists. The collections care and conservation of the Museum's extensive holdings receives a substantial portion of our resources and enables us to showcase artwork at the Museum, online, and through an active loan program with other institutions.

During FY 2021, the Museum transitioned from in-person to online programs and digital-native content as the primary means of connecting with our audiences. The closure of our physical spaces required by the COVID-19 pandemic provided an opportunity to highlight the time-based media and video works within our collection. We curated novel, digital-native exhibitions available to visitors through our website and social media channels, while also looking forward to the Museum's reopening and preparing thoughtful and well-researched physical exhibitions.

The Museum contributes to the strategic goal to Understand and Impact 21st Century Audiences with our wide range of educational and public programs that serve diverse audiences and encourage viewers to learn about various fields of contemporary culture. We leverage the lessons learned from *ARTLAB+*, our award-winning digital media studio that connects teenagers from local, underserved communities with artist mentors, to expand our audiences for youth and family programming.

The Museum also pursues the goal to Enable Cost-Effective and Responsive Administration by constantly improving its financial and administrative management tools and procedures. The Hirshhorn strives to cultivate a staff culture that is efficient, collaborative, committed, innovative, and diverse.

The FY 2022 budget request includes an increase of \$472,000. The increase includes \$117,000 for necessary pay and other related salary costs for existing staff, and a programmatic increase of 3 FTEs and \$355,000 for efforts to strengthen the Museum's collections management systems, online presence, and digital engagement.

MEANS AND STRATEGY

Efforts to support Enhanced Interdisciplinary Research continue as the Museum develops public forums on the intersections of art, design, technology, and education, featuring international subject-matter experts and an interactive online component, extending digital audience engagement far beyond the walls of the physical Museum. The Hirshhorn will expand its online and on-site programs dealing with the role of technology and new media in contemporary art, museum culture, and digital education.

The Hirshhorn's proposed exhibition schedule for FY 2022 builds upon the mission to expand access to the arts and increase public understanding of, and engagement with, the international scope of modern and contemporary art in all its diversity. FY 2022 will feature exhibitions and major events highlighting the best of emerging, international contemporary art. This will include:

- *Laurie Anderson: The Weather* will be the largest-ever U.S. exhibition of artwork by celebrated multimedia artist Laurie Anderson. Spanning her groundbreaking video and performance works from the 1970s to recent years, the exhibition will guide visitors through an immersive audiovisual experience. For more than four decades, Anderson has investigated pressing issues such as national identity, the climate crisis, and the effects of technology on human relationships.
- *Toyin Ojih Odutola: A Countervailing Theory*. Executed in pastel, charcoal, and chalk, the installation features a series of 40 drawings, each work acting as an individual episode within an overarching narrative. Ojih Odutola encourages viewers to piece together the fragments of the stories she presents. Set within a surreal landscape inspired by the rock formations of Plateau State in central Nigeria, the works depict a fictional prehistoric civilization dominated by female rulers and served by male laborers. Drawing on an eclectic range of sources, from ancient history to popular culture, she investigates the power dynamics at play within this community.
- *It's Art if I Say So*, a Virtual Museum exhibit featuring artworks donated by Aaron and Barbara Levine and exploring the inimitable ways that Marcel Duchamp transformed the possibilities of what an artwork could be. Also, *Blackbox 2.0* will continue as a thematic, online exhibition that explores how video, sound, and performance artists use new technologies and formats to imagine history now. *Blackbox 2.0* was introduced during the Museum's COVID-19-related closure and makes media artworks from the Hirshhorn's collection available to viewers at home.

In support of the strategic goal to Expand Digital Technologies, we will use the Museum's website to engage with local and remote audiences regarding exhibition offerings, upcoming public programs, and information about collections and artists. Featured content includes audio and video from public programs, interviews with artists and curators, and searchable access to the Museum's collections. The Hirshhorn's communication and marketing efforts will diffuse deep knowledge of contemporary art and culture, not merely describe activities and exhibits in superficial terms. The Museum

continues to publish original catalogues to complement exhibitions, along with other books that examine modern art, design, and cultural shifts of the early 21st Century.

Using *Hirshhorn Eye!* (*Hi!* for short), our revolutionary in-gallery art guide that uses image recognition to scan art and instantly provide access to exclusive artist videos and inside information, we have increased interaction between visitors and the digital resources of the Museum. *Hi!* content is updated regularly in coordination with our rotating exhibitions. In FY 2022, we will continue to create and deliver content that builds on the in-gallery exhibition learning aids. In addition, the innovative *Hirshhorn Eye!* technology will provide more in-depth content activations in our upcoming *Collections Handbook*. By scanning high-quality photographs, readers will be linked to artist interviews, additional viewpoints, and related content that could not be included in the published book.

The Hirshhorn will support the goal to Understand and Impact 21st Century Audiences through a range of public programs geared toward visitors with varying levels of art experience and cultural interests, and by expanding the concept of a museum as a learning center. Local artists will lead youth and teacher workshops for K–12 teachers and students. They will present ideas and inspirations to people of all ages through 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 different and unexpected fields to provide interpretive tours.

In concert with educational foundation sponsors, the Hirshhorn will reinvigorate the *ARTLAB+* program to create an environment where local teenagers can attend workshops to learn about and explore digital media. The Museum will re-launch the “Gallery 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. We will also pilot programs to capture additional audiences such as: preschool-aged children, families, and underserved audiences through increased accessibility programs offered in Spanish and American Sign Language.

The Hirshhorn will Preserve Our Natural and Cultural Heritage by continuing collections research in the Museum’s state-of-the-art Conservation Lab and collections storage space. The upgraded spaces have improved natural light to enhance collections management and conservation activities. In addition, the Hirshhorn will further research and preserve time-based media (e.g., film, digital video, and audio) artworks by integrating the work of conservation and exhibits to provide leading-edge presentation and responsible stewardship of the analog and digital time-based media. The Museum will also continue to photograph and catalogue the permanent collection to make the collection more accessible via search features on the Hirshhorn’s website.

Under the strategic goal to Enable Cost-Effective and Responsive Administration, the Museum will pursue capital projects that merge the functional with the artistic by including artists and designers in discussions with Smithsonian Facilities staff. This will involve a revitalization of the Sculpture Garden and repairs to the building envelope. These projects will enable the Hirshhorn’s physical plant to support the Museum’s mission and its

expanded programming and collections, as well as enhance the visitor experience and address critical infrastructure needs. The new garden will create an area for large-scale contemporary works and performances within intimate spaces where visitors can enjoy the Museum's modern masterpieces.

Finally, the Hirshhorn administration will continue to improve long-range program planning reviews to enhance resource allocation, funds management, and more effective cost sharing with outside organizations in support of major exhibitions and programs. By identifying and working with partners in the private sector, the Hirshhorn will leverage the Museum's federal appropriations to the maximum extent possible.

EXPLANATION OF CHANGE

The FY 2022 budget request includes an increase of \$472,000 that includes \$117,000 for necessary pay and other related salary costs for existing staff funded under this line item, and a programmatic increase of 3 FTEs and \$355,000 for digitization and collections support.

Digitization (+\$140,000, +1 FTE)

This budget request includes an increase of \$140,000 and 1 FTE for the hire of an IT specialist/webmaster. The addition of a webmaster will support the Museum's ability to feature time-based media artworks in the physical Museum galleries, as well as efforts to build the Hirshhorn's Virtual Museum. This will enhance the Museum's capabilities so they can participate in digital content production and more effectively transform their workflows to reach expanded audiences.

Collections Support (+\$215,000, +2 FTEs)

This budget request includes an increase of \$215,000 and 2 FTEs to hire a database administrator and a content manager. The database administrator will improve overall data management of the Museum's e-catalogue and will be responsible for the best practices related to the lifecycle of data, establishing security, and data-entry protocols. The content manager will produce, manage, and archive digital assets produced by the Hirshhorn, from artist interviews to *Hirshhorn Eye!* content. These positions will create enhanced, accurate catalogue records and improved data security in compliance with the Smithsonian's collections management policies.

NONAPPROPRIATED RESOURCES — General trust funds support salaries and benefits of administrative and development personnel, as well as some programs and public relations staff, advancement activities, and exhibition and program-related costs. Donor/sponsor-designated funds are essential to support 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 2020 ENACTED | 31 | 4,854 | 4 | 714 | 0 | 640 | 0 | 0 |
| FY 2021 ENACTED | 32 | 5,140 | 6 | 1,386 | 8 | 2,117 | 0 | 0 |
| FY 2022 REQUEST | 34 | 5,587 | 6 | 2,117 | 8 | 2,666 | 0 | 0 |

Federal Resource Summary by Performance Objective and Program Category

| Performance Objective/ Program Category | FY 2021 | | FY 2022 | | Change | |
|---|-----------|--------------|-----------|--------------|----------|------------|
| | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| Enhanced Interdisciplinary Research | | | | | | |
| <i>Research</i> | | | | | | |
| Engage in vital arts and humanities research | 3 | 589 | 3 | 600 | 0 | 11 |
| Expand Digital Technologies | | | | | | |
| <i>Digitization and Web Support</i> | | | | | | |
| Provide improved digitization and Web support | 4 | 349 | 6 | 694 | 2 | 345 |
| Understand and Impact 21st Century Audiences | | | | | | |
| <i>Public Programs</i> | | | | | | |
| Provide relevant reference services and disseminate information to the public | 3 | 555 | 3 | 566 | 0 | 11 |
| <i>Exhibitions</i> | | | | | | |
| Offer compelling, first-class exhibitions | 8 | 1,563 | 8 | 1,591 | 0 | 28 |
| <i>Education</i> | | | | | | |
| Engage and inspire diverse audiences | 4 | 558 | 4 | 573 | 0 | 15 |
| Preserve Our Natural and Cultural Heritage | | | | | | |
| <i>Collections</i> | | | | | | |
| Improve the stewardship of the national collections | 5 | 697 | 5 | 715 | 0 | 18 |
| Enable Cost-Effective and Responsive Administration | | | | | | |
| <i>Management Operations</i> | | | | | | |
| Enable efficient and responsive administrative infrastructure | 4 | 610 | 4 | 625 | 0 | 15 |
| <i>Information Technology</i> | | | | | | |
| Improve the Institution's information technology systems and infrastructure | 1 | 219 | 1 | 223 | 0 | 4 |
| Total | 32 | 5,140 | 34 | 5,587 | 2 | 447 |

BACKGROUND AND CONTEXT

The National Museum of African Art (NMAfA) inspires conversations about the beauty, power, and diversity of Africa's arts and cultures worldwide. The Museum strives to be the world's leading center of scholarly and artistic excellence on the arts of Africa and serves local, national, and international audiences on site and online. The NMAfA uses its unparalleled collections, exhibitions, education programs, and publications to foster the broadest access, dispel stereotypes, and collaborate with African, diasporic, and global communities. The Museum's activities and programming support the Institution's goals to be One Smithsonian and have a digital-first strategy while meeting the Grand Challenges of Valuing World Cultures, Understanding the American Experience, and Magnifying the Transformative Power of Arts and Design.

In FY 2021, the NMAfA plans to continue essential work on, exhibitions and programs, audience development, and collections/facilities care to fulfill its mission. A key component of Museum operations is the creation of temporary and long-term exhibitions of historical, modern, and contemporary artworks from its own collection and from other museums and private collections. A strategic range of public programs, curriculum-focused educational assets, and collaborations with organizational, university, and community partners will expand the NMAfA's reach to a wide range of local, national, and international visitors and stakeholders, both in person and online.

The NMAfA has, to date, been closed to the public for more than 15 months because of the COVID-19 pandemic. Upon reopening, substantial selections from the Museum's large and important permanent collection of Africa's historical, modern, and contemporary arts will remain on view in FY 2022. This includes the ongoing *Currents: Water in African Art* exhibition that features aquatic-themed artworks from the permanent collection; the multi-year exhibition *Heroes: Principles of African Greatness*, which uses interactive technology to engage visitors with stories about African men and women who achieved and exemplify greatness through varying types of heroism; and the long-term exhibition *Visionary: Viewpoints on Africa's Arts* that offers changing storylines and highlights substantial selections from the Museum's permanent collection of African works of art.

In FY 2022, the NMAfA will launch the exhibition *Iké Udé: Nollywood Portraits* featuring the work of the Nigerian-born, New York-based artist. Udé explores the school of Nollywood films, re-enacting the process of producing a major Nollywood picture and illustrating how audiences have a critical role in this process as actors, actresses, producers, and directors gain public acclaim through their skills in costume design, effective use of props, lighting, and performing before the camera's gaze. FY 2022 will also see the opening of the exhibition *From the Deep: In the Wake of Drexciya with Ayana V. Jackson*. Inspired by the Detroit-based Afrofuturist music duo Drexciya, photographer Ayana Jackson revisits the history of the trans-Atlantic slave trade in this first solo museum exhibition for the artist, one that addresses difficult and defining issues of history, race, representation, and the future. The exhibition will feature the artist's first video and a selection of full costumes realized in collaboration with designers in Senegal and Angola.

The Museum has launched Phase 1 of its renovations of the second-level staff and support facilities area to increase visibility and public access to assets, including the education program areas, the renowned Warren M. Robbins Library, and the Eliot Elisofon Photographic Archives, which are all dedicated to learning about African art. Phase 1 improvements include a new conference room and lecture hall with technology to provide both enhanced on-site and online public accessibility. The renovation plan repurposes the current architecture to minimize costs while improving spatial flow and efficiencies. This staged, multi-year renovation project permits ongoing access to current facilities.

The NMAfA is also working with the Freer and Sackler Museum of Asian Art to create new fire-rated storage spaces and modify existing fire-rated spaces as needed to meet current life-safety codes. In addition, the Museum has completed three phases of its main storage master plan and arranged funding for more phases of this work from the Smithsonian Collections Care and Preservation Funds (CCPF).

Because of COVID-19 concerns, several technology modifications are under way to support both on-site and virtual exhibitions and program access. Staff are working to adapt exhibition technology that permits touchless capabilities, as well as developing new digital technologies to create virtual gallery experiences. The NMAfA is exploring the potential to link this technology to the Museum's webpage and include add-ins such as artist or curator tours, other contextual information, and access to a new, online Museum store. To further enhance the in-person and online experience, the NMAfA has begun upgrading all exhibition fixtures and lamps with LED lights throughout the Museum. Two first-level galleries have been completed to date.

The NMAfA was awarded a \$1.5 million 5-year implementation grant from the Lilly Endowment Inc. to support our Global Religions of Africa Initiative. Africa's global religious practices on the continent and in its diasporas engage with verbal, visual, and performing arts and offer strategies relevant to the urgent issues of our day. This initiative focuses on educational programming, community outreach, and audience engagement through on-site and virtual programs. Endowment programming will be designed to enhance diversity, inclusion, access, and equity in program design and offerings, as well as to better represent voices and communities of faith. The grant includes contract support for a project coordinator and four paid internships per year.

The FY 2022 budget request includes an increase of \$447,000 that includes \$117,000 for necessary pay and other related salary costs for existing staff funded under this line item, and a programmatic increase of 2 FTEs and \$330,000 for digitization and Web support.

MEANS AND STRATEGY

The NMAfA contributes to the Smithsonian strategic goals to be One Smithsonian, catalyze new methods of engagement with larger audiences — including stakeholders historically engaged with the Museum as well as new, first-time visitor audiences — and reach one billion people globally through increased digital engagement. Through its expanding digital strategies, the NMAfA will emphasize

enhanced learning styles, language, and accessibility for differently abled visitors. The Museum has also launched a phased Web redesign that will address accessibility, offer content in additional languages, and present exciting NMAfA content for educators, art enthusiasts, and students from around the world. As part of this redesign, the Museum will also offer teacher resources in multiple languages and produce more visual content to reach a variety of diverse audiences.

The website redesign supports the FY 2021 and 2022 strategies to expand the Museum's social media presence on multiple platforms to reach a broader range of long-term audiences as well as new audiences and stakeholders. New digital stories will be developed and shared on the Museum's website, the NMAfA interface on Google Arts and Culture, via the Smithsonian Voices blog, as well as through social media platforms in an effort to broaden the reach of the Museum's work and increase its visibility.

The Museum will also continue digitizing its art and photographic archive collections to make them available to the public via the portals on the NMAfA website. This will increase public access to its collections through enhanced navigation features via eMuseum and multi-media applications, and by completing additional image and object catalogue records for the NMAfA's public access database. The Museum works closely with the Office of the Chief Information Officer to embark on a large-scale, mass-digitization project that will add a substantial number of new object records to the online collection database. Conservation and registration records are also being digitized and added to the Institution's database network.

In FY 2021, the NMAfA contracted with an audience research firm to design a comprehensive plan for the Museum to better identify both current audiences online and on site, as well as audiences who are unfamiliar with the Museum or have never participated in an NMAfA program. This research will drive the Museum's efforts to broaden visibility and prepare future programming that attracts more visitors. The Museum will continue to seek visitor feedback on exhibitions and programs in both the planning and implementation research phases, using visitor comments, docent interactions, and surveys of its public programs. In early FY 2022, the NMAfA will conduct a comprehensive audience research study that can better inform long-term strategies for audience engagement and development.

An online partnership with the Freer and Sackler Galleries produced the FY 2021 AfricAsia scholarly workshop that will result in an edited volume slated for publication in FY 2022. Other collaborative projects include working with Smithsonian units on best practices in program development, internships, and audience assessment. The NMAfA will also participate in a multi-unit Smithsonian initiative to develop a process for restitution and repatriation of colonial-era and looted collections objects. This collaboration will forge connections with colleagues at African museums to share information, develop mutually beneficial partnerships, and address questions of diversity, equity, access, and inclusion in the United States and worldwide.

The NMAfA will achieve the Smithsonian's strategic goal to reach one billion people a year with a digital-first strategy by expanding its use of digital technologies and focusing its resources in several areas: information technology (IT) operations;

staff performance and accountability; strategic audience engagement via social media; the development of curriculum materials to engage K–12 and university students in the arts of Africa; and effective relations with the news media.

The Museum’s IT plan has integrated functions for administration, collections management, exhibitions, and public access. NMAfA leadership has integrated these strategic goals and operational plans, in concert with the Secretary’s annual goals, into the performance plans for all Museum staff. Finally, the Museum will continue to forge strong relationships with the media, corporations, foundations, community interest groups, and congressional representatives.

EXPLANATION OF CHANGE

The FY 2022 budget request includes an increase of \$447,000 that includes \$117,000 for necessary pay and other related salary costs for existing staff funded under this line item, and a programmatic increase of 2 FTEs and \$330,000 for digitization and Web support.

Digitization and Web Support (+\$330,000, +2 FTEs)

This budget request includes an increase of \$330,000 and 2 FTEs to support the expanding digitization effort across NMAfA disciplines. The positions include a digitization specialist and an exhibition 3-D designer who would be responsible for managing the digitization of the Museum’s art and photographic archive collections and 3-D design of in-house exhibitions and permanent collection object rotations. These efforts will increase public access to the NMAfA’s collections through enhanced navigation features such as eMuseum and multi-media applications. The NMAfA will explore the potential of these projects to increase the number of touring exhibitions developed by the Museum and promote Museum scholarship, thereby achieving the goals of Expanding Digital Technologies and Impacting 21st Century Audiences.

NONAPPROPRIATED RESOURCES — General trust funds support staff salaries, benefits, and travel. The Museum raises contributions from individuals, foundations, and corporations to support activities and programs such as the newly launched Paid Internships Initiative, the ongoing NMAfA Women’s Initiative, and the five-year Global Religions of Africa Initiative. In addition, grants, donations, and sponsorships fund special projects like exhibitions, education programs, and publications. The Museum has expanded its offerings and increased fund raising to support new projects, such as collaborative programs with partner African museums, multi-year curatorial residencies, and participation in professional development training that increases both domestic and international peer perspectives, voices, and visibility from the African continent and around the globe.

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 2020 ENACTED | 19 | 2,490 | 2 | 483 | 0 | 25 | 0 | 670 |
| FY 2021 ENACTED | 20 | 2,698 | 3 | 556 | 0 | 0 | 0 | 150 |
| FY 2022 REQUEST | 21 | 2,873 | 3 | 612 | 0 | 25 | 0 | 75 |

Federal Resource Summary by Performance Objective and Program Category

| Performance Objective/ Program Category | FY 2021 | | FY 2022 | | Change | |
|--|-----------|--------------|-----------|--------------|----------|------------|
| | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| Enhanced Interdisciplinary Research | | | | | | |
| Research | | | | | | |
| Engage in impactful scientific research and discovery | 0 | 232 | 0 | 232 | 0 | 0 |
| Engage in vital arts and humanities research | 1 | 151 | 1 | 154 | 0 | 3 |
| | | | | | | |
| Understand and Impact 21st Century Audiences | | | | | | |
| Public Programs | | | | | | |
| Provide relevant reference services and disseminate information to the public | 3 | 246 | 3 | 255 | 0 | 9 |
| Exhibitions | | | | | | |
| Offer compelling, first-class exhibitions | 4 | 518 | 4 | 530 | 0 | 12 |
| Education | | | | | | |
| Engage and inspire diverse audiences | 4 | 470 | 4 | 482 | 0 | 12 |
| | | | | | | |
| Preserve Our Natural and Cultural Heritage | | | | | | |
| Collections | | | | | | |
| Improve the stewardship of the national collections | 3 | 391 | 4 | 515 | 1 | 124 |
| Facilities and Safety | | | | | | |
| Improve Smithsonian facilities operations and provide a safe and healthy environment | 1 | 118 | 1 | 121 | 0 | 3 |
| | | | | | | |
| Enable Cost-Effective and Responsive Administration | | | | | | |
| Management Operations | | | | | | |
| Enable efficient and responsive administrative infrastructure | 4 | 572 | 4 | 584 | 0 | 12 |
| | | | | | | |
| Total | 20 | 2,698 | 21 | 2,873 | 1 | 175 |

BACKGROUND AND CONTEXT

Since its founding in 1967, the Anacostia Community Museum (ACM) has been a means for people in urban neighborhoods to voice their concerns about city life, examine their role in society, and encourage local cultural expression. As the Smithsonian's first community museum, the ACM is uniquely positioned as a trusted bridge between organizations, academia, government, businesses, and community members which together give voice to untold perspectives and uncover new solutions to the problems of urban living.

The FY 2022 budget request includes an increase of \$175,000. The increase includes \$60,000 for necessary pay and other related salary costs for existing staff, and a programmatic increase of 1 FTE and \$115,000 to support collections care and digitization efforts.

MEANS AND STRATEGY

In 2020, the ACM kicked off a new initiative, Transforming America, focused on exploring issues through the lens of racial inequality. Each year, the Museum focuses on a different topic that is relevant to the community, both locally and nationally. The selected topics are food, housing, environment, education, and health. Using critical race theory, the Museum explores these topics by developing exhibits and programs aimed at diverse audiences. The initiative creates opportunities which take place both on Museum grounds and in community spaces.

One of the central components of Transforming America is providing opportunities for people to act on the information they are learning. This is directly tied to the ACM's mission to amplify the community's collective power and advance our vision to create a more equitable future for all. Through partnerships with local and national organizations, Transforming America will focus on serving the Washington, DC region, but its activities and programs are relevant for communities in urban areas around the country.

Enhanced Interdisciplinary Research

In FY 2023, the ACM will enhance its interdisciplinary research through the exploration of the environment. This is the third year of the Transforming America initiative and it will produce exhibits and programs focused on environmental issues, specifically in urban communities. In addition to Urban Waterways and Women's Environmental Leadership programs, the ACM will create experiences both on and off site to reflect the needs of the community and how different neighborhoods interact with their environments on a daily basis.

Understand and Impact 21st Century Audiences

The ACM completed an audience survey in 2020 and launched a new brand in 2021. To continue to build upon the Museum's focus on the audience, the ACM will reach out to diverse communities, learn their needs, and co-create content. In addition to in-person program opportunities, the ACM plans to continue its online programs and make better use of its collection by continuing to digitize its content.

Pop-up Programming and Exhibitions

With the success of *Men of the Change — Taking it the Streets* in 2021, the ACM will continue to develop exhibits and experiences in the local community. This will allow the Museum to continue to connect with the community around the ACM as well as be responsive to the needs of the community in real time. By placing exhibits and experiences outside of the Museum walls, the ACM expands its audience base and helps people rethink the role of community museums.

Education

DC Public School Engagement — the ACM is expanding its partnerships and work with Washington, DC public schools and other educational institutions to engage middle/high school students with ACM exhibitions and collections content. This project will develop specific engagement modalities for students, including on site, off site, and online. This involves designing programs and engaging in Museum-based experiences for both on-site and classroom experiences.

Preserve Our Natural and Cultural Heritage

Collections

The ACM is committed to improving stewardship and increasing public access to its collections. The Museum's major priority is to continue to digitize collections and develop its online portal to make hundreds of high-quality images and records available through the Smithsonian's Collection Search Center and The Museum System (TMS) database.

EXPLANATION OF CHANGE

The FY 2022 budget request includes an increase of \$175,000 that provides \$60,000 for necessary pay and other related salary costs for existing staff funded under this line item, and a programmatic increase of 1 FTEs and \$115,000 to support collections care and digitization efforts.

Collections Support (+\$115,000, +1 FTE)

This request supports a new, high-quality exhibition program designed to activate citizen engagement on critical civic issues, which includes a program of off-site exhibitions within non-traditional community locations.

The Museum will fully implement this program with this request to support a collections position who will continue to digitize collections and develop the ACM's online portal to make hundreds of high-quality images and records available through the Smithsonian's Collection Search Center and TMS database. This will create community-focused content that can be shared with multiple audiences through a variety of online platforms.

NONAPPROPRIATED RESOURCES — The ACM's financial strength is closely tied to its strategic revitalization. In FY 2022, advancement staff will leverage the Museum's new leadership, direction, and model to inspire current donors while attracting new ones through the development of a comprehensive fundraising plan. The ACM also sees the activation and communication campaign as a key component to fund raising because enhanced and widespread awareness will lead to better connections with community partners and local entities for giving and resource sharing.

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 2020 ENACTED | 17 | 1,933 | 0 | 546 | 18 | 2,153 | 0 | 0 |
| FY 2021 ENACTED | 17 | 1,987 | 1 | 292 | 18 | 2,411 | 0 | 0 |
| FY 2022 REQUEST | 17 | 2,023 | 2 | 510 | 18 | 2,748 | 0 | 0 |

Federal Resource Summary by Performance Objective and Program Category

| Performance Objective/ Program Category | FY 2021 | | FY 2022 | | Change | |
|---|-----------|--------------|-----------|--------------|----------|-----------|
| | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| Expand Digital Technologies | | | | | | |
| <i>Digitization and Web Support</i> | | | | | | |
| Provide improved digitization and Web support | 1 | 144 | 1 | 127 | 0 | -17 |
| | | | | | | |
| Understand and Impact 21st Century Audiences | | | | | | |
| <i>Public Programs</i> | | | | | | |
| Provide relevant reference services and disseminate information to the public | 1 | 146 | 1 | 121 | 0 | -25 |
| <i>Exhibitions</i> | | | | | | |
| Offer compelling, first-class exhibitions | 1 | 82 | 1 | 112 | 0 | 30 |
| | | | | | | |
| Preserve Our Natural and Cultural Heritage | | | | | | |
| <i>Collections</i> | | | | | | |
| Improve the stewardship of the national collections | 12 | 1,134 | 12 | 1,255 | 0 | 121 |
| Enable Cost-Effective and Responsive Administration | | | | | | |
| <i>Management Operations</i> | | | | | | |
| Enable efficient and responsive administrative infrastructure | 2 | 481 | 2 | 408 | 0 | -73 |
| | | | | | | |
| Total | 17 | 1,987 | 17 | 2,023 | 0 | 36 |

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 30 million unique letters, diaries, photographs, financial records, sketchbooks, scrapbooks, and the like, AAA embodies the Smithsonian's mission for "the increase and diffusion of knowledge."

To achieve the Institution's strategic goal to reach one billion people a year with a digital-first strategy, AAA continues its ambitious digitization program, established in 2005, to provide online access to a significant portion of its holdings. By digitizing entire archival collections and fulfilling digitization-on-demand requests from researchers, in FY 2022, AAA will make hundreds of linear feet of material freely available online and easily searchable.

In addition, AAA continues to engage in comprehensive and systematic collection assessment surveys to inform the strategic goal of Preserving Natural and Cultural Heritage while optimizing its assets. As part of this effort, AAA continues to decrease the backlog of unprocessed collections, and both audiovisual (AV) and born-digital holdings.

AAA will provide a nimble, cost-effective, and responsive administrative infrastructure by regularly assessing and enhancing staff development and maintaining conscientious oversight of internal controls.

The FY 2022 budget request includes an increase of \$36,000 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 to Understand and Impact 21st Century Audiences by representing the American experience and diversifying our exhibitions online and in the Donald W. Reynolds Center. As part of this effort, AAA is collaborating with the Smithsonian American Art Museum on the exhibition *Subversive, Skilled, Sublime: Fiber Art by Women*, which will open in March of 2022, and is working with the National Portrait Gallery to co-curate the exhibition *Felix Gonzalez-Torres: Angel of History*, which is scheduled to open in the fall of 2024. These two exhibitions also address the goals of One Smithsonian, with collaborative programming and, in the case of the fiber-art exhibition, promoting the American Women's History Initiative.

In FY 2022, with lessons learned from the Smithsonian's experience with the COVID-19 pandemic, AAA will refine its means of conducting remote oral history interviews, with portable kits funded by the Alice L. Walton Foundation. Interviews conducted remotely will focus on under-represented artists. The Archives will reach new audiences through a podcast series, drawing on the depth of AAA's oral history collection and incorporating multiple points of view from external partners. AAA will continue virtual events which tell an expansive story of art and the American experience while highlighting the mission of the Archives to preserve these primary sources and make them available to the public.

In FY 2022, with ongoing support from the Terra Foundation for American Art and other funding streams in the private sector, AAA will add an estimated 150,000 digital image files online. AAA will also develop its internal digitization and Collections Information System (CIS) application to ensure proper collections documentation and support increasingly complex workflows, as well as to provide proper logging and accessioning of materials in born-digital formats. These efforts will enable AAA to track the life cycle of all materials from pre-acquisition to storage and access. In addition, AAA will work with staff in the Office of the Chief Information Officer to leverage its investment in the description, digitization, and management of its collections by participating in ArchivesSpace, SOVA (Smithsonian Online Virtual Archives), the Smithsonian's Enterprise Digital Asset Network (EDAN) architecture, the Digital Asset Management System (DAMS), the Smithsonian Transcription Center, and other Smithsonian digitization initiatives.

In FY 2022, the Archives' goal will be to process all new collections and at least 10 percent of AAA's backlog, or about 1,000 linear feet of archival collections, resulting in new, fully searchable finding aids on AAA's website. Finding aids will provide online access to many previously hidden collections, with a focus on the records of art galleries and the papers of women artists. System workflows will continue to integrate accelerated processing and preservation strategies to diminish the current backlog and prevent a new backlog.

With the hiring of a new audiovisual archivist, AAA will conduct a review of its workflows for the acquisition, preservation, and description of and access to AV formats. This review will drive plans to digitize large quantities of at-risk digital formats and advance AAA's role in the new Institution-wide Audiovisual Media Preservation Initiative (AVMPI).

AAA will continue to strengthen its collections stewardship through its ongoing, comprehensive collections assessment surveys for manuscript collections, photographic materials, and at-risk audiovisual and born-digital holdings. Reports generated from this data provide valuable information about AAA's holdings, so the Archives' staff can make informed decisions about the best way to allocate resources. AAA will take a leadership role in working with the larger Smithsonian archival community to initiate and implement Institution-wide comprehensive collections assessment strategies and systems.

In FY 2022, AAA will continue to support researchers with access to its collections and microfilm in its Washington, DC, and New York City research centers, as well as other U.S. research centers, by providing remote reference services through its Web-based "Ask Us" form, and begin to digitize its legacy microfilm, on demand, with the goal of phasing out the interlibrary loan of microfilm reels and increasing the Archives' revenue stream.

Furthermore, AAA will establish a new two-year residency position in FY 2022 for an entry-level archivist to participate in accessioning, collections stewardship and processing, reference services, and digital projects. This position will include opportunities for professional development and mentorship.

Finally, AAA will Enable Cost-Effective and Responsive Administration by continuing to implement the strategic goals of the Smithsonian, and by adopting national best practices and standards to make the most cost-effective use of Smithsonian resources.

NONAPPROPRIATED RESOURCES — General trust funds support AAA’s advancement 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 2022, the Archives will continue to work closely with its diverse advisory board to position this publication as the leading scholarly journal in the field of American art history. During the past six years, AAA has increased the number of outstanding submissions, raised the visibility of the journal, strengthened the Archives’ relationship with the University of Chicago Press, and established more cost-effective, multi-year contracts for design and printing.

Also in FY 2022, the Archives will continue to develop strategies for sustaining its digitization program by growing its endowment to support essential staff and implementing improved rapid-capture technologies and techniques. Funding from the Terra Foundation for American Art, the Roy Lichtenstein Foundation, and other donors supports AAA’s digitization program. The Archives will continue to raise money for digitization, oral history projects, collections management, and 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 2020 ENACTED | 152 | 33,117 | 6 | 2,679 | 47 | 14,726 | 0 | 0 |
| FY 2021 ENACTED | 152 | 33,751 | 9 | 2,796 | 59 | 24,520 | 0 | 0 |
| FY 2022 REQUEST | 155 | 34,853 | 9 | 2,803 | 59 | 24,854 | 0 | 0 |

Federal Resource Summary by Performance Objective and Program Category

| Performance Objective/ Program Category | FY 2021 | | FY 2022 | | Change | |
|--|------------|---------------|------------|---------------|----------|--------------|
| | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| Enhanced Interdisciplinary Research | | | | | | |
| <i>Research</i> | | | | | | |
| Engage in vital arts and humanities research | 22 | 6,204 | 22 | 6,301 | 0 | 97 |
| Expand Digital Technologies | | | | | | |
| <i>Digitization and Web Support</i> | | | | | | |
| Provide improved digitization and Web support | 16 | 1,526 | 16 | 1,596 | 0 | 70 |
| Understand and Impact 21st Century Audiences | | | | | | |
| <i>Public Programs</i> | | | | | | |
| Provide relevant reference services and disseminate information to the public | 13 | 3,284 | 13 | 3,341 | 0 | 57 |
| <i>Exhibitions</i> | | | | | | |
| Offer compelling, first-class exhibitions | 19 | 3,904 | 19 | 3,988 | 0 | 84 |
| <i>Education</i> | | | | | | |
| Engage and inspire diverse audiences | 24 | 5,713 | 26 | 6,069 | 2 | 356 |
| Preserve Our Natural and Cultural Heritage | | | | | | |
| <i>Collections</i> | | | | | | |
| Improve the stewardship of the national collections | 18 | 3,416 | 19 | 3,679 | 1 | 263 |
| <i>Facilities and Safety</i> | | | | | | |
| Improve Smithsonian facilities operations and provide a safe and healthy environment | 5 | 1,435 | 5 | 1,457 | 0 | 22 |
| Enable Cost-Effective and Responsive Administration | | | | | | |
| <i>Management Operations</i> | | | | | | |
| Enable efficient and responsive administrative infrastructure | 27 | 4,558 | 27 | 4,676 | 0 | 118 |
| <i>Information Technology</i> | | | | | | |
| Improve the Institution's information technology systems and infrastructure | 8 | 3,711 | 8 | 3,746 | 0 | 35 |
| Total | 152 | 33,751 | 155 | 34,853 | 3 | 1,102 |

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 African Americans. In 2016, the NMAAHC, the first environmentally sustainable, “green” museum on the Mall, opened to the public, providing a national meeting place for all people to learn about the history and culture of African Americans and their contributions to every aspect of American life. This Museum seeks to help all Americans and others around the world to understand these contributions, and in so doing, stimulate a dialogue about race and help foster a spirit of reconciliation and healing. As the only national museum devoted exclusively to documenting and exploring African American history and culture, the NMAAHC bridges a major gap in our national memory by creating exhibitions and programs focusing on a wide arc of history and looking deeply into slavery, Reconstruction, the Harlem Renaissance, the great migrations of African Americans during the World Wars, the civil rights movement, and other significant issues of the 21st century. The Museum also celebrates African American creativity and cultural expressions through art, dance, theater, and literature.

The Museum opened to unprecedentedly large crowds in 2016. The building, exhibitions, information technology (IT), and Sweet Home Cafe have all been award-winning entities, creating even more excitement, and the shops continued to enjoy large crowds until the COVID-19 pandemic forced the Museum to temporarily close to the public. FY 2022 will mark the continuation and expansion of major initiatives which fulfill the mission of looking at American history through the lens of African American history and culture: the building of a national collection; continued development of IT and digitization programs; and the development and continued implementation of a robust research and education programming initiative — through both virtual and in-person resources.

The FY 2022 budget request includes an increase of \$1,102,000 that provides \$668,000 for necessary pay and other related salary costs for existing staff funded under this line item, and a programmatic increase of 3 FTEs and \$434,000 for education and collections support.

MEANS AND STRATEGY

In FY 2022, as the NMAAHC adjusts to a post-COVID-19 environment, the Museum’s top priority will continue to be making long-term enhancements to its scholarly research and education programs. This includes continuing to grow domestic and international partnerships to further generate support for the Museum; designing and developing temporary and traveling exhibitions for display throughout the United States; expanding scholarly research in all areas of African American history and culture; and developing robust virtual and in-person education programs for the public, educators, and students.

In FY 2022, the IT office will continue to work closely with the NMAAHC education and curatorial affairs department to broaden the Museum’s reach and

impact by leveraging technology and platforms to enhance education programs, promote engagement with visitors before, during, and after a visit, and improve accessibility features to engage a global audience.

The Museum will expand its interactive, online, and mobile offerings to include innovative and engaging content that further connects visitors to collection objects and topics of interest. The Searchable Museum is a multi-year project that aims to make all the NMAAHC's content — including collections, scholarly efforts, and interpretive content for all exhibitions — searchable through digital channels. In FY 2022, the Museum will continue prototyping The Searchable Museum, bringing the rich, interpretive experience of the *Slavery and Freedom* exhibits online and ensuring a broad national and global reach for new audiences. More than 1,500 digital object records have been identified for the *Slavery and Freedom* experience.

Also in FY 2022, curators and Museum specialists will continue to conduct in-depth studies of the NMAAHC's historical artifacts, fine art, archival materials, photographs, film, and other media collection areas. Museum staff will contextualize and collect objects relevant to crucial contemporary events as they relate to the African American experience, with the aim of catalyzing new conversations and addressing complex challenges.

The NMAAHC will achieve the goal of engaging in vital arts and humanities research by continuing to advance the work of the Center for the Study of Global Slavery. The Center's Slave Wrecks Project network will focus its research, preservation, capacity building, and community engagement efforts on the *Clotilda* slave ship discovery in Alabama. The Center's participation in the Global Curatorial Project will move into the planning phase of its global traveling exhibition, *In Slavery's Wake*, and launch the *Unfinished Conversations* oral history program. In addition, the NMAAHC continues to work with the Getty Research Institute to co-administer the Johnson Publications Photo Archive, a collection of more than four million prints and negatives from *Ebony* and *Jet* magazines — making it the most significant collection of photographs cataloguing African American life in the 20th century. In FY 2022, an archivist/project manager will conduct an inventory of the entire collection, helping to make the archive accessible to the broadest audience possible.

The *Smithsonian Anthology of Hip-Hop and Rap*, produced in collaboration with Smithsonian Folkways Records, is scheduled for release in FY 2022. The boxed set includes a 300-page illustrated book, nine CDs, essays, and extensive liner notes that capture the evolution of hip-hop from its earliest days to the present and providing a scholarly and accessible take on one of the world's most popular musical forms.

To achieve the strategic goal of Expanding Digital Technologies, the Museum's Web and emerging media team will continue to collaborate with the Office of Curatorial Affairs, Education, and Public Affairs to develop educational, informative, and engaging digital experiences as part of the Smithsonian's "digital-first" strategy to reach one billion visitors a year across all platforms. The NMAAHC website and mobile applications will continue to enhance the virtual and in-person visitor experience and increase the Museum's reach and impact by digitizing objects from the collections and exhibitions,

making the Museum more accessible to a more diverse, global audience and helping to connect with underserved communities. New “digital-only” experiences, building on The Searchable Museum, will also be developed,” which will further realize the goal of Expanding Digital Technologies.

Also, the Museum’s IT and digitization offices will continue to create searchable and accessible digital records for collection objects, object management, and high-quality digital surrogates, especially for recent acquisitions and undigitized objects, by improving the features and functions of The Museum System (TMS) database. These will be used with a digital-first strategy to encourage new conversations and stimulate innovative, interdisciplinary research. The Robert Frederick Smith Fund for the Digitization and Curation of African American History will enter its sixth year of public programming, collection digitizing, student professionalization, and visitor engagement through the Explore Your Family History Center and the Community Curation Program. A digital portal invites audiences to share personal stories, digitized images, video, audio, and other media sourced from the Museum’s community, collected through the Community Curation and Great Migration programs, and hosted in and delivered from the NMAAHC’s cloud-computing environment to provide a more scalable, cost-effective solution for digital storage and delivery. This means that the NMAAHC can offer curated and user-generated selections of collections via digital portals on the Museum’s website and through online partnerships.

The NMAAHC will continue to make all digitized collection records and images for all unrestricted materials freely available via the Digital Public Library of America, and participate in other platforms to make high-quality collection information and images from many institutions available with one-stop searching. In addition to serving as a resource clearinghouse, the Museum will increase access to the Freedmen’s Bureau records by continuing a multi-year effort with the Smithsonian Transcription Center to provide searchable, full-text transcriptions of the records and link them to the existing genealogical index. This will include working with partners to conduct Transcribe-a-Thons, where volunteers will help transcribe historical material.

The Museum’s Office of Strategic Partnerships (OSP) will achieve the strategic goal of Understanding and Impacting 21st Century Audiences by continuing to deliver far-reaching and transformative support for African American and African Diaspora history and culture organizations on a regional, national, and international level. The OSP connects with and builds awareness about the work of its participating institutions and provides access to training and resources in support of leaders and field-wide best practices. In FY 2021, the OSP launched the Historically Black Colleges and Universities (HBCU) History and Culture Access Consortium, a five-year pilot initiative to address issues facing HBCUs and their affiliated museums and archives. This multi-year initiative will strengthen the long-term institutional sustainability of these vital cultural organizations. The resulting community of best practices will focus on skill-based training for traditionally under-represented professionals; executive leadership training; and collections inventory and digitization. The initiative will culminate in 2026 with a travelling exhibition, aligned with the U.S. semi-quincentennial, to highlight the essential role HBCUs have played to advance American history and identity.

The NMAAHC continues to offer compelling, first-class exhibitions and engage and inspire diverse audiences. In FY 2020, the Museum opened a temporary exhibition entitled *Now Showing: Posters from African American Movies*, exploring the history and visual culture of film posters featured in the Earl W. and Amanda Stafford Center for African American Media Arts (CAAMA). Due to COVID-19-related closures of the Museum, the exhibition dates have been extended through FY 2022. The next CAAMA show, *The Politics of Black Style*, will explore how African Americans have used dress and style throughout the American history of protest as a political strategy to combat racism, as well as to create strong black identities. This will be followed by an exhibition about Black religious life.

In the fall of 2021, the NMAAHC will open the temporary exhibition *Reconstruction: Remaking America without Slavery*. This exhibition will explore how African Americans, in seeking to define themselves as free and equal citizens after the end of slavery, reshaped the nation in profound and lasting ways. The legacies of Reconstruction — its promises, successes, and failures — shed light on issues of race, citizenship, and social justice which continue to reverberate in American society. In addition to the exhibition, the Museum plans to host related public programming and educational initiatives, as well as a potential publication and a traveling component of the exhibit.

The fall of 2022 will see the opening of the next temporary exhibition, *Afro-Futurism: A History of Black Futures from the Past, Present, and Beyond*. This exhibition will present an alternative, deeper dive into ideas of black identity and representation by contextualizing the African American experience through the perspectives of science, technology, and futuristic principles. *Afro-Futurism* will provide a template for re-imagining black futures, unimpeded by the restrictions of racism, and will explore the various people, concepts, themes, and artistry that have given voice to expressions of such a freer society. In addition, the Museum will continue its intensive and comprehensive rotation program to replace loans and at-risk objects within the inaugural exhibitions. The NMAAHC replaces 200–300 objects per year on a twice-yearly cycle.

The COVID-19 realities of 2020 and 2021 necessitated transferring all public programs to a virtual environment but still allowed the NMAAHC to achieve the goal of engaging and inspiring diverse audiences locally, nationally, and around the world by presenting an array of lectures, conferences, community resources, staged readings, film screenings, concerts, and conversations with renowned scholars, thought leaders, musicians, actors, artists, and filmmakers to serve a diverse and broad community of learners. In FY 2022, the Museum will continue to present programs digitally and will resume doing so in-person when it is safe for the public and staff. Into the future, the NMAAHC will always make resources available by streaming to enable audiences to participate across the globe. The Museum's office of education will continue ongoing initiatives for all audiences by expanding digitally based resources which use the NMAAHC collections and exhibitions, offer educator and caregiver development opportunities, and provide resources for the classroom and home. Online lessons for curriculum development in classrooms and educational programming in the Museum will begin when safe. The office of education will also operate the "Save Our African American Treasures" program to help people preserve their personal collections.

In FY 2021, the office of visitor and guest services led the planning for reopening the Museum to the public, and in FY 2022 will continue implementing revised and tested visitor operations and digital experiences to enhance opportunities for the public.

The NMAAHC will further the goal of disseminating information to the public by continuing to educate people about African American history and culture through media, marketing, and social media channels. Media campaigns, cultivation and outreach, marketing, communications, and social media are avenues the Museum will continue developing to build and maintain a positive brand. The Museum will celebrate its fifth anniversary with activities to highlight the importance of African American history and culture to the country and the NMAAHC's prized place of honor in the Smithsonian family of museums.

To achieve the strategic goal of Preserving Our Natural and Cultural Heritage, the office of curatorial affairs will continue to identify, acquire, and process collections, and develop and refine its permanent collections. The Museum has collected nearly 40,000 objects, and in FY 2022 will employ numerous collection management policies to safely handle, display, and store these collections. In FY 2022, the NMAAHC will continue to prepare for its next accreditation from the American Alliance of Museums.

In addition, the Museum continues to make significant progress with its Smithsonian Collections Care Initiative (CCI) project, "Preserve and Organize NMAAHC Collections in Storage." Activities include developing return-to-work safety plans; conducting a risk assessment for art and objects planned for vertical storage; and updating several chapters of the *Internal Standards Guide for Collections in Storage*, a procedural manual on how to properly store furniture and larger collections objects.

The NMAAHC will achieve the goals of improving the stewardship of the national collections, and also improving Smithsonian facilities, by continuing to adapt the Museum's infrastructure and offices, work spaces, and collections and other storage spaces to meet the NMAAHC's diverse and wide-ranging needs. The Museum will continue identifying and correcting facility deficiencies which directly impact facility planning, business, safety, and security programs. In addition, the safety program will implement post-COVID-19 health and safety protocols and continue developing emergency operations, communications, disaster management, and consolidation plans.

To meet the goal of improving the Institution's information technology systems and infrastructure, the NMAAHC Web and emerging media team will continue building its cloud-based computing environment to create a more cost-effective, flexible, scalable, and secure infrastructure that supports technical innovation. Digital-first and digital-only initiatives, using low- or no-cost open-source technologies, may be developed to enable rapid prototyping while minimizing costs.

Finally, the NMAAHC will achieve the strategic goal of Enabling Cost-Effective and Responsive Administration by continuing to develop its organizational structure and make organizational and staffing revisions to accomplish program goals.

EXPLANATION OF CHANGE

The FY 2022 budget request includes an increase of \$1,102,000 that provides \$668,000 for necessary pay and other related salary costs for existing staff funded under this line item, and a programmatic increase of 3 FTEs and \$434,000 for education and collections support.

Education (+\$250,000, +2 FTEs)

This budget request includes an increase of \$250,000 and 2 FTEs to continue building a robust education program. As the nation considers issues of inequity, it is important for the Museum to play a critical role in serving individuals, schools, and educators by combining our collections and exhibitions with an anti-racist/anti-bias narrative to ensure that our programming addresses social, emotional, and cognitive needs and reaches underserved audiences. These two positions would help the NMAAHC accomplish those goals.

Collections Support (+\$184,000, +1 FTE)

The FY 2022 budget request also includes an increase of \$184,000 and 1 FTE to further develop a high-quality collections management and care program. As curators and Museum specialists continue to conduct in-depth studies of the NMAAHC's historical artifacts, fine art, archival materials, photographs, film, and other media collection areas, it has become increasingly clear that the Museum requires additional resources to acquire, handle, display, and store collections of both historical and contemporary significance as they relate to the African American experience.

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 fundraising goals; collections acquisitions, digitization, and educational initiatives; 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; as well as 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 2020 ENACTED | 165 | \$25,478 | 23 | \$4,158 | 54 | \$9,784 | 0 | \$1 |
| FY 2021 ENACTED | 167 | \$26,581 | 25 | \$3,100 | 56 | \$6,100 | 1 | \$100 |
| FY 2022 REQUEST | 170 | \$27,691 | 25 | \$3,100 | 56 | \$9,000 | 1 | \$100 |

Federal Resource Summary by Performance Objective and Program Category

| Performance Objective/ Program Category | FY 2021 | | FY 2022 | | Change | |
|--|------------|---------------|------------|---------------|----------|--------------|
| | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| Enhanced Interdisciplinary Research | | | | | | |
| Research | | | | | | |
| Engage in vital arts and humanities research | 22 | 3,548 | 22 | 3,647 | 0 | 99 |
| Expand Digital Technologies | | | | | | |
| Digitization and Web Support | | | | | | |
| Provide improved digitization and Web support | 12 | 1,958 | 15 | 2,372 | 3 | 414 |
| Understand and Impact 21st Century Audiences | | | | | | |
| Public Programs | | | | | | |
| Provide relevant reference services and disseminate information to the public | 13 | 2,490 | 13 | 2,548 | 0 | 58 |
| Exhibitions | | | | | | |
| Offer compelling, first-class exhibitions | 46 | 6,953 | 46 | 7,160 | 0 | 207 |
| Education | | | | | | |
| Engage and inspire diverse audiences | 6 | 957 | 6 | 984 | 0 | 27 |
| Preserve Our Natural and Cultural Heritage | | | | | | |
| Collections | | | | | | |
| Improve the stewardship of the national collections | 47 | 7,418 | 47 | 7,629 | 0 | 211 |
| Facilities and Safety | | | | | | |
| Improve Smithsonian facilities operations and provide a safe and healthy environment | 3 | 603 | 3 | 616 | 0 | 13 |
| Enable Cost-Effective and Responsive Administration | | | | | | |
| Management Operations | | | | | | |
| Enable efficient and responsive administrative infrastructure | 14 | 1,797 | 14 | 1,860 | 0 | 63 |
| Information Technology | | | | | | |
| Improve the Institution's information technology systems and infrastructure | 4 | 857 | 4 | 875 | 0 | 18 |
| Total | 167 | 26,581 | 170 | 27,691 | 3 | 1,110 |

BACKGROUND AND CONTEXT

The National Museum of American History (NMAH), Kenneth E. Behring Center, has the unique and cherished role as the only Museum in the country dedicated to telling the full history of the United States. Through incomparable collections, rigorous research, and dynamic public outreach, the NMAH seeks to empower people to create a just and compassionate future by exploring, preserving, and sharing the complexity of our past. Learning U.S. history helps people understand that today's world is the result of myriad choices and actions made by individuals and communities. Increasingly, we understand that knowledge of the past is not a luxury: it is a necessity for the civic health of our country and for our democracy to thrive.

The Museum is the steward of the nation's history collections, consisting of more than 1.8 million objects and more than three shelf-miles of archival collections. Our artifacts form a fascinating mosaic of American life and make up the greatest single collection of American history in the world. The NMAH manages a nearly 800,000 square-foot building on the National Mall in Washington, DC as well as collections primarily stored and cared for at the Museum Support Center and Paul E. Garber Facility in Suitland, Maryland, and at the Pennsy Drive Building in Landover, Maryland.

At the heart of the Museum are the employees who care for its audiences, collections, resources, messages, buildings, and scholarship, all in service to the people of the United States. Collectively, the staff create a series of forums where people can engage with one another and with stories from U.S. history that will inspire and challenge them. In our galleries and online presence, we have connected generations of Americans to deeply researched history via an exceptionally broad range of primary sources and material culture. Before the COVID-19 pandemic struck, approximately three million people visited the Museum in 2019. In addition, more than 9.8 million people interacted with the Museum through online channels (e.g., websites, social media platforms, e-news) in 2020, making the NMAH the most visited history museum in the world.

The FY 2022 budget request includes an increase of \$1,110,000. The increase includes \$750,000 for necessary pay and other related salary costs for existing staff funded under this line item, and a programmatic increase of 3 FTEs and \$360,000 to expand digital access and technologies.

MEANS AND STRATEGY

In FY 2020, the Museum completed its new 10-year strategic plan (for 2020–2030), which will guide the Museum through to the 250th anniversary of the United States in 2026 and beyond. The strategic planning process was inclusive, ambitious, transparent, and designed to include key audiences and stakeholders in decisions which will shape the Museum during the next decade. The plan is organized around the Museum's new vision to become the country's most accessible, inclusive, relevant, and

sustainable public history institution. To fulfill that role by 2030, the Museum will serve an audience that reflects the full racial, class, gender, ethnic, and geographic demographics of the United States. New, state-of-the-field interpretative and collections plans will support the overarching strategic plan.

The NMAH's vision is a timely reflection of its status as the Smithsonian's flagship history museum, especially since Congress recently authorized the creation of the Smithsonian American Women's History Museum and the National Museum of the American Latino, whose missions and work will be inextricably tied to the current mission and work of the NMAH. The Museum has already laid the groundwork to establish the linkages to these two new museums through its own efforts and participation and partnerships with the Institution's American Women's History Initiative (AWHI) and the Smithsonian Latino Center. The NMAH will continue these collaborative efforts with the new museums and ensure that our combined mutual resources are serving our audiences in the best possible manner. The fiscal impact of these new museums on the NMAH will be the subject of future budget considerations.

This groundwork is evidenced by the Museum's participation in the Smithsonian's AWHI and leadership in the development and opening of three new exhibitions in 2020. *Creating Icons: How We Remember Women's Suffrage* uses the Museum's collections to look at the women who fought for the right to vote and explores how the memory of the suffragists and the quest for diversity in membership, leadership, and goals has affected modern women's activism. *Girlhood (It's Complicated)* tackles the long and complicated history of girls from all backgrounds, races, and classes, and what it has meant to grow up female in the United States, from the early republic of the 1790s to the present. The exhibition mines the Museum's rich collections and covers key topics such as education, wellness, work, fashion, and, first and foremost, girls' involvement in American political and social movements. Finally, through bold murals, *Picturing Women Inventors* highlights the distinctive motivations, challenges, and accomplishments of exceptional 20th- and 21st-century inventive women who are diverse both personally and professionally.

The connection with the National Museum of the American Latino is also evidenced by the new NMAH exhibition opening in 2021, *¡Pleibol! In the Barrios and the Big Leagues/En los barrios y las grandes ligas*, which will take audiences on a bilingual journey into the heart of the nation's pastime to understand how generations of Latin Americans have helped make baseball the game it is today. Their inspirational stories gesture toward larger themes in American history that connect us all, on and off the baseball diamond. The Museum is also providing the Smithsonian Latino Center with space and assistance to open the *Molina Family Latino Gallery* at the NMAH in 2022. This 4,500-square-foot space will center the U.S. Latino experience within America's historical narrative via a series of changing exhibits, the latest in digital technology, and through robust educational and cultural programs for multi-generational audiences. The *Molina Gallery* will be the first physical space at the Smithsonian primarily dedicated to highlighting the contributions of the Latino community in nation-building and shaping America's culture.

In February of 2021, the Museum issued a tactical plan to map how the NMAH will achieve the strategic plan's vision and goals. The tactical plan also factors in the impacts of the COVID-19 pandemic, which has caused the Museum to close to the public for more than one year, excluding an eight-week period in the fall of 2020 when the Museum briefly reopened. Along with the lost opportunities and revenues have been new opportunities to use technologies and work in different ways to reshape how the NMAH interacts with audiences in the future. The Museum will use both the strategic and tactical plans as living documents to measure success and share results with staff, stakeholders, and the public. Moreover, the NMAH's efforts align with the Smithsonian's Strategic Plan and performance objectives as part of the One Smithsonian ethos.

The NMAH is contributing to the Smithsonian's goal of Enhanced Interdisciplinary Research, which will also help the Museum become the most accessible, relevant, and inclusive history museum in the country. The NMAH's efforts are wide-ranging, reflecting a commitment to telling intersectional stories that engage diverse audiences; nurturing community partnerships; and advancing collaborative work across disciplinary boundaries. Recent efforts include launching the Center for Restorative History; creating the Center for the Public Understanding of American Religion; convening a COVID-19 task force to collect and share research on the pandemic; initiating *24 Hours in a Time of Change*, an Institution-wide public outreach effort and *Stories of 2020*, an NMAH-based digital collecting initiative; and creating *Undocumented*, a multi-year collecting initiative to chronicle the efforts of undocumented people to shape political change. The Museum's curatorial and research efforts are closely tied to work done across the Smithsonian. We work in close partnership with and receive transformational funding from the Smithsonian's AWHI, Latino Center, and Asian Pacific American Center, as well as the Institution's Race, Community, and Our Shared Future Initiative.

In addition, the NMAH is focused on investing in its digital future to become the most accessible history museum in the country as part of the Smithsonian's goal to Expand Digital Technologies. The Museum is in the process of a major redesign, migration, and refresh of its public Web platform for the first time in seven years, based on the needs of the NMAH's audiences and staff. The Museum is also developing a digital plan to define an updated set of goals and objectives, with a focus on more efficient workflows, enhanced infrastructure, and better training to increase staff capacity. The NMAH continues to improve access to and use of its collections through digitization and collaboration with partners such as Google Arts and Culture and the Journal Storage service known as JSTOR.

The Museum will support the Smithsonian's goal of Understanding Our 21st Century Audiences by crafting an interpretive plan that provides direction, focus, and priorities for the NMAH's work and integrates visitors' experiences within the Museum, in classrooms, and on digital channels. The plan is centered on the audiences involved, ranging from visitors, readers, program attendees, students, and teachers to online users, co-creators, community partners, conveners, and artists. The Museum's aim is to ensure that when different audiences experience the power of active learning and co-curation, they will recognize themselves as change-makers and connect to each other as a unified public with common goals and interests. This new awareness, in turn, will

empower the Museum's diverse audiences to pursue a just and compassionate future. In 2022, the NMAH will have a multi-year strategy for determining the audiences the Museum intends to grow, engaging them, and guiding our public outreach efforts. This will build on our 2019 commitment to pursuing language justice in our bi- and multi-lingual exhibitions and programs.

In response to the COVID-19 pandemic, the NMAH created a digital task force to create new digital learning content for adult and student audiences. The task force oversaw the production of 25 new digital programs between April and September of 2020. Since the Museum has targeted students ages 5 to 17 as a core constituency for these programs, the NMAH staff produced digital "playlists" of curricular resources and bi-monthly, bilingual opportunities for these students and their teachers to interact with Museum experts via YouTube. Throughout the 2020–2021 school year, the NMAH continued to add to its library of thousands of free K–12 interactive resources available via History Explorer, the Museum's acclaimed website for teachers, and expanded its online outreach to caregivers of children ages 5–7 with a new video program called *HistoryTime*. As a measure of this program's success, despite the pandemic closures of schools and the Museum, NMAH educators trained more than 1,000 teachers in 2020 and led a collaboration with other Smithsonian units to design and deliver a digital summer teacher institute that served hundreds of teachers nationwide.

In FY 2021, the Museum will conduct its ninth National Youth Summit (NYS), with a special focus on gender equity. The NYS is a webcast event that brings middle and high school students together with scholars, teachers, policy experts, and activists in a national conversation about important events in America's past which remain relevant to the nation's present and future. The 2020 NYS focused on *Teen Resistance to Systemic Racism* and succeeded in drawing approximately 4,000 young people to participate from 34 states and abroad.

Also in FY 2022, the NMAH will be opening two new exhibitions: *In Sickness and In Health*, which will examine disease, treatment, and social impacts from the 1700s to today, including the ongoing COVID-19 pandemic; and *Discovery and Revelation: Science, Religion, and Making Sense of the World*, which aims to increase public understanding of the history and role of religion in the United States while prompting visitors to consider how science and religion influence our understanding of life as we know it.

As part of the NMAH's priority to align collections stewardship with the Smithsonian's goal of Preserving our Natural and Cultural Heritage, the Museum recently completed a forward-looking collections plan that follows the best practices required for reaccreditation by the American Alliance of Museums. This plan identifies opportunities to create a shared language and common sense of purpose that can drive and sustain collections-related work across the Museum. The plan also sets forth priorities to guide decisions about the NMAH's collections' acquisition, stewardship, and utilization.

The Museum is committed to ensuring sound collections stewardship through preservation, accountability, and increased digital access. In collaboration with the

Smithsonian's National Collections Program and Smithsonian Facilities, the NMAH continues to plan the renovation of the Museum's East Wing (also known as the Public Space Renewal Program — PSRP IV), the development of the Pod 6 collections storage space at the Museum Support Center in Suitland, Maryland, and the collections inventory and decontamination projects at the Garber Facility. These projects establish the framework for collections space and storage decisions. To promote the use and enhance the value of its collections, The NMAH will continue to promote and enhance the value of its collections by focusing on intensive inventory, digitization, and description efforts, increased access online, collaboration, and innovative uses of technology.

In FYs 2020–2021, the pandemic limited staff access to the NMAH, which consequently affected its collections stewardship functions and required a focus on what could be done virtually. Digitization efforts continued, with the addition of an improved workflow to address the physical and technological obsolescence of its audiovisual collections through digitization. New approaches for descriptive practices, including the exploration of artificial intelligence and batch processing, made more catalogue records available online. The Museum also supported the Smithsonian's foray into open access to its collections by researching and identifying objects now in the public domain. All these efforts to increase the intellectual and physical control of its collections will help the NMAH better determine its space and storage needs through the next decade.

The NMAH will Enable a Cost-Effective and Responsive Administration by reorganizing the Museum to align its work and human and financial resources with its strategic plan. These efforts will focus on achieving accountability and efficiencies in the Museum's administrative, staffing, hiring, and governance practices which prioritize diversity, equity, and inclusion among volunteers, interns, Fellows, staff, and the NMAH advisory board. The Museum's Inclusion, Diversity, Equity, and Access (IDEA) Council is working to establish a more inclusive and equitable work environment. For instance, the NMAH continues to broaden and diversify its pool of intern candidates by increasing stipend amounts offered to all interns and by reaching communities which have been historically excluded from the museum field, such as formerly incarcerated students and alumni of the Goucher Prison Education Partnership.

EXPLANATION OF CHANGE

The FY 2022 budget request includes an increase of \$1,110,000. The increase includes \$750,000 for necessary pay and other related salary costs for existing staff funded under this line item, and a programmatic increase of 3 FTEs and \$360,000 to expand digital technologies.

Digital Technologies (+\$360,000, +3 FTEs)

The budget request includes an increase of \$360,000 and 3 FTEs to expand and strengthen the Museum's Web, social media, and digital media programs; support the initial implementation of the NMAH strategic, interpretive, and tactical plans; increase the reach, engagement, and impact of Museum collections, research and programs through digital outreach; provide technical and cost efficiencies; and

improve the NMAH's ability to manage projects, contracts, and core functions to expand its production capacity.

The additional staff will enable the NMAH to listen better to and serve our digital audiences and address the growing demand for digital and media-based learning opportunities (especially for K–12 students); drive deeper engagement with the Museum's collections and scholarship; reach and serve new and more diverse audiences, regardless of geography or income; and maintain and manage the Museum's public-facing digital infrastructure. The NMAH will seek diverse, multilingual candidates as part of the ongoing goal to make the Museum more diverse, inclusive, and accessible.

NONAPPROPRIATED RESOURCES — General trust revenue sources include space rentals for special events, revenue sharing from business operations, honoraria for speaking engagements, and tuition reimbursements. These general trust funds support salaries and benefits for NMAH staff who work in administration, advancement, public affairs, and special events, as well as other program costs. In addition, the Museum receives restricted funding through donor/sponsor-designated trust funds (such as gifts, private grants, and endowments) and Government grants and contracts. These restricted funds are used to develop, install, and promote new exhibitions, fund public programs and educational initiatives, and support visitor services, research, travel, and collection acquisitions. These restricted funds are vital to complete the renovation of the public spaces in the Museum through the fabrication and opening of new exhibits, such as the upcoming permanent exhibition, *Entertainment Nation*, and a temporary rotating exhibition space, both of which will be installed on the West Wing's third floor. Opening in FY 2023, *Entertainment Nation*, an approximately 7,000-square-foot exhibition, will remain open for 20 years. The exhibition will rotate objects from the Museum's vast collections to chronicle the country's robust history of sports, music, film, television, and theater. When that is done, the NMAH's focus will then turn to the East Wing public space renovation.

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 2020 ENACTED | 206 | 33,885 | 10 | 1,536 | 23 | 9,413 | 0 | 71 |
| FY 2021 ENACTED | 206 | 34,891 | 5 | 935 | 22 | 11,137 | 0 | 106 |
| FY 2022 REQUEST | 206 | 35,680 | 9 | 1,381 | 20 | 8,048 | 0 | 95 |

Federal Resource Summary by Performance Objective and Program Category

| Performance Objective/ Program Category | FY 2021 | | FY 2022 | | Change | |
|--|------------|---------------|------------|---------------|----------|------------|
| | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| Enhanced Interdisciplinary Research | | | | | | |
| Research | | | | | | |
| Engage in vital arts and humanities research | 14 | 2,587 | 14 | 2,641 | 0 | 54 |
| Expand Digital Technologies | | | | | | |
| Digitization and Web Support | | | | | | |
| Provide improved digitization and Web support | 8 | 1,361 | 8 | 1,392 | 0 | 31 |
| Understand and Impact 21st Century Audiences | | | | | | |
| Public Programs | | | | | | |
| Provide relevant reference services and disseminate information to the public | 16 | 2,527 | 16 | 2,588 | 0 | 61 |
| Exhibitions | | | | | | |
| Offer compelling, first-class exhibitions | 25 | 6,063 | 25 | 6,159 | 0 | 96 |
| Education | | | | | | |
| Engage and inspire diverse audiences | 41 | 5,408 | 41 | 5,564 | 0 | 156 |
| Preserve Our Natural and Cultural Heritage | | | | | | |
| Collections | | | | | | |
| Improve the stewardship of the national collections | 31 | 4,445 | 31 | 4,564 | 0 | 119 |
| Facilities and Safety | | | | | | |
| Improve Smithsonian facilities operations and provide a safe and healthy environment | 16 | 1,898 | 16 | 1,959 | 0 | 61 |
| Security | | | | | | |
| Provide world-class protection for Smithsonian facilities, collections, staff, visitors and volunteers | 0 | 1,214 | 0 | 1,214 | 0 | 0 |
| Enable Cost-Effective and Responsive Administration | | | | | | |
| Management Operations | | | | | | |
| Enable efficient and responsive administrative infrastructure | 43 | 6,594 | 43 | 6,759 | 0 | 165 |
| Information Technology | | | | | | |
| Improve the Institution's information technology systems and infrastructure | 12 | 2,794 | 12 | 2,840 | 0 | 46 |
| Total | 206 | 34,891 | 206 | 35,680 | 0 | 789 |

BACKGROUND AND CONTEXT

By partnering with Native peoples and their allies, the National Museum of the American Indian (NMAI) fosters a richer shared human experience through a more informed understanding of Native peoples.

In keeping with its authorizing statute, the NMAI is 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, exhibits, and programs concerning the cultures and histories of Native communities and to present contemporary works of art to the public. The online and on-site offerings of diverse exhibitions, cultural demonstrations, tribal festivals, educational presentations, and scholarly symposia ensure a meaningful visitor experience. Online content based on these programs will continue to expand our reach to distant virtual visitors who may not be able to come to the Museum in person. 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 continue to steward the more than one million collection items entrusted to the Museum's care. The collections represent an excess of 14,000 years of history and more than 1,500 indigenous cultures and communities throughout the Western Hemisphere and Hawaii.

The FY 2022 budget request includes an increase of \$789,000 for necessary pay and other related salary costs for existing staff funded under this line item.

MEANS AND STRATEGY

To achieve the strategic goal to Understand and Impact 21st Century Audiences, 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 enabling legislation) and that will demonstrate the presence and cultural contributions of contemporary Native peoples; 3) outreach to Native communities, tribes, and organizations through programming that includes consultations, loans from NMAI collections, online access to collections and content, videoconferences, internships, and publications; and 4) amplify the civic discourse on issues facing Native Americans by conducting seminars and symposia on matters of public interest. Major exhibitions opening or under development in FY 2022 include:

- *Preston Singletary: Raven and the Box of Daylight* — Featuring works by the internationally acclaimed Tlingit artist Preston Singletary. Countless generations of Tlingit children have heard about Raven's adventures through an oral tradition that plays an essential role in the survival of Tlingit culture by

preserving its rich histories and narratives. Singletary shares this story with others through a dynamic multi-sensory environment. The exhibition is organized by the Museum of Glass in Tacoma, Washington, and curated by Dr. Miranda Belarde-Lewis (Zuni Pueblo/Takdeintaan Clan of the Tlingit Nation). This exhibit is scheduled to run from January of 2022 to January of 2023.

- *Oscar Howe (Working title)* — In partnership with the Portland Museum of Art, the NMAI will organize a retrospective exhibition on the art of Yanktonai artist Oscar Howe (1915–1983), opening in NMAI-NY on November 6, 2021 and traveling thereafter to Portland in 2022. Howe was known for both his iconic, modernist approach in his work as a painter and for his defense of the rights of Native artists to choose their own artistic path. The exhibition will include approximately 70 paintings by Oscar Howe lent from museums, historical institutions, and private owners from across the United States, including many which have never been exhibited publicly before. This exhibition will be accompanied by a fully illustrated catalogue produced by the NMAI, and a seven-to-nine-minute gallery film that adds biographical dimension to the presentation. The exhibition will trace Howe’s development as an artist and illustrate how his work was informed by indigenous aesthetics and modern art. The exhibit will run from March to September of 2022.

The Museum will achieve its education goals by continuing to provide daily exhibit and educational programming about Native peoples of the Western Hemisphere and Hawaii, thereby providing opportunities to 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 model materials that schools across America can use and expand upon for their own students. To promote learning across generations, the imagiNATIONS Activity Centers in NMAI-DC and NMAI-NY 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 addition, various tribal educational resources, including curricula enhancement materials, will be made available to teachers nationwide.

NMAI staff will continue to provide on-site and online group, school, and general public tour programs, directing presentations in galleries and deploying volunteers in all public spaces and program areas to ensure maximum use of all the educational resources available to enhance the visitor experience.

Public engagement efforts will continue to bring the Museum and its resources to audiences through both on-site and online venues and via innovative outreach and training programs. These contacts will link external communities to public audiences through technology and involvement in NMAI planning and programming.

In addition, the NMAI will continue dedicating resources to expanding access to the Museum's collections online, providing digital educational resources and developing its website, as part of the Smithsonian's strategic goal to Expand Digital Technologies.

As part of the Enhanced Interdisciplinary Research strategic goal to engage in vital arts and humanities research, 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 disseminate their research to Native American communities and public audiences through the Web, exhibitions, printed materials, programs, and publications, and will also seek out collaborative opportunities with other organizations, museums, institutions of higher learning, and Native American communities.

Through an ongoing dialogue with Native communities and cultural experts, the NMAI's collection stewards and scholars will also continue to advance the strategic goal to Preserve Our Natural and Cultural Heritage through judicious acquisition, documentation, digitization, inventory, preservation, research, security, storage renewal and enhancements, as well as increased online access and loans to museums across the United States. This includes enhancing the collections by acquiring works that document Native experiences and expressive cultures, such as those represented in modern and contemporary arts. In addition, the NMAI will continue to loan objects to tribal museums and, where appropriate, repatriate sacred objects and items of cultural patrimony to their original tribes.

The strategic goal to Enable Cost-Effective and Responsive Administration will be addressed by efficiently and economically designating appropriate resources to achieve the mission of the Museum.

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 the NMAI's fundraising goals; training of future conservators; conservation of objects for exhibits and community loans; publications and special events for exhibition openings; costs related to specific programs and projects, including the National Native American Veterans' Memorial Opening, educational programs, advertising, production of fundraising proposals, and member- and donor-related special events; as well as outreach activities.

NATIONAL MUSEUM OF THE AMERICAN LATINO

| | APPLICATION OF OPERATING RESOURCES | | | | | | | |
|-----------------|------------------------------------|-------|---------------|-------|--------------------------|-------|--------------------------|-------|
| | FEDERAL APPROPRIATIONS | | GENERAL TRUST | | DONOR/SPONSOR DESIGNATED | | GOV'T GRANTS & CONTRACTS | |
| | FTE | \$000 | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| FY 2020 ENACTED | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FY 2021 ENACTED | 5 | 1,307 | 6 | 903 | 6 | 2,084 | 0 | 0 |
| FY 2022 REQUEST | 17 | 3,324 | 7 | 1,063 | 4 | 5,116 | 0 | 0 |

Federal Resource Summary by Performance Objective and Program Category

| Performance Objective/ Program Category | FY 2021 | | FY 2022 | | Change | |
|--|----------|--------------|-----------|--------------|-----------|--------------|
| | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| Enhanced Interdisciplinary Research | | | | | | |
| Research | | | | | | |
| Engage in vital arts and humanities research | 0 | 0 | 0 | 0 | 0 | 0 |
| Expand Digital Technologies | | | | | | |
| Digitization and Web Support | | | | | | |
| Provide improved digitization and Web support | 1 | 350 | 3 | 686 | 2 | 336 |
| Understand and Impact 21st Century Audiences | | | | | | |
| Public Programs | | | | | | |
| Provide relevant reference services and disseminate information to the public | 2 | 300 | 5 | 688 | 3 | 388 |
| Exhibitions | | | | | | |
| Offer compelling, first-class exhibitions | 1 | 250 | 2 | 466 | 1 | 216 |
| Education | | | | | | |
| Engage and inspire diverse audiences | 0 | 50 | | 100 | 0 | 50 |
| Preserve Our Natural and Cultural Heritage | | | | | | |
| Collections | | | | | | |
| Improve the stewardship of the national collections | 0 | 0 | 1 | 170 | 1 | 170 |
| Facilities and Safety | | | | | | |
| Improve Smithsonian facilities operations and provide a safe and healthy environment | 0 | 0 | 0 | 0 | 0 | 0 |
| Enable Cost-Effective and Responsive Administration | | | | | | |
| Management Operations | | | | | | |
| Enable efficient and responsive administrative infrastructure | 1 | 357 | 6 | 1,214 | 5 | 857 |
| Information Technology | | | | | | |
| Improve the Institution's information technology systems and infrastructure | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 5 | 1,307 | 17 | 3,324 | 12 | 2,017 |

BACKGROUND AND CONTEXT

Public Law (P.L.) 116-260, signed by the President on December 27, 2020, established the National Museum of the American Latino (NMAL) within the Smithsonian Institution. The mission of the NMAL is to give voice to the richness and challenges of the Latino American experience, make it possible for all people to understand the depth, complexity, and promise of the American experience, and serve as a national forum for a collaboration on and celebration of Latino American history and culture for educational and social institutions.

More specifically, the NMAL will be the keystone institution for people in the United States and visitors worldwide to learn about Latino contributions to life, art, history, and culture in the United States; and will serve as a gateway for visitors to view other Latino exhibitions, collections, and programming at other Smithsonian facilities and museums throughout the United States.

For FY 2021, resources from the Smithsonian Latino Center (\$807,000 and 5 FTEs) were realigned to the new NMAL line item, along with \$500,000 from the Latino Initiatives Pool to the new Museum line item and an additional \$500,000 to the Administration line item for required staff to support the NMAL.

In FY 2022, the estimate includes an initial program request of 12 FTEs and \$2,000,000 to begin recruiting and selecting initial personnel; form planning and coordination teams to develop exhibitions, public programs, education, research, collections acquisition, technology, and capital fund raising; implement a site-selection evaluation process; and develop the capacity for administrative and financial management. The estimate also includes an increase of \$17,000 for necessary pay for existing staff funded under this line item.

In accordance with Division T of P.L. 116-260, the amounts appropriated pursuant to the authorization under this section shall remain available until expended.

MEANS AND STRATEGY

As indicated in P.L. 116-260, the Museum will illuminate the story of the United States for the benefit of all by featuring Latino contributions, and provide a national resource for the collection, study, research, publication, and establishment of exhibitions and programs relating to Latino life, art, history, and culture that encompass:

- Latino contributions to the early history of what now forms the United States of America and its territories;
- Latino service in the armed forces from the earliest days of the American Revolution to current military activities in defense of our freedoms;

- Latino contributions to the freedom, well-being, and economic prosperity of all people in the United States through historical movements;
- the entrepreneurial and charitable activities of Latinos; and
- the study and appreciation of Latino life, art, history, and culture, and their impact on U.S. society.

As part of the Enhanced Interdisciplinary Research strategic goal to engage in vital arts and humanities research, the Museum will begin to hire the highest quality research staff and collaborate with leading institutions of learning and community-based scholars. The NMAL staff will make research for film, video, audio, and photographic content developed for exhibitions available at the Museum and eventually to public audiences through the Web, printed materials, and collaborative activities with other groups and organizations.

The NMAL will achieve the goal of Understanding and Impacting 21st Century Audiences by establishing a planning and coordination structure to develop an agenda and project schedule for defining exhibition emphasis, direction, and composition; forming a collections identification and acquisition strategy; coordinating collaborative efforts with other museums; and creating a strategic public relations plan and initial materials to introduce the new Museum to a national and global audience.

The NMAL will Preserve Our Natural and Cultural Heritage by developing operating plans; purchasing needed equipment, supplies, and contractual support; and performing environmental impact and traffic analyses on potential building sites.

The Museum will achieve the strategic goal to Enable Cost-Effective and Responsive Administration by developing annual operating budgets, preparing personnel actions and vacancy announcements to hire new Museum staff; organizing a capital campaign office; and developing a fundraising strategy and implementation plan to identify philanthropic prospects and major gift sources.

EXPLANATION OF CHANGE

The FY 2022 budget request includes an increase of \$2,017,000. This includes an increase of \$17,000 for necessary pay for existing staff funded under this line item and a programmatic increase of \$2,000,000 and 12 FTEs. The program increases are as follows:

- (+\$1,668,000, +10 FTEs) This increase will support the initial planning activities for the new Museum in the areas of exhibitions, public programs, collections, and outreach. Extensive programmatic planning, in conjunction with facilities planning, will be necessary so that the

NMAL's programs and the eventual design of the Museum building are compatible and enable the NMAL to achieve its intended mission. Planning will encompass the development of strategies for the identification, acquisition, and management of collections and archival materials for research; physical and thematic design, composition, and direction of exhibitions; design of a full range of public programs for various audiences; and establishing an outreach program to address constituencies including different ethnic groups, schools, families, and cultural and historical foundations. This initial planning work is critical because it will establish the foundation for the programs and activities the NMAL offers in the future.

Administrative staff will perform all necessary purchasing tasks to acquire supplies, equipment, and contractual services; develop budgetary estimates and budget justification material; perform accounting functions; process personnel actions, including hiring and all other personnel actions; and provide legal advice and opinions. This additional staffing will become essential for the smooth functioning of operations as the workforce and workload of the new Museum increases each year.

- (+\$332,000, +2 FTEs) This increase will establish a fundraising/campaign office and enable the recruitment and hiring of professional fundraising personnel who will develop a strategic fundraising plan and begin cultivating donor prospects. P.L. 116-260 authorizes the NMAL to use appropriated funds for fund raising.

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 NMAL's fundraising goals; training of future conservators; conservation of objects for exhibits and community loans; publications and special events for exhibition openings; and costs related to specific programs and projects.

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 2020 ENACTED | 56 | 6,646 | 20 | 4,016 | 1 | 2,388 | 0 | 0 |
| FY 2021 ENACTED | 57 | 6,983 | 4 | 3,039 | 18 | 3,039 | 0 | 0 |
| FY 2022 REQUEST | 59 | 7,511 | 4 | 3,692 | 18 | 3,243 | 0 | 0 |

Federal Resource Summary by Performance Objective and Program Category

| Performance Objective/ Program Category | FY 2021 | | FY 2022 | | Change | |
|--|-----------|--------------|-----------|--------------|----------|------------|
| | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| Enhanced Interdisciplinary Research | | | | | | |
| Research | | | | | | |
| Engage in vital arts and humanities research | 4 | 546 | 4 | 560 | 0 | 14 |
| Expand Digital Technologies | | | | | | |
| Digitization and Web Support | | | | | | |
| Provide improved digitization and Web support | 2 | 301 | 3 | 508 | 1 | 207 |
| Understand and Impact 21st Century Audiences | | | | | | |
| Public Programs | | | | | | |
| Provide relevant reference services and disseminate information to the public | 2 | 251 | 3 | 393 | 1 | 142 |
| Exhibitions | | | | | | |
| Offer compelling, first-class exhibitions | 18 | 2,202 | 18 | 2,263 | 0 | 61 |
| Education | | | | | | |
| Engage and inspire diverse audiences | 6 | 754 | 6 | 774 | 0 | 20 |
| Preserve Our Natural and Cultural Heritage | | | | | | |
| Collections | | | | | | |
| Improve the stewardship of the national collections | 19 | 2,137 | 19 | 2,201 | 0 | 64 |
| Facilities and Safety | | | | | | |
| Improve Smithsonian facilities operations and provide a safe and healthy environment | 0 | 18 | 0 | 18 | 0 | 0 |
| Enable Cost-Effective and Responsive Administration | | | | | | |
| Management Operations | | | | | | |
| Enable efficient and responsive administrative infrastructure | 6 | 774 | 6 | 794 | 0 | 20 |
| Total | 57 | 6,983 | 59 | 7,511 | 2 | 528 |

BACKGROUND AND CONTEXT

The Smithsonian's 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 NPG 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, one that brings factual American biography into discussion of contemporary issues, and as an institution that includes diverse audiences as active participants in defining American identity through portraiture and biography.

The NPG devotes a major portion of its resources to the strategic goal of Understanding and Impacting 21st Century Audiences, thereby increasing the availability and accessibility of the NPG's collections through exhibitions, public programs, and publications. The exhibitions explore themes in history, biography, and art in a way that brings out new meaning and understanding of the American experience. The NPG's exhibitions in FYs 2021 and 2022 will continue to support the Smithsonian's *American Women's History Initiative* (AWHI), examining as never before the contributions women have made to shaping America.

Due to the COVID-19 pandemic closures since March of 2020, the exhibitions schedule has seen four cancellations, five postponements, and four extended shows. Three exhibitions closed earlier than planned. This is noted below in the highlights of special exhibitions scheduled in FY 2021, which include:

- *Recent Acquisitions (Corcoran Gift)* — Following the Corcoran Gallery of Art's closure in 2014, the NPG received 80 works as part of the collection dispersal from the country's first private museum. This exhibition will present more than 25 gifted works, including portraits of cultural figures Louis Armstrong and Frida Kahlo, presidents James Madison and Zachary Taylor, and the first Secretary of the Smithsonian Institution, Joseph Henry, in a mix of mediums. (*This exhibition is extended by one year.*)
- *Every Eye Is Upon Me: First Ladies of the United States* — Part of "Because of Her Story," the Smithsonian Institution's *American Women's History Initiative*, this major exhibition spans nearly 250 years, from Martha Washington to Melania Trump, and is the first to explore the historical significance of this prominent national position through portraiture. Working closely with the White House and the National First Ladies' Library, *Every Eye Is Upon Me* — a quote taken from an 1844

- letter written by First Lady Julia Tyler to her mother — will bring viewers closer to understanding the challenges and triumphs of the dozens of dynamic women who embraced, sometimes reluctantly, the duties of serving as “First Lady.” (*Forced to close 10 days after opening due to the pandemic, this exhibition was captured on video to ensure its availability.*)
- *Visionary: The Cumming Family Collection (Part II)* — This exhibition reveals the results of more than 25 years of inspired collecting on the part of Ian M. and Annette P. Cumming. Beginning in 1995, the Cummings commissioned or acquired more than two dozen portraits of national and global leaders created by important American artists, including Chuck Close and Nelson Shanks. (*Due to COVID-19 closures, this exhibition was divided into two parts; the display of this part was extended nine months.*)
 - *Block to Block: Naming Washington* — Each day, people in Washington, DC travel on streets, cross bridges, or relax in squares whose names belong to others. Barton, Douglass, Farragut, Totten, and Wallenberg are among the names that may be well known to those who live in and visit here; however, do we know who these people were? Why were they chosen in the first place? This exhibition includes a selection of images from the Gallery’s collection, depicting the people whom city planners deemed worthy of memorializing through streets and other urban space names. (*Opening delayed several weeks due to COVID-19 closures.*)
 - *“Warranted to Give Satisfaction:” Daguerreotypes by Jeremiah Gurney* — This exhibition of portraits by American daguerreotypist Jeremiah Gurney (1812–1895) will continue the NPG’s practice of highlighting works by a single daguerreotypist or studio in the *Daguerreian Gallery*. A jeweler by profession, Gurney gave up that trade in favor of daguerreotypy in 1840 and established one of New York City’s first daguerreotype studios. (*This exhibition was postponed one year from FY 2020 to FY 2021.*)
 - *One Life: Will Rogers* — An American original whose insightful humor was surpassed only by his generosity of self and inestimable goodwill, Rogers was born in 1879 in Indian Territory, of Cherokee ancestry, in what later became the state of Oklahoma. His life in vaudeville, Hollywood, and journalism won for him the hearts of Americans throughout the country. (*This exhibition, originally postponed from FY 2020 to FY 2021, has since been cancelled on site, but an online version will launch in 2021.*)
 - *Hung Liu: Portraits of Promised Lands* — This large-scale retrospective of internationally acclaimed, Chinese-born, American artist, Hung Liu will feature more than 50 artworks the artist made during her time in Maoist China in the 1960s, through her immigration to California in the 1980s, to the height of her career today. Having lived through wars, political revolutions, exile, and displacement, Liu’s story presents a complex,

multifaceted picture of an Asian Pacific American experience. Her portraits offer a personal yet universal look at themes of feminism, the freedom of self-expression, history and personal memory, migration, and immigration. Part of “Because of Her Story,” the Smithsonian’s *American Women’s History Initiative*, the exhibition is also supported by the Smithsonian’s Asian American Pacific Center. (*This exhibit’s opening was postponed by three months.*)

In addition to these temporary exhibitions, the permanent collection will refresh *The Struggle for Justice*, as we continue to plan for the thematic return of *Out of Many: Portraits from 1600 to 1900* (formerly, *American Origins*). A photographic representation of President Trump will be installed in *America’s Presidents* while we await the official commissioned portrait. Although our traveling exhibitions program was impacted by the pandemic, we kept *Eye to I: Self-Portraits from the National Portrait Gallery* on the road by adjusting venue dates that accommodated their COVID-19 closures. The tour of *The Outwin: American Portraiture Today* also continued on a reduced scale that had to be limited to two venues due to pandemic-related venue cancellations. Our most impactful traveling show in FY 2021 is *The Obama Portraits Tour*, which has a five-venue national reach to Chicago, Brooklyn, Los Angeles, Atlanta, and Houston. Lastly, the *Outwin Boochever Portrait Competition 2022* will be completed and the finalist selected by end of FY 2021.

The combined Audience Engagement Department, consisting of Communications, New Media, and Education staff, has furthered the goal of Broadening Access by defining overarching strategies, actionable tactics for each strategy, and key performance indicators to measure success. The NPG will make further strides to raise its national visibility, as well as to increase local visitor engagement. The Audience Engagement team will accomplish these goals through targeted outreach, the World Wide Web, and social media campaigns. The NPG will continue building on its diverse representation of art to leverage social media platforms and attract more followers, convert them to visitors, and expand our engagement with international media.

In FYs 2021 and 2022, the NPG will continue to collaborate with its innovative learning groups, The Teen Council, and the Teacher Advisory Board, and use the perspectives and knowledge of these key constituencies to extend the educational value of the NPG’s collection both programmatically and digitally. The Accessibility Task Force will bring NPG staff up to par with accessibility issues and demands. Other popular programs, including afterhours events, curator tours, and Family Days events, will continue to anchor the NPG’s educational offerings. The NPG docent corps remains a vibrant and diverse group that is well-versed in the collection and trained in inquiry techniques to engage audiences, with one-quarter of the docents fluent in Spanish and English. *Explore!*, the NPG education space for 18-month to 8-year-olds, was designed to

help young people explore portraiture as art and history, and will continue to draw more families to the Gallery.

The NPG's primary publication projects in FY 2021 are *First Ladies of the United States* (in December of 2020, in association with Smithsonian Books), which accompanies the Gallery's exhibition *Every Eye Is Upon Me: First Ladies of the United States*; and *Hung Liu: Portraits of Promised Lands* (in June of 2021, in association with Yale University Press). Both books contribute new research to the field of portraiture and complement their respective exhibitions. The NPG has also begun developing a children's book and initiated discussions for other FY 2022 and 2023 publications (*Lives that Matter*, Outwin; 1898; and *Kinship*).

The publications office has adjusted to the pandemic by pivoting to assist various departments with additional digital resources (especially in the areas of curation and audience engagement). At the same time, the office has continued to edit and manage the Spanish-language translations for hundreds of extended object labels.

Furthermore, the NPG remains committed to its bilingual initiative by continuing to translate new label texts and other materials into Spanish.

The NPG will Preserve Our Natural and Cultural Heritage by featuring prioritized acquisitions of portraits of under-represented Americans. The NPG will also continue several projects to produce digital images of its collection items, and to address cataloguing backlogs, to enhance the study and appreciation of its portraits in all media by researchers and the public around the world. The NPG will digitize collections objects as pandemic restrictions allow, with a primary focus on works on paper which can be scanned and filed into the Smithsonian Digital Asset Management System (DAMS), complete with object condition reports. Other conservation work continues, including necessary conservation of paintings and sculptures of notable American women, as well as other paintings requiring treatment, and restoration of the delicate frames of numerous painted portraits.

The FY 2022 budget request includes an increase of \$528,000 that includes \$193,000 for necessary pay and other related salary costs for existing staff funded under this line item, and a programmatic increase of 1 FTE and \$200,000 for digitization support and 1 FTE and \$135,000 for visitor engagement support.

MEANS AND STRATEGY

In FY 2022, the NPG will continue to concentrate its efforts and resources on exhibitions, developing and maintaining its collection, expanding public education offerings, and pursuing new research directions.

As the Smithsonian returns to more normal activities in a post-pandemic environment, the NPG plans to pursue the strategic goal of Understanding and Impacting 21st Century Audiences in FY 2022, with an ambitious and active on-site schedule, while continuing to address contemporary social and cultural themes through the following exhibitions:

- *Pursuing Pop: Portraiture Since 1960* — Featuring more than 40 works from the Gallery’s collection, this exhibition illustrates the influence of the pop movement of the mid- to late-1950s throughout the decades that have followed. Artists have chased the pop phenomenon since its height, applying its principles to address the politics of their time head-on and celebrate icons of social change. The portraits represent subjects across the fields of music, dance, sports, politics, activism, and the media, with likenesses of Fab 5 Freddy, Janis Joplin, Lolita Lebrón, and Ruben Salazar to name a few.
- *Watergate: Portraiture and Intrigue* — The year 2022 marks the 50th anniversary of Watergate, the White House scandal that played out over two years and led to the political downfall of President Richard Nixon. The Nixon administration opened a door to China and saw Americans walk on the moon; however, Nixon’s second term ended disastrously for him personally and tragically for the nation at large. Drawn from the NPG’s collection, the exhibition highlights figures from Nixon’s inner circle as well as the journalists who brought the intrigue to light.
- *The Outwin 2022: American Portraits Today* — This exhibition will be the result of our sixth Outwin Boochever Portrait Competition. The triennial competition for 2022 — open to all media, including those focusing on performance art — will have its final jury session in late FY 2021, at which time exhibition finalists and prize winners will be selected. The exhibition will broaden the definition of portraiture by highlighting the genre’s relevance in contemporary art and culture.
- *One Life: Maya Lin* — The premiere exhibition in our new *One Life Gallery*, this will be the first visual biography of architect, sculptor, and environmentalist Maya Lin presented in an art museum. Tracing Lin’s life from her childhood in Ohio to today, the exhibition will include family and portrait photographs, posters, letters, drawings, architectural plans, and personal ephemera. Part of “Because of Her Story,” the Smithsonian *American Women’s History Initiative*, it also extends the NPG’s commitment to illustrate U.S. history from a variety of viewpoints and perspectives to further increase the diversity of stories told through exhibitions.
- *Family Ties: Daguerreotype Portraits* — Within a few years of its introduction in 1839 as the first commercially viable form of photography, the daguerreotype emerged as a highly popular way to document familial relationships. In 1849, a writer for a national magazine observed, “It is hard to

find the man who . . . has not the shadowy faces of his wife and children done up” in presentation cases “of purple morocco and velvet.” Timed to coincide with the exhibition *Portraiture Now: Kinship* in FY 2023, this installation will highlight daguerreotypes of family groups from the NPG’s collection, including a portrait of famed photographer Mathew Brady with his wife and sister, and an image of Hawaiian ruler Kaikeoli (King Kamehameha III) with members of his family.

- *I Dream a World: Selections from Brian Lanker’s Portraits of Remarkable Black Women (Part I)* — This exhibition features 27 photographs of remarkable Black women included in Pulitzer Prize-winner Brian Lanker’s 1989 photographic essay. Installed in two phases, the exhibition brings together likenesses of women who have made a difference across the disciplines of the arts, activism, literature, and politics. Sitters featured in Part I include Maya Angelou, Septima Pinsette Clark, Barbara Jordan, Rosa Parks, Wilma Rudolph, and Alice Walker.

In addition to these on-site temporary exhibitions, the NPG will complete both *The Outwin 2019: American Portraiture Today* tour and *The Obama Portraits Tour*, while planning traveling shows for 2023 and beyond. The Gallery will also refresh *Out of Many: Portraits from 1600 to 1900*, as well as resume rotations from the permanent collection.

The NPG’s other publication projects in FY 2022 will include *Brilliant Exiles* (an exhibition catalogue) and *The ABCs of the National Portrait Gallery*. We will also begin work on the Outwin 2022 catalogue. With each publication, the Gallery will produce high-quality printed works that reach a broad audience nationally and internationally.

In addition, the NPG will continue to Preserve Our Natural and Cultural Heritage by providing a fuller picture of the early nation with further acquisitions of 18th- and 19th-century portraits of under-represented minorities and women. The Gallery will also seek to expand its holdings of contemporary Americans by acquiring portraits of leading figures in disability rights, the sciences, business, and the arts. The NPG will continue working with the Digitization Program Office until its entire collection of both two- and three-dimensional works is captured with digital imagery and made accessible to the public and researchers via the Web. Moreover, the NPG will care for the physical conservation needs of the collection, in all media, and continue to provide state-of-the-art analysis of works in the permanent collection.

Finally, the NPG will continue to Enable Cost-Effective and Responsive Administration through vigorous efforts to recruit a diverse and professional workforce. The Gallery will also continue to participate with central Smithsonian offices on finance and operations management process improvements.

EXPLANATION OF CHANGE

The FY 2022 budget request includes an increase of \$528,000 that includes \$193,000 for necessary pay and other related salary costs for existing staff funded under this line item, and programmatic increases for \$335,000 and 2 FTEs, as detailed below.

Digitization Support — (+\$200,000, +1 FTE)

The NPG needs a content developer and strategist to help create a truly public platform with multiple points of entry for our visitors to access a vibrant digital communications studio. Such a studio will allow visitors to participate in an open public discourse/dialogue on the history, art, and biography of portraiture. The content developer and strategist will develop resources which can be used for a wide range of digital platforms, including podcasts, handheld technologies, websites, social media, and communications, as well as in-gallery technologies such as touring aids. This will enhance the Museum's capabilities so they can participate in digital content production and more effectively transform their workflows to reach expanded audiences.

Visitor Engagement (Accessibility) — (+\$135,000, +1 FTE)

As the nation's showcase for American biography and portraiture, the NPG must ensure that its collections and programs are accessible and relevant to all Americans, and therefore requires a dedicated accessibility specialist to accomplish this goal. The program specialist will review the NPG's accessibility programs; actively engage the accessibility community to improve the diversity of and access to portraiture, cultures, and art; and help the Gallery reach underserved audiences with content relevant to their interests.

NONAPPROPRIATED RESOURCES — General trust funds support essential 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 vital to the NPG'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 and serves the Smithsonian's mission.

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 2020 ENACTED | 6 | 1,831 | 2 | 501 | 1 | 2,473 | 17 | 3,125 |
| FY 2021 ENACTED | 6 | 1,854 | 2 | 500 | 1 | 2,605 | 20 | 3,355 |
| FY 2022 REQUEST | 8 | 2,105 | 2 | 500 | 3 | 3,265 | 23 | 3,525 |

Federal Resource Summary by Performance Objective and Program Category

| Performance Objective/ Program Category | FY 2021 | | FY 2022 | | Change | |
|--|----------|--------------|----------|--------------|----------|------------|
| | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| Expand Digital Technologies | | | | | | |
| <i>Digitization and Web Support</i> | | | | | | |
| Provide improved digitization and Web support | 1 | 96 | 1 | 100 | 0 | 4 |
| | | | | | | |
| Understand and Impact 21st Century Audiences | | | | | | |
| <i>Exhibitions</i> | | | | | | |
| Offer compelling, first-class exhibitions | 1 | 164 | 1 | 168 | 0 | 4 |
| | | | | | | |
| Preserve Our Natural and Cultural Heritage | | | | | | |
| <i>Collections</i> | | | | | | |
| Improve the stewardship of the national collections | 4 | 551 | 6 | 794 | 2 | 243 |
| <i>Facilities and Safety</i> | | | | | | |
| Improve Smithsonian facilities operations and provide a safe and healthy environment | 0 | 1,043 | 0 | 1,043 | 0 | 0 |
| | | | | | | |
| Total | 6 | 1,854 | 8 | 2,105 | 2 | 251 |

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 exhibitions and public programs which educate visitors on the history of America, transportation, communication, economics, and commerce.

The NPM's new strategic plan is designed to advance the core strategic directions of the Museum during the next three fiscal years. Many of the strategic

objectives assigned to key result areas (by management department) required Institution-wide cooperation. Teamwork and the processes necessary to achieve shared objectives were created by the Museum's management staff. Senior leadership gave special attention to the plan for digital outreach and networking, because this area will become increasingly important to the NPM as it develops new audiences and serves as a focal point for national and international philatelic history, collecting, and storytelling.

Social media is also a useful platform for broadening the curatorial impact on philately and postal history. Expanding the research and public output of the curatorial department will enhance the brand of the NPM as the premier philatelic institution in the United States. Using the Web to highlight the collection's depth and value will provide better access for the public and scholars as well as encourage donations. In addition, the Museum will change how it greets and orients visitors, staffs the exhibitions, and creates programs that attract and serve diverse audiences.

The NPM will become a leader in the Smithsonian's effort to embody DEAI (Diversity, Equity, Accessibility, and Inclusion) principles and practices in its operations. This commitment will span both in-house activities (from hiring practices to inter-staff professional communications) and the outward-looking efforts to develop programs and audiences.

These highlights of the NPM's strategic plan shine a light on the strong potential of the Museum to dramatically increase its reach and impact and become a known leader in its field.

The FY 2022 budget request includes an increase of \$251,000. The increase includes \$21,000 for necessary pay and other related salary costs for existing staff funded under this line item and a programmatic increase of 2 FTEs and \$230,000 for collections and curatorial support.

MEANS AND STRATEGY

The NPM's primary activities will contribute to the Smithsonian's vision of building on "its unique strengths to engage and to inspire more people, where they are, with greater impact, while catalyzing critical conversations on issues affecting our nation and the world" through the prism of postal communications and philately. These challenges will be met by partnering with other Smithsonian museums in support of the *One Smithsonian* Strategic Plan: serving as a catalyst for conversations about complex issues; extending the digital reach of the Museum; understanding and impacting 21st century audiences; contributing to large, visionary, interdisciplinary research and scholarly projects; and preserving our philatelic and postal heritage while optimizing our assets.

In April of 2022, the Museum will open the exhibition *Baseball: America's Home Run*, exploring America's national pastime. Featuring hundreds of U.S.

and international stamps commemorating historic moments and drawing on original artwork and archival material from the United States Postal Service's (USPS) esteemed Postmaster General's (PMG) Collection, the display of stamps and mail will be complemented by dozens of objects loaned by other Smithsonian museums, law-enforcement agencies, and private collectors. The exhibition will be presented in English and Spanish through a collaboration with the Smithsonian Latino Center and will have broad appeal to the public.

The NPM's Department of Education and Visitor Services (DEVS) will continue to expand pre-K–12 educational programs and create new learning opportunities in the Byrne Education Center of the *William H. Gross Stamp Gallery* and in new and existing exhibitions. The Byrne Center will provide enhanced learning opportunities for visiting groups, which incorporate social and emotional learning practices, hands-on activities, and civic connections to the Museum's collections. The Byrne Center will also continue to be used for NPM and Institution-wide meetings and programs. A second educational space supports the Museum's on-site school tours, community engagement activities, and family programming such as the NPM's traditional programs, including *First-Class Problem Solvers* and *Listen, Look, and Do!*

Due to the COVID-19 pandemic, the NPM has had to re-imagine all of its educational programming and identify new ways to engage our audiences online. Through *Virtual Story Time*, virtual school field trips, and our *Virtual Wine and Design* crafting program, among others, the NPM will continue to engage national and international audiences through creative programs that support personal connections to the postal service and mail delivery. Online visitor resources will also continue to grow through new online tours, exhibitions, and activities for learners of all ages.

In FY 2022, the Museum will also focus on initiatives to improve the visitor experience by enhancing our online and on-site accessibility programs and resources. The Visitor Services team will continue to improve the visitor experience both through physical changes, such as facilities and signage, and by fostering an atmosphere of customer service, cooperation, and teamwork. FY 2022 will also include the planning and design of a family-style bathroom, as well as a targeted volunteer recruitment effort to reflect an increasingly diverse population, both of which are designed to help ensure a more positive visitor experience for all.

At the NPM, federal resources are dedicated to improving the stewardship of the six million objects which represent the national collection of philatelic material and postal history. Accordingly, the Museum's collections and curatorial teams will continue to increase the number of collection objects that are available online. Associated initiatives include partnering with the Smithsonian's Digitization Program Office to carry out mass-digitization projects of 2D and 3D

material, and participating in the SI-wide Open Access initiative by identifying which materials can be made available to the public for download and re-use.

In FY 2022, the NPM collections and curatorial departments will build on their accomplishments by continuing to participate in Institution-wide digital initiatives, carry out exhibition rotations, identify and consolidate material in storage, process deaccessions, and maintain normal business operations. The collections will be made available to Museum visitors, researchers who contact the team for an appointment to see material not on view, and to audiences around the world via the NPM website.

Also in FY 2022, the collections department will continue to undertake all aspects of collections management by developing, maintaining, preserving, and making the national collection accessible to the public. For example, the team will continue to document and add data to the Museum's database. The Museum's conservator will carry out conservation treatments on the permanent collection, ensuring that the objects are preserved for future generations. And finally, the team will process new acquisitions to enhance the NPM's ability to fully capture philatelic and postal history.

A major initiative to improve accessibility to off-site collections will remain a Museum priority. The NPM will continue to coordinate with the staff of the National Museum of American History on the decontamination of NPM collection objects stored in Garber building number 16 in Suitland, Maryland. This project will remove hazardous lead and asbestos from NPM collections which have been inaccessible for many years. The project will eliminate a potential safety hazard for staff and make previously inaccessible collection items available for cataloguing and imaging. These collection items can then be made available to the public in displays on site and via the Museum's website.

The collections department will continue to catalogue, image, and conserve the PMG collection of original stamp art. The PMG collection, which began transferring to the Museum from the USPS in FY 2012, represents one of the NPM's most important collections. 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. As the USPS continues to transfer new PMG material to the NPM, the collections department will examine, treat, and re-house the collection as well as process related archival collections.

Finally, in FY 2022, the team will refine collections policies, plans, and procedures due for review. Policies and plans include the Museum's collections management policy, its lending policies, its collections emergency plan and, perhaps most importantly, its collections stewardship plan. The collections stewardship plan will guide the content and development of the Museum's collection. The collections department will lead the staff in a coordinated and uniform direction to draft this plan, which will allow the NPM to gain better control

of its collections and ensure that it has appropriate staff and resources to manage them.

EXPLANATION OF CHANGE

The FY 2022 budget request includes an increase of \$251,000. The increase includes \$21,000 for necessary pay and other related salary costs for existing staff funded under this line item and a programmatic increase of 2 FTEs and \$230,000 for collections and curatorial support.

Collections and Curatorial Support (+\$230,000, +2 FTEs)

The NPM collection is the second largest of any Smithsonian museum and the largest among the history and culture units. With more than 6,000,000 objects in its collection, the Museum employs only four full-time curators (1.5 million objects per curator). In contrast, the National Portrait Gallery employs approximately seven curators and three historians for 21,000 objects and the National Air and Space Museum has approximately 10 curators for 68,000 objects. Compared to nearly every other Smithsonian museum, the NPM has the fewest number of scholars on staff. We have two urgent position needs at the NPM. This is why the NPM urgently needs to fill two positions which will have important roles in upcoming digitization projects and the commemoration and celebration of the United States Postal Services' 250th anniversary in 2025 as well as the country's 250th anniversary in 2026.

- **Archivist — Collections (+\$115,000, +1 FTE)**

Despite its vast and varied collection of archival material, the NPM is the only Smithsonian history and culture museum without a designated archive. Hiring a full-time technical archivist will enable the Museum to gain physical and intellectual control over its historic records and provide public access in person and online to material ranging from personal papers, historic photographs, letters to postal officials, interviews, logbooks, and airmail contract cards to postal service promotional materials, postal forms, ledgers, and registers, as well as scrapbooks, maps, and blueprints.

The exact volume of the Museum's rich archival collection is unknown, but it is massive and stored on site and off site, in curators' offices, collections storage, and the library in multiple analog and digital formats. Moreover, since the collection continues to grow, it is imperative for the NPM to have a technical archivist who can help catalogue and preserve the Museum's archival treasures, which will otherwise be at risk of deteriorating.

- **Curatorial Department (+\$115,000, +1 FTE)**

The public content officer within the NPM's curatorial team will develop and deliver new content using the Museum's extensive collection, thus expanding the

NPM's reach and impact for all Americans. This position will work with all NPM departments, and especially closely with curatorial, collections, and education staff to curate online exhibitions, promote and share research and scholarship, and tell important stories about American history through the unique lens of the Museum's collections. She/he will be a leader who will institute best practices in activating the NPM's collection in digital engagement, thus helping the Smithsonian achieve its strategic goal of reaching one billion people.

This essential member of the curatorial team will be responsible for developing robust digital initiatives to support the NPM's vision of becoming the world's greatest philatelic resource and housing the definitive collection of American postal history by prioritizing the increase and diffusion of knowledge through research, scholarship, exhibits, and education. By providing digital content to audiences on site and online, the Museum will grow new audiences who will use the NPG collections and those of other Smithsonian museums.

NONAPPROPRIATED RESOURCES — The United States Postal Service provides the NPM with an annual grant, which supports more than 60 percent of the Museum's core functions and operational costs. These costs include nonfederal salaries and benefits, facility maintenance, exhibitions, education, and collection management programs. Fundraising initiatives will continue to generate increased support from the private sector to develop and support new exhibitions, research opportunities, educational programs, 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 2020 ENACTED | 89 | 10,412 | 12 | 1,930 | 46 | 9,698 | 1 | 119 |
| FY 2021 ENACTED | 90 | 10,938 | 14 | 1,754 | 36 | 4,230 | 2 | 136 |
| FY 2022 REQUEST | 91 | 11,413 | 16 | 1,883 | 38 | 4,464 | 2 | 136 |

Federal Resource Summary by Performance Objective and Program Category

| Performance Objective/ Program Category | FY 2021 | | FY 2022 | | Change | |
|--|-----------|---------------|-----------|---------------|----------|------------|
| | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| Enhanced Interdisciplinary Research | | | | | | |
| <i>Research</i> | | | | | | |
| Engage in vital arts and humanities research | 6 | 744 | 6 | 766 | 0 | 22 |
| | | | | | | |
| Expand Digital Technologies | | | | | | |
| <i>Digitization and Web Support</i> | | | | | | |
| Provide improved digitization and Web support | 7 | 874 | 8 | 1,049 | 1 | 175 |
| | | | | | | |
| Understand and Impact 21st Century Audiences | | | | | | |
| <i>Public Programs</i> | | | | | | |
| Provide relevant reference services and disseminate information to the public | 13 | 1,540 | 13 | 1,587 | 0 | 47 |
| <i>Exhibitions</i> | | | | | | |
| Offer compelling, first-class exhibitions | 25 | 2,936 | 25 | 3,026 | 0 | 90 |
| <i>Education</i> | | | | | | |
| Engage and inspire diverse audiences | 2 | 279 | 2 | 286 | 0 | 7 |
| | | | | | | |
| Preserve Our Natural and Cultural Heritage | | | | | | |
| <i>Collections</i> | | | | | | |
| Improve the stewardship of the national collections | 20 | 2,373 | 20 | 2,445 | 0 | 72 |
| <i>Facilities and Safety</i> | | | | | | |
| Improve Smithsonian facilities operations and provide a safe and healthy environment | 1 | 131 | 1 | 135 | 0 | 4 |
| | | | | | | |
| Enable Cost-Effective and Responsive Administration | | | | | | |
| <i>Management Operations</i> | | | | | | |
| Enable efficient and responsive administrative infrastructure | 13 | 1,768 | 13 | 1,815 | 0 | 47 |
| <i>Information Technology</i> | | | | | | |
| Improve the Institution's information technology systems and infrastructure | 3 | 293 | 3 | 304 | 0 | 11 |
| | | | | | | |
| Total | 90 | 10,938 | 91 | 11,413 | 1 | 475 |

BACKGROUND AND CONTEXT

The Smithsonian American Art Museum (SAAM) is the nation's Museum dedicated to the art 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 44,000 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 SAAM and the National Portrait Gallery) and the Renwick Gallery, dedicated to American crafts and decorative arts.

To achieve the strategic goal of Enhanced Interdisciplinary Research, SAAM curators and research Fellows-in-residence use the collection and other resources to develop new insights into America's cultural and artistic legacy as well as current themes and explorations. The resulting knowledge informs collections development and serves as the basis for exhibitions, associated award-winning catalogues and scholarly publications, and educational programs. The Fellowship program, which celebrated its 50th anniversary in 2020, cultivates the next generation of professors and curators. SAAM has hosted more than 700 scholars who now work at academic and cultural institutions across the United States, Australia, Asia, the Caribbean, Europe, the Middle East, and South America. The Museum's peer-reviewed journal, *American Art*, serves as a primary venue for groundbreaking scholarship in the field. The Museum also hosts international symposia and seminars on topics of relevance in the field of American art and encourages a deeper understanding of American art's global connections.

SAAM will Expand Digital Technologies by offering a constellation of activities to engage users both online and in the galleries. The Museum takes full advantage of the latest technologies, with a focus on mobile-optimized websites and applications, video production, and social media engagement. Three videoconference centers deliver the Museum's education programs to classrooms around the world. The digitization of SAAM's collections also continues, allowing the Museum to add new assets and media to support its vast online resources.

The Museum will Understand and Impact 21st Century Audiences through exhibitions, education, and public programs. An ambitious schedule of exhibitions developed in-house and complemented by shows obtained from other organizations attracts new visitors and encourages repeat visits. At the DWRC, large exhibition spaces, shops, and a renovated restaurant greet visitors with a broad range of activities to maintain their interest. The Lunder Conservation Center provides a window on preservation of the national 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 other museums throughout the United States, enriching people's lives by giving them direct access to their nation's artistic and cultural heritage.

National education programs directly reach K–12 teachers and students. These programs use the latest technologies where they are most effective to incorporate art into social studies, history, and language arts. 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. In addition, students are brought into the Museum as often as possible to provide that direct experience with the transformative power of great art. The MacMillan Education Center, located in the galleries, serves students in classrooms across the nation and on U.S. military bases worldwide.

Public programs complement Museum exhibitions and highlight permanent collections with lectures, tours, and gallery talks, as well as craft and sketching workshops. The McEvoy Auditorium hosts four of SAAM's five lecture series and two of its five music series, with additional programming taking place at the Renwick Gallery or in the Kogod Courtyard. The latter space also hosts programs such as family days, heritage months, and art-themed movies. In FY 2020, SAAM hosted more than 100 virtual programs and events.

The strategic goal of Preserving Our Natural and Cultural Heritage is achieved through multiple activities. Scholarship and research help set acquisition objectives. Gifts of art and private funds raised through advancement activities pay for additions to the national collection. Conservators research methods and tools to preserve the artwork. The Lunder Conservation Center is an important resource for conservation training and colloquia of interest to the conservation community and the public. Conservation Fellowships ensure that experience and knowledge are shared with the larger community of conservation practitioners.

SAAM also has a robust safety program to ensure a safe and healthy environment for Museum staff and visitors.

Cost-Effective and Responsive Administration encompasses many activities. Information Technology (IT) staff implement and maintain the information framework on which so many other efforts depend. This includes exhibition space screens and kiosks that provide access to information available anywhere, on any device. Managers carefully plan, promote, protect, and conserve the Museum's resources.

The FY 2022 budget request includes an increase of \$475,000 that includes \$325,000 for necessary pay and other related salary costs for existing staff funded under this line item, and a programmatic increase of 1 FTE and \$150,000 for digitization and Web support coordination.

MEANS AND STRATEGY

Research on the collections and related American art topics by curatorial staff continues in support of exhibitions and the permanent collection, including three new exhibition catalogues scheduled for publication in FY 2022. Endowments and multi-year private support have allowed the Museum to hire a full slate of curators with specialties ranging from sculpture, photography, and contemporary crafts to media

arts. The Museum's award-winning, peer-reviewed journal, *American Art*, will publish three issues of new scholarship. The Museum hosts approximately 20 research Fellows every year from throughout the country and internationally, 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 and diverse cultural heritage as well as advance scholarship in American art. Research also feeds into educational programs and provides content for the Museum's website and new media.

The Museum embraces the Web by making as much of its artwork and related data as possible freely available online to the public. Ninety-nine percent of SAAM's collection is now online. The Museum hosts dynamic websites for visitors, researchers, and educators, most notably through the popular website at AmericanArt.si.edu. SAAM participates in collaborative digital initiatives with other organizations, implementing powerful tools such as Linked Open Data (LOD). The publication of SAAM's collections data as LOD has established the Museum as a leader in promoting semantic Web standards in the museum community. SAAM maintains an active social media presence across many platforms — including Facebook, Twitter, Instagram, and our blog, *Eye Level* — which focuses on engaging the public in conversations about art-related topics. The Museum produces dozens of educational videos and live streams each year, which are added to its non-profit YouTube channel. These assets are fully accessible and responsive, regardless of the type of device used. Custom-built interactive exhibition components, apps, and videos are used whenever appropriate to provide a richer and more varied learning experience for visitors.

SAAM is planning six exhibitions for FY 2022. Major exhibitions include *Subversive, Skilled, Sublime: Fiber Art by Women*; *Sargent, Whistler, and Venetian Glass: American Artists and the Magic of Murano*; and *Welcome Home: A Portrait of East Baltimore*. The Renwick Gallery will host an event around its upcoming anniversary, taking over the whole building to showcase the exhibition celebrating *50 Years of Craft at the Renwick*.

As part of its ongoing effort 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. The Luce Foundation Center for American Art displays an additional 3,500 collection objects in glass cases.

National outreach includes the touring exhibitions *African American Art*, *Kara Walker*, and *William H. Johnson: Fighters for Freedom*. Interactive exhibition components continue evolving to keep pace with proliferating information streams. In addition, whenever possible, SAAM honors requests by other museums for loans from the national collection.

Education initiatives continue to expand as the Museum takes advantage of new online tools and assets. SAAM continues to develop its highly successful distance-learning program with staff and 22 volunteers who create content that reaches

classrooms worldwide. Three videoconference centers, including the MacMillan Education Center, enable the Museum to serve more students than ever before. Contracts and partnerships with Government agencies such as the Department of Defense, the American Battle Monuments Commission, the National Endowment for the Humanities, and the Washington, DC Public Schools expand the Museum's reach to more diverse audiences. In addition, the Museum partnered with three other Smithsonian units to create two weeklong "Smithsonian Summer Sessions," a virtual, interdisciplinary experience to model strategies for learning through art, history, and culture; 250 teachers from 36 states, Washington, DC, two U.S. territories (Puerto Rico and the U.S. Virgin Islands), and four foreign countries (Barbados, Bolivia, Canada, and Mexico) attended. SAAM also turned the "Summer Sessions" content into a self-paced, online course for teachers.

The safe storage and display of collection objects remain a top priority. SAAM 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 and professional programs. The acquisition of new tools and instrumentation allow for more complete monitoring of the collection and application of leading-edge conservation techniques to preserve the collection. Leased cool-storage space ensures that photographic material is preserved in ideal conditions. Artworks will be acquired to fill gaps in the collection identified through the Museum's collections plan. Time-based media (that is, works exhibiting a changing observable state, such as film, videos, or lights) continue to receive special attention in our Time-based Media Lab. Galleries in the DWRC continue to be converted to light-emitting diode (LED) lighting, which is less damaging to the collection and more economical in reducing the costs of maintenance and utilities.

Information technology and administrative procedures closely monitor resources and processes, resulting in Cost-Effective and Responsive Administration. Strong partnerships with Smithsonian central offices enable SAAM to provide an end-user perspective on policy changes. Use of the Museum's intranet site keeps staff current on the ever-changing procedural and regulatory environment. Continual reviews of work processes and conditions result in safer techniques and materials for both staff and the environment as well as the national collections.

EXPLANATION OF CHANGE

The FY 2022 budget request includes an increase of \$475,000 that includes \$325,000 for necessary pay and other related salary costs for existing staff, and a programmatic increase of 1 FTE and \$150,000 for digitization and Web support.

Digitization Lifecycle Coordinator (+\$150,000, +1 FTE)

This budget request includes an increase of \$150,000 and 1 FTE to hire a digitization lifecycle coordinator who will assist with handling the increased workload and high demand for digital content. This essential position will coordinate and manage a pan-departmental Museum process to implement and track collections digitization, including planning and optimization of acquisition and documentation workflows;

metadata creation and enhancement; artwork cataloguing and artist biographic description; digital asset lifecycle management; and harmonization of information and publishing across collections management and access systems, from website indexes to LOD. Improved digitization of museum collections means better public access to and online availability of SAAM's collection for scholars, students, researchers, and audiences around the world. The position also allows for the resources needed to build a robust, long-term digitization and maintenance program integrated into all levels and core functions of the Museum's departments. It will improve responsible stewardship of SAAM's digital assets and ensure the Museum's full participation in the Smithsonian open-access initiative. This hire is essential for SAAM to achieve its own mission, sustain core functions, and meet the digital expectations of the 21st century.

NONAPPROPRIATED RESOURCES — Nearly all SAAM's non-personnel costs, including those for exhibitions, educational and public programs, and purchases for the national collection, are paid with funds provided by individuals, foundations, and corporations. Donor/sponsor-designated funds support specific programs and projects. Additionally, trust funds support salaries and benefits for one-third of staff, as well as all fundraising activities and related costs.

SMITHSONIAN AMERICAN WOMEN'S HISTORY 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 2020 ENACTED | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FY 2021 ENACTED | 0 | 500 | 0 | 0 | 0 | 0 | 0 | 0 |
| FY 2022 REQUEST | 13 | 2,500 | 0 | 0 | 0 | 0 | 0 | 0 |

Federal Resource Summary by Performance Objective and Program Category

| Performance Objective/ Program Category | FY 2021 | | FY 2022 | | Change | |
|---|----------|------------|-----------|--------------|-----------|--------------|
| | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| Expand Digital Technologies | | | | | | |
| <i>Digitization and Web Support</i> | | | | | | |
| Provide improved digitization and Web support | 0 | 0 | 3 | 467 | 3 | 467 |
| | | | | | | |
| Understand and Impact 21st Century Audiences | | | | | | |
| <i>Public Programs</i> | | | | | | |
| Provide relevant reference services and disseminate information to the public | 0 | 0 | 1 | 206 | 1 | 206 |
| | | | | | | |
| Preserve Our Natural and Cultural Heritage | | | | | | |
| <i>Collections</i> | | | | | | |
| Improve the stewardship of the national collections | 0 | 0 | 1 | 206 | 1 | 206 |
| Enable Cost-Effective and Responsive Administration | | | | | | |
| <i>Management Operations</i> | | | | | | |
| Enable efficient and responsive administrative infrastructure | | 500 | 8 | 1,621 | 8 | 1,121 |
| | | | | | | |
| Total | 0 | 500 | 13 | 2,500 | 13 | 2,000 |

BACKGROUND AND CONTEXT

Public Law (P.L.) 116-260, signed by the President on December 27, 2020, established the Smithsonian American Women's History Museum (SAWHM) within the Smithsonian Institution.

Currently, there is no national museum in the United States devoted to the documentation of women's contributions throughout our nation's history. On December 19, 2014, Congress created a congressional commission to study the potential for an American museum of women's history. The bipartisan commission unanimously concluded that the country needs and deserves a national museum dedicated to showcasing the historical experiences and impact of women in the United States. A comprehensive women's history museum would document the full

spectrum of the experiences of women in the United States, represent a diverse range of viewpoints, experiences, and backgrounds, more accurately depict the history of the United States, and add value to the Smithsonian Institution for the American people.

For FY 2021, resources from the *American Women's History Initiatives Pool* (\$1,000,000) were realigned to the new SAWHM line item (\$500,000) and to the Administration line item (\$500,000) for required staff to support the new Museum.

In FY 2022, the estimate includes an initial program request of 13 FTEs and \$2,000,000 to recruit and select initial personnel; form planning and coordination teams to develop exhibitions, public programs, education, research, collections acquisition, technology, and capital fund raising; implement a site-selection evaluation process; and develop the necessary capacity for administrative and financial management.

MEANS AND STRATEGY

Establishing this Museum provides the Smithsonian with a significant new vehicle for the collection, preservation, study, and exhibition of programs relating to women's contributions in various fields and different periods of history which have influenced the direction of the United States; collaboration with other Smithsonian museums and facilities, outside museums, and educational institutions; and the creation of exhibitions and programs to recognize diverse perspectives on women's history and contributions.

As part of the Enhanced Interdisciplinary Research strategic goal to engage in vital arts and humanities research, the Museum will begin hiring the highest quality research staff and collaborate with leading institutions of learning and community-based scholars. The SAWHM staff will make research for film, video, audio, and photographic content developed for exhibitions available at the Museum and eventually to communities and public audiences through the Web, printed materials, and collaborative activities with other groups and organizations.

To achieve the strategic goal of Understanding and Impacting 21st Century Audiences, initial activities will focus establishing a planning and coordination structure to develop an agenda and project schedule for defining exhibition emphasis, direction, and composition; plan a collections identification and acquisition strategy; coordinate collaborative efforts with other museums; and devise a strategic public relations plan for and publish initial materials about the new Museum.

The SAWHM will Preserve Our Natural and Cultural Heritage by developing operating plans; purchasing needed equipment, supplies, and contractual support; and performing environmental impact and traffic analyses on potential building sites.

The Museum will achieve the strategic goal to Enable Cost-Effective and Responsive Administration by developing annual operating budgets, preparing

personnel actions and vacancy announcements to hire new Museum staff; organizing a capital campaign office; and developing a fundraising strategy and implementation plan to identify philanthropic prospects and major gift sources.

EXPLANATION OF CHANGE

The FY 2022 budget estimate includes a net increase of \$2,000,000 and 13 FTEs. The increases are as follows:

- (+\$1,758,000, +11 FTEs) This increase will support the initial planning activities for the new Museum in the areas of exhibitions, public programs, collections, and outreach. Extensive programmatic planning, in conjunction with facilities planning, will be necessary so that the SAWHM programs and the eventual design of the Museum building are compatible and support the new Museum in achieving its intended mission. Planning will encompass the development of strategies for the identification, acquisition, and management of collections and archival materials for research; the physical and thematic design, composition, and direction of exhibitions; preparations for a full range of public programs for various audiences; and establishing an outreach program to involve constituencies including different ethnic groups, schools, families, and cultural and historical foundations. This initial planning work is essential to establish the foundation for the programs and activities the SAWHM offers in the future.

Administrative staff will perform all necessary purchasing tasks to acquire supplies, equipment, and contractual services; develop budgetary estimates and budget justification materials; perform accounting functions; process personnel actions, including hiring and all other required staffing actions; and provide legal advice and opinions. This additional staffing will be vital to the smooth functioning of operations as the workforce and workload for the new Museum increase each year.

- (+\$242,000, +2 FTEs) This increase will help establish a fundraising/campaign office, including the recruitment and hiring of professional fundraising personnel who will develop a strategic fundraising plan and begin cultivating donor prospects. P.L. 116-260 establishes the Museum and also authorizes the SAWHM to use appropriated funds for fund raising.

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 the SAWHM's fundraising goals; training of future conservators; conservation of objects for exhibits and community loans; publications and special events for exhibition openings; and costs related to specific programs and projects.

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 2020 ENACTED | 64 | 9,333 | 39 | 7,143 | 14 | 4,679 | 1 | 435 |
| FY 2021 ENACTED | 64 | 9,717 | 27 | 5,417 | 26 | 6,154 | 5 | 1,034 |
| FY 2022 REQUEST | 66 | 10,224 | 33 | 6,585 | 18 | 4,817 | 4 | 693 |

Federal Resource Summary by Performance Objective and Program Category

| Performance Objective/ Program Category | FY 2021 | | FY 2022 | | Change | |
|---|-----------|--------------|-----------|---------------|----------|------------|
| | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| Enhanced Interdisciplinary Research | | | | | | |
| <i>Research</i> | | | | | | |
| Engage in impactful scientific research and discovery | 3 | 1,396 | 3 | 1,406 | 0 | 10 |
| Engage in vital arts and humanities research | 1 | 850 | 1 | 853 | 0 | 3 |
| | | | | | | |
| Expand Digital Technologies | | | | | | |
| <i>Digitization and Web Support</i> | | | | | | |
| Provide improved digitization and Web support | 3 | 365 | 3 | 375 | 0 | 10 |
| | | | | | | |
| Understand and Impact 21st Century Audiences | | | | | | |
| <i>Public Programs</i> | | | | | | |
| Provide relevant reference services and disseminate information to the public | 2 | 215 | 2 | 221 | 0 | 6 |
| <i>Exhibitions</i> | | | | | | |
| Offer compelling, first-class exhibitions | 39 | 4,963 | 41 | 5,389 | 2 | 426 |
| <i>Education</i> | | | | | | |
| Engage and inspire diverse audiences | 11 | 1,474 | 11 | 1,510 | 0 | 36 |
| | | | | | | |
| Enable Cost-Effective and Responsive Administration | | | | | | |
| <i>Management Operations</i> | | | | | | |
| Enable efficient and responsive administrative infrastructure | 5 | 454 | 5 | 470 | 0 | 16 |
| | | | | | | |
| Total | 64 | 9,717 | 66 | 10,224 | 2 | 507 |

BACKGROUND AND CONTEXT

All of the Institution's outreach activities link the Smithsonian's national collections, research, and educational resources with Americans from coast to coast.

These programs aim 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 closely with Smithsonian museums and cultural and research centers, as well as with more than 200 affiliated institutions and others across the nation.

This line item includes the programs which provide the critical mass of Smithsonian Across America outreach activity: the Smithsonian Institution Traveling Exhibition Service and Smithsonian Affiliations (SITES | Affiliations); Educational Outcomes and Academic Programs and the Office of Educational Technology (OET, formerly the Smithsonian Center for Learning and Digital Access); Fellowships and Internships; and the Smithsonian Institution Scholarly Press (SISP). Smithsonian Associates and the Smithsonian Science Education Center (SSEC), which receive no direct federal funding, are also part of this national outreach effort.

The FY 2022 budget request includes an increase of \$507,000, including \$207,000 for necessary pay and other related salary costs for existing staff funded under this line item, and \$300,000 and 2 FTEs in exhibit support for SITES.

MEANS AND STRATEGY

Smithsonian Institution Traveling Exhibition Service and Smithsonian Affiliations (SITES | Affiliations) (43 FTEs and \$5,772,000) became a single unit in 2018. Our unified mission is to more effectively catalyze public engagement and spark curiosity and learning by connecting the knowledge, resources, and expertise of the Smithsonian with a vital network of cultural and educational organizations.

SITES | Affiliations makes interdisciplinary connections in science and the arts, creating mutually beneficial, reciprocal relationships among and between the Smithsonian's many units and museums and other organizations across the country and beyond. We expand the reach and impact of the Smithsonian and our network of collaborators, widely sharing knowledge, resources and expertise. We facilitate strong connections and relationships across the network so that our staff, partners, and collaborators can all learn from each other and extend our outreach to the public.

SITES | Affiliation's programs, exhibitions, and services — including the award-winning Museum on Main Street (MOMS) program — inspire national audiences of all ages to broaden their perspective, deepen their understanding of critical issues, and become more informed and curious learners. Our work underscores the importance of using local stories to better understand national

stories, contributes local perspectives on national and global issues, and stimulates lifelong learning. We enable people to see the relevance of the Smithsonian in their daily lives.

SITES | Affiliations promotes innovation and best practices for museums and museum professionals. We collaborate with a robust network of museums and cultural and education organizations across the nation. The reputation of the Smithsonian helps them attract audiences, build internal capacity, and expand stakeholder support. Together, we increase our collective reach and capacity to foster conversations on relevant questions of interest to particular communities.

SITES | Affiliations reaches all 50 states with exhibitions, programs targeted to adults, families, youth, and classrooms, professional development for museum professionals and classroom teachers, and loans from Smithsonian collections. In FY 2022, we will address such topics as the diversity of cultural heritage in America, arts, science, and history. This will be achieved through more than 30 exhibitions — supported by related programs — such as *The Negro Motorist Green Book*, *Narwhal: Revealing An Artic Legend*, and *¡Pleibol! In the Barrios and the Big Leagues / En los barrios y las grandes ligas*. The new exhibition *Spark: Places of Innovation* will be developed by the MoMS program to examine the relationship between place and creativity and tell the story of small towns where innovation flourishes. *Crossroads: Change in Rural America*, an exhibition looking at how small towns are reinventing themselves by focusing on history and new opportunities for growth and economic development, will continue to circulate with community-based programming. A lively series of digital programs offered by more than 200 Affiliates across the nation will focus on topics such as American women's history and scientific exploration. Programs will bring teenagers together at Affiliate locations to learn how they can understand our world and change it for the better. Training for teachers will include classroom resources. Professional development for museum professionals at Affiliates will enhance the work of their respective organizations. In addition, we will help diversify future museum workers and supporters through robust internship programs for college students at Affiliates across the nation.

These strategies have resulted in the display of more than 9,000 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, cultural diversity, 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. In addition, the Smithsonian Affiliations' annual conference creates a forum for networking, information sharing, and future planning. Current Affiliate projects build on and amplify the core objectives outlined in the Smithsonian's Strategic Plan.

Educational Outcomes and Academic Programs (5 FTEs and \$678,000) —

This outreach function will now exist organizationally within the Office of the Under Secretary for Education. Within the Institution, this function offers many services and technical support to other units, ranging from collaborations to create and disseminate content to outreach that broadens access to and engages audiences with the Smithsonian's educational offerings. By placing this function within the Under Secretary's office, the Smithsonian's expertise in research will also support education and outreach initiatives across the Institution and more closely link the outreach measures with outcomes reported to that Under Secretary.

Office of Educational Technology (OET) (8 FTEs and \$946,000) —

The Smithsonian is creating new digital platforms for scholars and educators to better access Smithsonian collections, research, and education resources. The Smithsonian Learning Lab is a digital platform for educators and students that enables everyone to find and customize resources for educational use and share them with others. Based on continual research and evaluation, the Lab evolves to provide valuable services to its global audiences. The OET also develops content and materials for classrooms and provides professional development to teachers. Within the Institution, the OET offers many services and technical support to other units. These range from collaborations to create and disseminate content, technical modifications to the Learning Lab in response to unit requests, and outreach to broaden access to and engage audiences with the Smithsonian's educational offerings. The OET's expertise in research also supports education and access initiatives across the Institution.

Fellowships and Internships (6 FTEs and \$2,001,000) —

These programs provide the central management and administrative responsibility for the Institution's research, Fellowships, and other scholarly appointments. One of the Institution's primary objectives is to facilitate the Smithsonian's academic interactions with students and scholars at universities, museums, and other research institutions around the world. These programs administer Institution-wide research support and assist Smithsonian museums, research centers, and offices with diversifying and developing additional Fellowships and visiting appointments. This work will now occur in three separate organizations: Fellowships will be handled by the Under Secretary for Science and Research; internships will be handled by the Under Secretary for Education; and stipend payments will be managed by the Under Secretary for Administration's organization.

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

To achieve the strategic goal of Enhanced Interdisciplinary Research and maintain the Smithsonian's level of expertise in the research community, the Institution must continue attracting the best scholars. The Smithsonian has increased Fellowship stipends to provide awards comparable to other prestigious

programs so the Institution 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 to help today's young scientists become the next generation's top researchers. In addition, the Smithsonian 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 proposed projects.

Smithsonian Institution Scholarly Press (SISP) (4 FTEs and \$827,000) — Through the open-access Smithsonian Contributions Series program, continually published since 1875, and through open-access monographs, SISP publishes and disseminates the research results of Smithsonian staff and their collaborators. The federal funds support the production of first-class research in science, art, culture, history, and education, with widespread distribution to the public and to libraries, universities, and other education and research organizations. SISP publishes open-access materials online in digital formats as well as in print, covering core subject areas of anthropology, art, botany, history, marine sciences, museum conservation, paleobiology, and zoology. In addition, SISP disseminates interdisciplinary research and conference proceedings. Federal resources also underwrite the publication of scholarly books closely related to the national collections.

Furthermore, federal resources enable SISP to administer the Institution's initiative to increase public access to articles and papers authored by Smithsonian staff. The performance objectives advanced by SISP's scholarly publications and its program to increase public access to Smithsonian research results are Enhanced Interdisciplinary Research and support the strategic goal to Understand and Impact 21st Century Audiences.

EXPLANATION OF CHANGE

The FY 2022 budget request includes an increase of \$507,000, including \$207,000 for necessary pay and other related salary costs for existing staff funded under this line item, and \$300,000 and 2 FTEs in exhibit support for SITES | Affiliations.

Smithsonian Institution Traveling Exhibition Service and Affiliations (SITES | Affiliations) (+\$300,000, +2 FTEs)

This budget request includes an increase of \$300,000 and 2 FTEs to support SITES' landmark MoMS initiative. The MoMS program works with state humanities councils to bring traveling exhibitions, educational resources, and programming to small towns across America through local museums and other community venues. The MoMS program continues to enrich the underserved populations of rural America. The increased funding will support the broad array of educational resources each MoMS exhibition uses to reach local communities, engage and inspire more

people where they live, and create deep and impactful educational experiences for youth while catalyzing critical conversations on issues affecting them.

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 2020 ENACTED | 23 | 2,839 | 29 | 3,669 | 0 | 191 | 0 | 0 |
| FY 2021 ENACTED | 23 | 2,915 | 34 | 4,530 | 0 | 0 | 0 | 0 |
| FY 2022 REQUEST | 25 | 3,204 | 34 | 4,470 | 0 | 0 | 0 | 0 |

Federal Resource Summary by Performance Objective and Program Category

| Performance Objective/ Program Category | FY 2021 | | FY 2022 | | Change | |
|---|-----------|--------------|-----------|--------------|----------|------------|
| | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| Understand and Impact 21st Century Audiences | | | | | | |
| <i>Public Programs</i> | | | | | | |
| Provide relevant reference services and disseminate information to the public | 17 | 2,054 | 19 | 2,322 | 2 | 268 |
| Enable Cost-Effective and Responsive Administration | | | | | | |
| <i>Management Operations</i> | | | | | | |
| Enable efficient and responsive administrative infrastructure | 6 | 861 | 6 | 882 | 0 | 21 |
| Total | 23 | 2,915 | 25 | 3,204 | 2 | 289 |

BACKGROUND AND CONTEXT

The Office of Communications and External Affairs (OCEA) consists of four departments and a front office: 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). In addition, the OCEA front office hosts the Assistant Secretary for Communications and External Affairs and her direct reports.

The OCEA manages the Smithsonian's brand strategy, coordinates brand marketing, and oversees internal communications. 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. Accordingly, the OCEA is responsible for implementing the Smithsonian brand strategy, both internally and externally, so that the Institution reaches and engages more people with its mission. By improving internal communications and more effectively and efficiently informing

staff of Institution-wide policies, initiatives, and events, the OCEA encourages cross-unit collaboration to help the Smithsonian better achieve its strategic goals and core mission.

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

The 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 the Senate, appropriations and oversight committees and 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 the Smithsonian's offerings to the Congress and the Administration. The 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.

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

The OSEP participates in strategic decision making for advancing the Institution's goals by identifying event opportunities which will help the Smithsonian achieve its objectives, and also helps plan special events to extend the reach of the Institution and energize its representation. The Office also serves as the principal coordinator of events for the Secretary and the leadership of the Institution.

The FY 2022 budget request includes an increase of \$289,000 that includes \$67,000 for necessary pay and other related salary costs for existing

staff funded under this line item, and a programmatic increase of 2 FTEs and \$222,000 for visitor engagement.

MEANS AND STRATEGY

The OPA allocates resources for national and international media publicity and to expand relationships through targeted media outlets. As the Smithsonian Office with primary responsibility for extending the Institution's communications message to online audiences, the OPA manages content on the Institution's central website, Newsdesk, and on the central Smithsonian social media accounts. The OPA works with units throughout the Institution to establish and maintain professional communications guidelines and standards. The OPA also produces *Smithsonian Science*, an online blog devoted to scientific research, as well as blogs about African American and American women's history, National Air and Space Museum stories, modern design, Smithsonian traveling exhibitions, and *Smithsonian Folklife* magazine, in addition to numerous podcasts such as the popular and well-received *Sidedoor*.

In addition, the 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, the OPA also has a leading role in coordinating the Institution's *One Smithsonian: Greater Reach, Greater Relevance, Profound Impact* Strategic Plan and many other programs, as well as appeals for private support.

The OVS designs and administers systems that visitors use regularly to plan and enjoy their visits, as well as systems that enable Smithsonian staff to better aid on-site visitors. The OVS administers the Smithsonian Information Center at the Castle Building, the outdoor visitor information kiosks adjacent to all museums and galleries, Web applications, and selected publications. In addition, the OVS oversees a comprehensive visitor feedback system that includes the general Smithsonian email address, a telephone call center, comment cards, and surveys.

The OVS also works with relevant units to deliver products and services which help their staff understand and meet the needs of their specific audiences. The OVS systematically analyzes visitor behavior, trends and insights, and delivers pertinent findings to museum and research center teams whose projects will affect how visitors experience the Smithsonian and get the most out of their time in our facilities. The OVS recruits and trains highly qualified, motivated, and diverse volunteers to engage with visitors and help Smithsonian staff conduct research projects. The OVS also increases retention of volunteers by offering personal enrichment, award, and recognition opportunities.

EXPLANATION OF CHANGE

The FY 2022 budget request includes an increase of \$289,000 that includes \$67,000 for necessary pay and other related salary costs for existing staff funded under this line item, and a programmatic increase of 2 FTEs and \$222,000 for visitor engagement.

Visitor Engagement (+\$222,000, +2 FTEs)

The budget request includes an increase of \$130,000 and 1 FTE to hire a research analyst who will help the understaffed OVS conduct visitor studies and surveys on a pan-institutional level. The position will allow the OVS to respond to requests by Smithsonian museum visitor services staff to design, plan, and conduct studies, surveys, and projects to analyze visitor experiences, determine visitor trends, and see how visitors use the various systems within the Smithsonian. A special emphasis will be on how to handle our growing number of elderly and disabled visitors. This hire is an essential first step in making OVS staffing levels commensurate with its mission to gather information to examine and improve the visitors' experience at various Smithsonian museums.

The request also includes an increase of \$92,000 and 1 FTE to hire a public inquiry assistant. The position will assist the OVS with providing timely and accurate information to the public via telephone and email inquiries. Specifically, this position will enable the OVS to more effectively and efficiently operate the Smithsonian's Call Center and Public Inquiry Mail program by reducing the need to rely on volunteers to answer telephone calls and respond to email inquiries. This hire will function as an initial point of contact for visitor inquiries about all aspects of a Smithsonian visit, including programs, activities, facilities, operating hours, and more.

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 2020 ENACTED | 0 | 23,284 | 0 | 0 | 0 | 0 | 0 | 0 |
| FY 2021 ENACTED | 0 | 23,284 | 0 | 0 | 0 | 0 | 0 | 0 |
| FY 2022 REQUEST | 0 | 32,634 | 0 | 0 | 0 | 0 | 0 | 0 |

Federal Resource Summary by Performance Objective and Program Category

| Performance Objective/ Program Category | FY 2021 | | FY 2022 | | Change | |
|---|----------|---------------|----------|---------------|----------|--------------|
| | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| Enhanced Interdisciplinary Research | | | | | | |
| <i>Research</i> | | | | | | |
| Engage in impactful scientific research and discovery | 0 | 1,300 | 0 | 6,300 | 0 | 5,000 |
| | | | | | | |
| Expand Digital Technologies | | | | | | |
| <i>Digitization and Web Support</i> | | | | | | |
| Provide improved digitization and Web support | 0 | 966 | 0 | 5,316 | 0 | 4,350 |
| | | | | | | |
| Understand and Impact 21st Century Audiences | | | | | | |
| <i>Public Programs</i> | | | | | | |
| Provide relevant reference services and disseminate information to the public | 0 | 10,600 | 0 | 10,600 | 0 | 0 |
| | | | | | | |
| Preserve Our Natural and Cultural Heritage | | | | | | |
| <i>Collections</i> | | | | | | |
| Improve the stewardship of the national collections | 0 | 8,197 | 0 | 8,197 | 0 | 0 |
| | | | | | | |
| Enable Cost-Effective and Responsive Administration | | | | | | |
| <i>Information Technology</i> | | | | | | |
| Improve the Institution's information technology systems and infrastructure | 0 | 2,221 | 0 | 2,221 | 0 | 0 |
| | | | | | | |
| Total | 0 | 23,284 | 0 | 32,634 | 0 | 9,350 |

BACKGROUND AND CONTEXT

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

- Research Equipment Pool
- Information Resources Management Pool
- Latino Initiatives Pool
- Collections Care and Preservation Fund
- Asian Pacific American Initiatives Pool
- American Women’s History Initiatives Pool

In 1993, Congress approved the Smithsonian’s reallocation of funds to create two Institution-wide funding programs: the Research Equipment Pool (REP) to support the units’ needs for state-of-the-art research equipment, and the Information Resources Management (IRM) Pool to systematically address information technology 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’ 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 to improve the overall stewardship of the national collections. The FY 2016 appropriation included an increase of \$400,000 to establish the Asian Pacific American Initiatives Pool (APAIP) to explore and share the contributions of Asian Pacific Americans to the American Experience. More recently, in FY 2018, Congress approved a \$2,000,000 increase to Institution-wide programs in support of the new American Women’s History Initiatives (AWHI) Pool. Congress also approved increases to the Institution-wide programs in FY 2020, including \$100,000 for the REP, \$200,000 for the IRM Pool, \$3,000,000 for the Latino Initiatives Pool (LIP), \$200,000 for the APAIP, and \$3,000,000 for the AWHI. In FY 2021, Congress approved increases of \$1,000,000 each for the LIP and AWHI pools.

In FY 2022, the Institution requests approval for the following funds:

- Research Program Initiatives: \$5,000,000
- Digital Support Pool: \$2,850,000
- Education Initiatives Pool: \$1,500,000
- TOTAL: \$ 9,350,000**

MEANS AND STRATEGY — RESEARCH EQUIPMENT POOL (\$1,300,000)

The Smithsonian’s ambitious research agenda requires appropriate equipment to achieve its goal of Enhanced Interdisciplinary 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. REP funds have enabled Smithsonian museums and research centers to undertake groundbreaking research in many areas. For example, genomics is offering new opportunities for exploring biodiversity. To be successful, biodiversity genomics requires a set of cutting-edge genetic technologies such as next-generation sequencing. Similarly, the Institution's efforts in materials conservation have been greatly enhanced by using highly specialized equipment that has enabled conservators to better identify the age and provenance of artifacts as well as improve the preservation of fragile materials. Investing in equipment and maintenance contracts will allow the Smithsonian to better leverage its collections and expertise in these important areas of research.

MEANS AND STRATEGY — INFORMATION RESOURCES MANAGEMENT POOL (\$3,187,000)

The Information Resources Management Pool supports network operations and server administration, including the Institution's Enterprise Resource Planning (ERP) financial system. Specifically, the requested funds are used for:

- upgrades and enhancements to the Smithsonian's information technology infrastructure;
- contractor support in the Network Operations Center;
- services of Active Directory and desktop migration technicians;
- network hardware/software maintenance; and
- delivery of Smithsonian digital assets to the public.

MEANS AND STRATEGY — LATINO INITIATIVES POOL (\$5,000,000)

To achieve the strategic goals of Enhancing Interdisciplinary Research and Understanding and Impacting 21st Century Audiences, the Latino Initiatives Pool (LIP) provides funding for projects that support Latino programs and focus on U.S. Latino contributions to science, history, and culture. Pool funds have been used to support exhibition and collections development, public and educational programs, research and publications, digital content, and Fellowships and internships.

Projects are selected on a competitive basis, as recommended by a peer-review panel, from proposals that demonstrate cost-effective deployment of pool funds, as well as coordination with other Smithsonian resources and external funding. Since its creation in 1995, the LIP has provided more than \$39.6 million in funding to more than 590 Smithsonian programs and projects.

In addition, the Latino Curatorial Initiative has supported 10 Latino curators and eight curatorial assistants at various Smithsonian units. The Initiative was designed to increase Latino representation and scholarship at the Smithsonian. Furthermore, the expanded funding of the LIP has broadened the Smithsonian's outreach efforts nationwide. This includes an increased number of traveling exhibitions, public and educational programs, and institutional partnerships. These funds ensure that Smithsonian content is available to

more visitors throughout the country and the world, including audiences using digital platforms.

The LIP funding will continue to go to Smithsonian leadership and professional development programs as well. An example of this is the Smithsonian Latino Center's Latino Museum Studies Program (LMSP), which now boasts a national alumni network of more than 300 professionals and scholars, some of whom are employed at the Smithsonian. Programs such as the LMSP play an important role in creating an extensive pool of qualified museum professionals and cultural specialists at universities, museums, and cultural centers which also collaborate with the Smithsonian.

The Smithsonian is also developing the first exhibition and public program space in the National Museum of American History (NMAH) dedicated to the U.S. Latino experience. With a major gift from the Molina family and other private donors, along with LIP funding, this 4,500-square-foot gallery is scheduled to open in the winter of 2022. The *Molina Family Latino Gallery* will present stories of discovery, identity, migration, innovation, entrepreneurship, and success to millions of diverse, intergenerational visitors.

In FY 2021, the Institution redirected \$1,000,000 from the LIP to the National Museum of American Latino line item to provide administrative support for the new Museum.

MEANS AND STRATEGY — COLLECTIONS CARE AND PRESERVATION FUND (\$8,197,000)

Collections stewardship is a key component and core priority of the Smithsonian's Strategic Plan. Assembled throughout the Institution's 175-year history, Smithsonian collections are fundamental to carrying out the Institution's mission and serve as the intellectual base for scholarship, exhibition, and education.

Currently, Smithsonian collections total 155.5 million objects and specimens; 145,700 cubic feet of archives; and 2.2 million library volumes that include irreplaceable national icons, examples of everyday life, and scientific material vital to the study of the world's natural and cultural heritage, covering subjects from art to zoology. The proper stewardship of the national collections is essential for America's artistic, scientific, and education infrastructure, enabling researchers to address such significant challenges as the effects of climate change, the spread of invasive species, and the loss of biological and cultural diversity and its impact on global ecosystems and cultures.

To achieve the strategic goal of Preserving Our Natural and Cultural Resources, the CCPF provides essential resources to make targeted improvements in the accountability, documentation, care, preservation, storage, and accessibility of the Smithsonian's vast and diverse collections. With this funding, the Smithsonian continues to strategically address important Institution-wide collections care needs in a pragmatic and systematic manner, based on sound collections assessment data, innovative collections care methodologies,

economies of scale, and project-driven activities, including collections moves, re-housing, and digitization. Smithsonian senior leadership acknowledges that an effective strategy for addressing our shared collections challenges depends on a coordinated, Institution-wide approach. Holistic collections-level management has enabled comprehensive improvements which benefit the greatest number of collection items and collecting units in an efficient, practical, and cost-effective way.

Collections Physical and Digitization Assessments

Since FY 2012, the National Collections Program (NCP) and the Digitization Program Office (DPO) developed and implemented an Institution-wide assessment tool — the Collections and Digitization Reporting System (CDRS) — to annually assess the state of the collections' physical condition and their digitization, establish priorities, identify areas where improvements are needed, measure progress, and provide a practical framework for the allocation of resources. Based on assessment results, the NCP has used centralized CCPF resources to achieve targeted improvements in the preservation and accessibility of collections in the most efficient and cost-effective manner possible. These funds have enabled staff to correct specific collections management deficiencies identified in the Smithsonian's Inspector General audit recommendations; facilitate collections moves from substandard facilities and conditions; replace obsolete, substandard storage equipment; support the management and preservation of the Smithsonian's cryo-collections; improve the preservation and management of time-based media, digital art, and audiovisual collections across the Institution; and strengthen Institution-wide collections emergency management and professional development. By working closely with the DPO, the NCP has also provided essential resources to support the collections care activities required for the success, efficiency, and competition of numerous DPO-supported, unit-driven, mass-digitization projects.

Collections Space Planning

In FY 2015, the Smithsonian completed a multi-year, Institution-wide collections space planning initiative, culminating in the Collections Space Framework Plan (CSFP). The CSFP includes recommendations and a 30-year implementation plan for addressing current and projected Institution-wide collections space requirements in a strategic, integrated, and collaborative manner. The plan is a road map that provides renovation and construction strategies to address unacceptable collections space conditions, allow for decompression of overcrowded collections to make them more physically accessible, anticipate future collections growth, and reduce reliance on leased space for collections storage.

To address near-term space requirements, the implementation of the CSFP includes: (1) the decontamination of collections in Garber Buildings 15, 16, and 18, including processing, re-housing, and temporary storage in Building 37; (2) the construction of Pod 6 at the Museum Support Center to relocate at-risk collections from the Paul E. Garber Facility, and several Mall museums, as well as provide essential temporary swing and permanent collections space for the NMAH East Wing public renewal project; (3) the

construction of two new storage modules and a hangar adjacent to the Udvar-Hazy Center to support the continued move of the National Air and Space Museum (NASM) collections from substandard conditions at the Garber Facility and the immediate need for temporary collections swing space during the NASM Mall building renovation; and (4) the completion of the Suitland Collections Center master plan. That plan supports a phased development of the Suitland and NASM Udvar-Hazy campuses to address intermediate and long-term collections space needs.

The Smithsonian has robust Institution-wide data on the national collections, their physical condition, state of digitization, and current collections space conditions. When combined, this information provides key tools and direction for improving the management, care, and accessibility of Smithsonian collections. In FY 2022, the Smithsonian will continue to build on collections initiatives and strategically address the preservation, digitization, and storage space needs of collections, based on the results of the Institution-wide physical and digitization collections assessments and collections space survey.

MEANS AND STRATEGY — ASIAN PACIFIC AMERICAN INITIATIVES POOL (\$600,000)

To achieve the strategic goals of Enhancing Interdisciplinary Research and Understanding and Impacting 21st Century Audiences, and documenting the full spectrum of the American Experience, the APAIP provides funding to support research, exhibitions, educational programs, collections, digital and media projects, and partnerships with local and regional cultural organizations.

Projects are selected on a competitive basis from proposals that demonstrate effective deployment of the pool funds, coordination with other Smithsonian resources, and successful external fund raising from the private sector. Since its inception in FY 2016, the APAIP has provided funding to more than 50 Smithsonian programs and projects, and has increased the Asian Pacific American presence in the Smithsonian's presentation of and research into the American Experience. In FY 2018, the APAIP supported its first curator dedicated to Asian Pacific American History at the NMAH. With the additional funding provided in FY 2020, the pool is now able to support more projects and employ two curatorial assistants — one in the NMAH and the other in the Center for Cultural Heritage.

MEANS AND STRATEGY — AMERICAN WOMEN'S HISTORY INITIATIVES POOL (\$5,000,000)

The AWHI, first funded by Congress in FY 2018, will heighten the public's knowledge and appreciation of the transformational role women have played in constructing our national identity and culture. The Smithsonian Institution, through AWHI, will: (1) magnify the contributions of women through exhibitions, programs, and educational content; (2) increase the representation of women online by building on the Institution's trusted resources; (3) hire curators committed to amplifying American women's history; and (4) expand the national collection, both online and on site, to better portray how women have shaped this country. The Smithsonian Institution is partnering with public and private

entities to secure funding for its outreach and impact. In FY 2019, the Institution established a national advisory committee to play a key role in shaping the initiative and securing resources for representing the constituencies and stakeholders of the AWHI. The FY 2021 appropriation included an additional \$1 million to expand the AWHI and amplify women's history for local, national, and international audiences.

In October of FY 2020, the AWHI launched the exhibit *Girlhood: It's Complicated* at the NMAH. The initiative continues to fund the development of the traveling exhibit, which will tour the nation. Also in FY 2020, AWHI funds supported the *First Ladies of the United States* exhibit at the National Portrait Gallery. The initiative presented its first public art installation, Maren Hassinger's *Monument*, in Washington, DC's Dupont Circle in October of 2020. The project — a partnership between the initiative and the Golden Triangle Business Improvement District — is the first public work to go on view in a series that will feature outdoor sculptures of women artists from around the country, including an installation by the artist Rania Hassan, among others.

On social media, the AWHI celebrated the anniversary of the passage of the 19th amendment with two efforts. It launched a *#BecauseOfHerStory* series of eight animated videos which explored how women worked together to advocate for voting rights and emphasized the diversity of the suffrage movement and the everyday people who collaborated to create political and social change. Also, a collaboration between the Smithsonian, the National Archives, and the Library of Congress, *#19SuffrageStories*, used colorful graphics to tell 19 stories about the suffrage movement drawn from our collections, including tales about how groups and individuals who were Black, indigenous, and people of color (BIPOC) blazed the trail for equal voting rights. Inviting social media audiences to use the animated videos inspired by our collections sparked connections between the past and present. AWHI-funded curators worked across the Institution to make these projects happen.

Launched in 2019, the Because of Her Story Cohort Internship Program is an eight-week long, paid summer internship experience geared toward undergraduate students. The 2019 internship alumni have gone on to pursue careers in teaching at the K–12 level, doing graduate work in women's history, and more. The 2021 Because of Her Story Virtual Cohort Internship Program will host 16 paid interns at various Smithsonian units across the country. Due to the COVID-19 pandemic, the AWHI redesigned the experience for a virtual setting to ensure the interns can participate regardless of outside conditions.

In FY 2021, the Smithsonian continues to support and hire curators, promote research and education via online partnerships, due to COVID-19, and fund digital pool awards with federal allocations. The Institution is also establishing a baseline to guide the representation of American women and girls in the Smithsonian's public digital collections. In addition, the AWHI launched an expanded digital pool fund to provide gender-inclusive descriptions of collections metadata, which will increase the discoverability of women and girls in Smithsonian collections online.

In FY 2022, the AWHI program will continue developing its private/federal partnership to make the most cost-effective use of these combined resources. With the blend of federal and nonfederal funds, the AWHI has hired a director as well as two data scientists to provide a more sophisticated analysis of our collections data on women's history.

In FY 2021, the Institution redirected \$1,000,000 from the AWHI to the Smithsonian American Women's History Museum line item to provide administrative support for the new Museum.

EXPLANATION OF CHANGE

In FY 2022, the Institution is requesting an increase of \$9,350,000 to establish the following new pools:

RESEARCH PROGRAM INITIATIVES (\$5,000,000)

The Smithsonian requests funding to support an innovative and emerging research pool of money to be managed by the Under Secretary for Science and Research. This pool will foster a research environment conducive to scientific innovation and provide the essential financial support necessary to execute world-class science. Priority will be given to high-risk, high reward activities which build technical capabilities within the Smithsonian's established areas of research. This program will help recruit and retain the finest scientific talent, support postdoctoral researchers, and develop a diverse science, technology, engineering, and mathematics (STEM) workforce.

The funding criteria will be flexible enough to respond to unique research opportunities that could change our understanding of Earth systems (such as extreme ground-level weather events and volcanic eruptions). In the interest of allocating resources in the most cost-effective manner possible, the Institution will distribute the funds by both competitive and more focused, targeted efforts. We expect to allocate the funding in several tracks; for example, internally competitive seed and innovation grants, start-up funds for new researchers, and targeted funding to address diversity and inclusion will also address the impact of COVID-19 telework on early career researchers, especially women.

Examples of current relevant research include:

- One Health/Interconnected Health — Better understanding and controlling the interactions between human, animal, plant, and ecosystem health will improve the sustainability of our planet and society, and how both of these are impacted by climate change.
- Biodiversity genomics — Applying genomic tools to answer questions in ecology and evolution, including the exploration of microbial populations (that is, microbiota and microbiomes), which play a key role in soils, oceans, and

interactions in animals and plants, will help explain how these organisms are impacted by climate change.

- **Movement of Life** — Tracking the movement of animals across landscapes and applying wide-ranging technologies (involving chemistry, telemetry, remote sensing, and tagging) to monitor the movement of animals over their life cycles will reveal how they are impacted by climate change.
- **Endangered species research** — Studying the fundamental biology of species; reintroducing and/or sustaining species into nature; mitigating human-animal conflict; and understanding the factors responsible for extinction, including the impacts of climate change.
- **Invasive species research** — What makes some species invasive and/or pests, while others become rare? How does climate change impact these things and affect our current understanding of pest management?
- **Astronomy** — How will we find evidence of life on another planet? What physical-chemical processes lead to the great diversity among planets in our solar system and beyond?

DIGITAL SUPPORT POOL (\$2,850,000)

A key pillar of the Secretary's strategic framework has been the continued development of the "Virtual Smithsonian" that will leverage digital capabilities and platforms to reach expanded audiences in the United States and around the globe.

As the leader of an influential scientific, cultural, and educational institution, it is essential for the Smithsonian to bring people together to share big ideas and conflicting perspectives, especially about important topics that touch all aspects of society, such as race relations, a deadly virus, or climate change. The Smithsonian has the unique ability and obligation to increase public understanding of our universe, our history, and our shared future, and to work for the common good.

The Smithsonian is celebrating its 175th anniversary by pressing forward with comprehensive digital transformation and initiatives focused on key national and global challenges. To sustain the change that has begun, we have created a new position reporting to the Secretary and Deputy Secretary to lead the transformation. This central function will provide critical leadership and guidance to Smithsonian units as they re-imagine their work by creating content and programming to reach our diverse audiences digitally.

To support our expansion of digitization and open access, and increase the type and volume of content we manage and make available to the world, the Institution requests a Digital Support Pool (**+\$2,850,000**) be established in the Institution-wide line item.

This funding will provide digital platform and software development, in addition to supporting the ramp-up of mass digitization, informatics, and expansion of 3D digitization infrastructure, with key developers and program managers. The funds will also support the central digital transformation function, digital platforms which support the sharing our collections, our successful open-access initiative, digitization program, and the Transcription Center, a pilot project that has blossomed into a highly publicized institutional program that draws thousands of digital volunteers worldwide. In addition, the funding will support data science by expanding the information management infrastructure, along with appropriate staffing to be embedded with key units.

Furthermore, this funding will support the logistics and technology for how Smithsonian researchers do their work. An example is how the Data Science Lab uses artificial intelligence (AI) and machine learning (ML) to extract information from our digitized collections, perform research, and assist curators and researchers in looking at our objects and specimens in ways that are otherwise not possible given the massive scale of the national collections. Their work includes providing training on software development, specifically for researchers, developing methods to increase the efficiency of new neural networks, and evaluating and addressing bias in existing networks.

EDUCATION INITIATIVES POOL (\$1,500,000)

The Institution also requests funding to support our educational outreach, including programs to address racial equity and sustainability issues. In response to the COVID-19 pandemic, the Smithsonian ramped up its commitment and access to a wide array of our virtual assets, educational tools, and digital platforms. We are helping people navigate distance learning, reintroducing our nation's most revered treasures to a bigger audience, and inviting everyone to rediscover the wonder of history, culture, the arts, and the sciences. Our curators, scientists, and other experts continue to offer their knowledge, expertise, and insights. They have found new ways to engage with visitors and introduce them to exhibits and collections. We have collected a wide range of these resources on [Smithsonian Cares](#), including numerous webcasts and online events.

The Institution is requesting **\$1,500,000** to establish an Education Initiatives Pool, in the Institution-wide line item, to continue providing high-quality educational resources to the public, as detailed below:

- **Learning Lab**

The Smithsonian's Learning Lab is a free online platform for educators and learners of all ages to access the millions of digitized resources to support teaching and learning. Smithsonian educators and experts use this platform to co-create content with pre-K–12 teachers from around the country. Free tools like the Learning Lab help extend the reach of the Smithsonian to communities nationwide and make high-quality and relevant content accessible to all. The pool funds will support the integration of the Learning Lab with learning management systems used by schools (e.g., Canvas) and support Smithsonian educators as

they work with the nation's pre-K–12 teachers to co-create content for use in classrooms.

- **Equity and Access**

The Smithsonian is committed to providing equal access to high-quality educational resources for everybody. Pool funds will be used to create educational materials and tools which make content available in a variety of low-tech and highly tactile formats. They will also support enhancing tools to make content accessible to communities with disabilities and individuals who need bilingual content.

- **Distance Learning**

The Smithsonian Institution serves as the nation's knowledge partner and has been engaging in distance learning since well before the pandemic struck, serving learners beyond the walls of our museums and centers through virtual tours, webinars, distance-learning classes for students at America's military bases around the world, recorded videos, podcasts, and more. These funds would be used to create new distance-learning resources and add content to existing Smithsonian platforms in support of the nation's distance-learning needs in school, after school, and at home. We would also invest in technology and develop processes to help ensure that our online learning environments are age-appropriate safe spaces for young learners.

SMITHSONIAN EXHIBITS

| | APPLICATION OF OPERATING RESOURCES | | | | | | | |
|-----------------|------------------------------------|-------|---------------|-------|--------------------------|-------|--------------------------|-------|
| | FEDERAL APPROPRIATIONS | | GENERAL TRUST | | DONOR/SPONSOR DESIGNATED | | GOV'T GRANTS & CONTRACTS | |
| | FTE | \$000 | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| FY 2020 ENACTED | 28 | 3,169 | 18 | 465 | 0 | 0 | 0 | 0 |
| FY 2021 ENACTED | 28 | 3,266 | 17 | 276 | 0 | 0 | 0 | 0 |
| FY 2022 REQUEST | 29 | 3,498 | 16 | 200 | 0 | 0 | 0 | 0 |

Federal Resource Summary by Performance Objective and Program Category

| Performance Objective/ Program Category | FY 2021 | | FY 2022 | | Change | |
|---|-----------|--------------|-----------|--------------|----------|------------|
| | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| Understand and Impact 21st Century Audiences | | | | | | |
| <i>Exhibitions</i> | | | | | | |
| Offer compelling, first-class exhibitions | 24 | 2,662 | 24 | 2,743 | 0 | 81 |
| Preserve Our Natural and Cultural Heritage | | | | | | |
| <i>Collections</i> | | | | | | |
| Improve the stewardship of the national collections | | | 1 | 138 | 1 | 138 |
| Enable Cost-Effective and Responsive Administration | | | | | | |
| <i>Management Operations</i> | | | | | | |
| Enable efficient and responsive administrative infrastructure | 4 | 604 | 4 | 617 | 0 | 13 |
| Total | 28 | 3,266 | 29 | 3,498 | 1 | 232 |

BACKGROUND AND CONTEXT

The Smithsonian Exhibits (SIE) office is a full-service exhibit planning, design, and production shop supporting Smithsonian public exhibitions that connect the American people and international audiences with the richness of Smithsonian content and collections. SIE is the Smithsonian-wide exhibit resource available to all Smithsonian museums, research centers and Affiliates and, in partnership with colleagues throughout the Institution, delivers the highest quality exhibit design, interpretive writing, editing, project management, graphic production, fabrication, installation, and 3D services.

To achieve the strategic goal to Understand and Impact 21st Century Audiences, the SIE will continue to focus on its core mission of planning, designing, and producing exhibitions for the Institution. Clients with full, limited, or no design or production capabilities can use the SIE for complete or partial exhibition services, including exhibit development, design, refurbishing, signage, acrylic casing, cabinetry, model making, crating, and artifact mounting.

The SIE fosters collaboration among units by providing expert consultation, especially in the early stages of exhibition planning. With a broad array of skills, the SIE exhibit specialists work across the Smithsonian, enabling the creation of more compelling exhibits that connect the American people to their history as well as their cultural and scientific heritages.

For clients who seek specialized exhibition-related services, the SIE will continue to develop digital interactive and multi-media services and expand its expertise in computer-controlled production and automated modeling technologies such as 3D scanning and printing. In addition, the SIE will provide opportunities for Smithsonian colleagues to take advantage of its state-of-the-art facility, allowing trained staff to work with the specialized equipment.

The SIE's Object Storage Facility (OSF) offers secure, climate-controlled storage for artifacts during production. The SIE, in its work to advance the strategic goal to Understand and Impact 21st Century Audiences, and the Smithsonian's expansive collections, will continue to support exhibitions in the S. Dillon Ripley Center concourse, as well as in the Commons, Schermer, and Great Hall galleries in the Smithsonian Castle, and throughout the Smithsonian's many other facilities.

The SIE also conducts forums for exhibit staff throughout the Smithsonian to inspire creativity, innovation, and collaborations which result in cutting-edge exhibitions and technological advances. The SIE is expanding its skills in exhibit creation, interpretive master planning, and exhibition development services to include prototyping and interactive development for diverse design projects.

The FY 2022 budget request includes an increase of 1 FTE and \$232,000. The increase includes \$94,000 for necessary pay and other related salary costs for existing staff and a programmatic increase of 1 FTE and \$138,000 for collections support.

MEANS AND STRATEGY

As the Institution's most comprehensive producer of exhibits, the SIE provides its Smithsonian clients with first-class exhibition design, interpretive writing, editing, content development, production, and installation services. Each year, the SIE plans, designs, and produces approximately 100 projects, large and small, for almost every office and museum in the Smithsonian.

In FY 2022, most SIE resources will stay focused on achieving strategic goals to Understand and Impact 21st Century Audiences and Enable Cost-Effective and Responsive Administration by:

- serving as a learning center within the Smithsonian, which shares its expertise in exhibit planning, design, and production with community partners, exhibit colleagues at the Smithsonian, and at the national/international museum level;
- cross-training staff within the SIE to share expertise and maximize efficiencies while also advancing environmental sustainability in exhibits;

- demonstrating new exhibition design technologies to Smithsonian units;
- promoting exhibition excellence, unit sharing of resources, and advancement of exhibitions as an interpretive medium throughout the Smithsonian Institution; and
- leveraging its expertise in work with electro-mechanical interactive components and tactile experiences to deepen audience engagement at all SI exhibits.

The SIE will accomplish these objectives by focusing exclusively on exhibit-related work, freeing up SIE staff with specialized experience to concentrate on the planning, design, and production of museum exhibits. By building on well-established, collaborative relationships with other Smithsonian design and production staff, the SIE will continue to play a strong role in sharing its expertise with other Smithsonian units. These initiatives will result in a more informed and expert staff that can do more to maintain the Smithsonian's leadership in the field of exhibition design and production.

EXPLANATION OF CHANGE

The FY 2022 budget request includes an increase of 1 FTE and \$232,000. The increase includes \$94,000 for necessary pay and other related salary costs for existing staff and a programmatic increase of 1 FTE and \$138,000 for collections support.

Collections Support (+\$138,000, +1 FTE)

The SIE is requesting a funding increase (+\$138,000 and +1 FTE) to hire a GS-12 exhibits specialist to provide collections management support. The position will support a full range of tasks necessary to preserve acquisitions, fabricate and install collection displays for both temporary and permanent exhibits, as well as monitor and safeguard all collections under the care of the SIE.

The new person will also perform graphic labeling, fabrication, and installation of custom casework to meet conservation requirements for collections, and install structural mounts to secure collections artifacts for educational presentation in exhibit displays in the museums, galleries, and other venues.

The exhibits specialist will also create three-dimensional exhibit components, replicating artifacts to reduce the handling of and potential damage to delicate collection objects. In addition, the position will provide consultation and support for museum conservation staff on collections care, including the crating of exhibit objects for traveling exhibitions and the proper climate-controlled storage of artifacts in the SIE's Object Storage Facility.

NONAPPROPRIATED RESOURCES — General trust funds support SIE salaries and benefits for project management, design, and exhibit specialists, as well as general operations, equipment services, and maintenance requirements.

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 2020 ENACTED | 18 | 1,906 | 0 | 0 | 0 | 0 | 0 | 0 |
| FY 2021 ENACTED | 18 | 1,949 | 0 | 0 | 0 | 0 | 0 | 0 |
| FY 2022 REQUEST | 18 | 1,991 | 0 | 0 | 0 | 0 | 0 | 0 |

Federal Resource Summary by Performance Objective and Program Category

| Performance Objective/ Program Category | FY 2021 | | FY 2022 | | Change | |
|---|-----------|--------------|-----------|--------------|----------|-----------|
| | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| Preserve Our Natural and Cultural Heritage | | | | | | |
| <i>Collections</i> | | | | | | |
| Improve the stewardship of the national collections | 18 | 1,949 | 18 | 1,991 | 0 | 42 |
| Total | 18 | 1,949 | 18 | 1,991 | 0 | 42 |

BACKGROUND AND CONTEXT

The Museum Support Center (MSC) is the Smithsonian's principal off-site collections preservation and research facility. Located in Suitland, Maryland, the facility houses more than 77 million objects, or 55 percent of the Institution's irreplaceable national collections, primarily from the National Museum of Natural History (NMNH). Other Smithsonian museums using the facility include 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. External agencies storing collections at the MSC include the Walter Reed Biological Unit (WRBU) and the National Institutes of Health.

The collections at MSC are used to support scientific and cultural research for essential Government functions such as food and transportation safety, border security, criminal investigations, forensics, national defense, the evaluation of environmental disasters, cancer research, and much more.

The MSC accommodates collections with a variety of state-of-the-art equipment: collections in cabinets; mobile shelving for biological specimens preserved in alcohol; meteorites in a nitrogen atmosphere; tissues and film in mechanical and nitrogen-vapor freezers; high-bay storage for oversized objects

such as totem poles, boats, and large mounted mammals; and large mobile racks for storing art works.

The facility consists of five buildings, including a greenhouse, laboratory and oversized storage area in addition to the main building. These facilities house laboratories for Smithsonian scientists and other federal agencies, such as the WRBU. These laboratories focus on molecular systematics, ancient DNA, conservation, and other specialized research. The MSC supports contracted maintenance services and required calibration for much of the specialty collections preservation, laboratory equipment, and safety systems, such as environmental chambers, freezers, nitrogen systems, reverse-osmosis water systems, and oxygen-detection systems. The MSC staff provides project planning and construction coordination, collections care, safety and emergency management, access and logistical support, as well as administrative and shipping services.

The FY 2022 budget request includes an increase of \$42,000 for necessary pay and other related salary costs for existing staff funded under this line item.

MEANS AND STRATEGY

In support of the Smithsonian's strategic goal of Preserving Our Natural and Cultural Heritage, the MSC will work to improve the stewardship of the national collections. The FY 2022 funding will be used to improve pest management and storage of collection materials, as well as assist museum staff in adjusting to new ways of working while finishing delayed projects at the MSC. Additionally, with base funding the MSC will focus on logistical support of shipping and collections functions. Shipping has become more complex and dynamic with the fast expansion of e-commerce, international sanctions, customs and duties changes, and security threats to transportation systems. Irreplaceable objects are often received or sent out through loan programs but many shipments are being delayed due to the COVID-19 pandemic. Shipments of collections, materials, equipment, and supplies are expected to increase as on-site activities resume.

In FY 2022, MSC staff will begin planning and preparing for the construction of Pod 6 and continue to support maintenance of the national collections. In addition, the MSC staff will support Smithsonian Facilities to replace aging heating, ventilation, and air-conditioning (HVAC) equipment and complete a comprehensive study of the electrical infrastructure. Both projects will improve collections storage and laboratory space. The Pod 6 construction project will bring new partnerships and an Institution-wide improvement to collections storage and care. MSC staff will assist with the preparations required for large movements of collections and plan to integrate new staff and activities into the Pod 6 building.

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 2020 ENACTED | 22 | 3,359 | 0 | 14 | 3 | 673 | 0 | 0 |
| FY 2021 ENACTED | 22 | 3,459 | 0 | 19 | 3 | 567 | 0 | 0 |
| FY 2022 REQUEST | 22 | 3,562 | 0 | 21 | 3 | 696 | 0 | 0 |

Federal Resource Summary by Performance Objective and Program Category

| Performance Objective/ Program Category | FY 2021 | | FY 2022 | | Change | |
|---|-----------|--------------|-----------|--------------|----------|------------|
| | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| Enhanced Interdisciplinary Research | | | | | | |
| <i>Research</i> | | | | | | |
| Engage in impactful scientific research and discovery | 7 | 1,190 | 8 | 1,346 | 1 | 156 |
| | | | | | | |
| Expand Digital Technologies | | | | | | |
| <i>Digitization and Web Support</i> | | | | | | |
| Provide improved digitization and Web support | 1 | 126 | 1 | 138 | 0 | 12 |
| | | | | | | |
| Understand and Impact 21st Century Audiences | | | | | | |
| <i>Public Programs</i> | | | | | | |
| Provide relevant reference services and disseminate information to the public | 1 | 162 | 1 | 166 | 0 | 4 |
| <i>Education</i> | | | | | | |
| Engage and inspire diverse audiences | 1 | 107 | 1 | 111 | 0 | 4 |
| | | | | | | |
| Preserve Our Natural and Cultural Heritage | | | | | | |
| <i>Collections</i> | | | | | | |
| Improve the stewardship of the national collections | 8 | 1,179 | 8 | 1,344 | 0 | 165 |
| | | | | | | |
| Enable Cost-Effective and Responsive Administration | | | | | | |
| <i>Management Operations</i> | | | | | | |
| Enable efficient and responsive administrative infrastructure | 4 | 695 | 3 | 457 | -1 | -238 |
| | | | | | | |
| Total | 22 | 3,459 | 22 | 3,562 | 0 | 103 |

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 Protecting Cultural Heritage and Preventive Conservation Programs, and by participating in the Smithsonian's signature Preparedness and Response in Collections Emergencies (PRICE) program, the MCI responds to the threats facing cultural heritage in multiple and complex ways. This includes: analyzing and consulting on preservation environments; developing less invasive and damaging storage, display, and conservation techniques; and supporting U.S. agencies and the museum community in identifying illicitly trafficked cultural heritage artifacts and objects. For example, the MCI works with the U.S. Department of State on a highly successful training program at the Iraqi Institute for the Conservation of Antiquities and Heritage in Erbil, which supports the rescue and recovery of Iraqi and regional cultural heritage artifacts.

The MCI, as the only Smithsonian resource for technical studies and scientific analyses for most of the Institution's national collections, brings unique analytical capabilities to Smithsonian researchers, including a central mass-spectrometry instrument core and advanced technological capabilities for analyzing biomolecules. These services are available to Smithsonian units at no charge. In addition to responding to requests for consultations from within the Smithsonian, the MCI handles requests from affiliates and outside organizations, such as the White House, U.S. Congress, U.S. Department of Homeland Security — Homeland Security Investigations, U.S. Department of State, and many other federal, museum, and academic organizations.

The FY 2022 budget request includes an increase of \$103,000 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 Enhanced Interdisciplinary Research, the MCI will collaborate with the Smithsonian's scientific researchers and research centers and provide increased technical and research assistance to Smithsonian arts and humanities researchers, collections, and museums. The MCI will initiate, facilitate, and support technology transfer for the Smithsonian's collaborative research projects by using biomolecular mass-spectroscopy, including biological isotopes and proteomics (i.e., the large-scale study of proteins; particularly, their structures and functions). The MCI will also conduct fundamental research into mechanisms of degradation and biodeterioration, preserve cultural heritage, and harness new technologies. The MCI's research programs will cross boundaries between Smithsonian units as well as support all of the Institution's signature programs and Institution-wide stakeholders. The MCI will

also support the conservation and heritage science fields through publications, hosted symposia, presentations, invitation-only seminars, lectures, and its website, to disseminate the results of its research programs.

In FY 2022, the MCI will continue to develop its biomolecular mass-spectrometry and proteomics capabilities as a part of the Smithsonian's central research infrastructure. Proteomics is an area of rapid growth in biological and medical research that is being driven by advances in molecular separation and mass-spectrometry technology. Along with genomics, the field has the potential for rapid acquisition of data that speeds the discovery and identification of organisms, the linking of genotypes and phenotypes, and the development of novel biomolecular markers. Proteomics, in tandem with genomics, is expanding our understanding of biological and ecological functions. These capabilities will allow the MCI to gather more information from Smithsonian collections, cultural objects, and biological specimens, and to learn more about their materials, origins, and the causes of their deterioration.

To achieve the strategic goal of Expanding Digital Technologies, the MCI will provide improved digitization support for making Smithsonian research and collections accessible in ways that broaden public access to collections, exhibitions, and outreach programs. The MCI will conduct advanced research and development into effective and economical digital imaging technologies that are appropriate for Facebook, Twitter, YouTube, Flickr, blogs, mobile applications, and virtual reality. The MCI will achieve the Smithsonian's goal of reaching one billion people by revitalizing the MCI webpages to engage 21st-century audiences and to highlight the Institute's large, visionary, interdisciplinary research and scholarly projects. The MCI will make its research products and records secure and accessible through The Museum System (TMS), and with repositories such as the Digital Asset Management System (DAMS), Smithsonian Research Online, and Figshare for Institutions, an open platform for publishing and sharing Smithsonian research data.

To achieve the strategic goal of Understanding and Impacting 21st Century Audiences, the MCI will provide heritage literature references to professionals and the public. 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. The MCI will continue enhancing its digital and social media to increase the impact of the Institute's research and outreach programs. 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 online materials, presentations, workshops, and demonstrations to reach new audiences, especially those targeted by the Institution's newest museums.

In addition, to achieve the goal of education, the MCI will engage and inspire diverse audiences, focusing on training higher-education students and professionals. The MCI will continue to promote career development for Smithsonian conservators and other collections care providers through colloquia, symposia, and workshops, as well as distance-learning opportunities. The MCI will continue to offer internships and Fellowships for students pursuing careers in conservation and conservation science, as well as support diversity programs inside and outside of the Smithsonian, which are seeking to attract students from a wider variety of backgrounds to pursue conservation and conservation science careers.

In particular, the MCI will participate in initiatives with Historically Black Colleges and Universities and other local and national partners to highlight cultural heritage and conservation as possible career paths. Through its partnership in Science and Engineering in Arts, Heritage, and Archaeology, housed at the University College, London, the University of Oxford, and the University of Brighton, the MCI is supporting advanced training for museum professionals who want to learn new methods of digital documentation for cultural heritage collections and obtain new tools for evaluating museum storage environments.

In keeping with this goal, the MCI is providing in-kind support and leading a partnership with the Iraqi Institute for the Conservation of Antiquities and Heritage program to train local communities in the rescue and recovery of regional cultural heritage. The crisis caused by ISIS endangered irreplaceable world cultural heritage and the local citizenry requires consistent support to recover from the destruction and ensure that these treasures are safe and preserved. Currently, an interagency agreement with the Department of State and other grants are supporting salvage and recovery at the important archaeological site of Nimrud and other major cultural heritage sites in Iraq. The Smithsonian continues raising additional funds for operations and expanded programs at the Iraqi Institute. Given adequate support, the Institute can become a regional center to educate the local population in the preservation of their cultural heritage.

To achieve the strategic goal to Preserve Our Natural and Cultural Heritage, the MCI will support Smithsonian museums and research centers in their efforts to improve stewardship and scholarship of the national collections and will disseminate collections information to the larger museum community and the public. To this end, the MCI is chairing the new Council of Conservators and Conservation Scientists that seeks to share best practices, current research, and laboratory facilities and equipment across the Institution. In addition, the MCI will pursue collaborative conservation treatment projects with other Smithsonian units to provide conservation guidance and analytical technical consultations to the art and history museums for their more challenging and unique objects. The Institute has a proven track record of establishing scientifically-based environmental standards for museum collections, detecting unsafe conditions and materials for museum exhibition and storage, and solving biodeterioration problems — including those that involve buildings and monuments. The MCI is expanding its research in preventive conservation by developing new tools and partnerships that aid

in avoiding deterioration caused by environmental factors. By co-chairing the Smithsonian Collections Space Committee's new preservation environments subcommittee, supporting the PRICE team, and chairing the American Institute for Conservation Materials Selection and Specification Working Group, the MCI helps develop best practices in collections care across the Institution and the U.S. museum community. The MCI's photograph and paper conservation lab will support conservation and research for the Smithsonian's fragile and at-risk photographic collections and the Institute will continue to assess and remediate collection hazards.

In addition, the MCI will focus on using less invasive and damaging materials and procedures for collections conservation, reflecting the importance of incorporating energy-efficient and "green" materials and practices into the Institute's work. 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 preventive conservation in museum environments (involving light, temperature, humidity, and pollutants), and museum hazards (such as pests and pesticides).

To achieve the strategic goal of Enabling Cost-Effective and Responsive Administration, the MCI will support an efficient management infrastructure. 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 so staff can advance the Smithsonian mission in a transparent manner that reflects the Smithsonian's status as a public trust.

Finally, 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 working with the Institution's employees, Fellows, interns, volunteers, and vendors while also improving communications with internal and external stakeholders in both the public and private sectors.

NONAPPROPRIATED RESOURCES — Annually, the MCI receives nonappropriated 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 of the MCI. The MCI director's endowment, supported in part by an Andrew W. Mellon Foundation challenge grant, provides the salary, benefits, and travel and research funds for the MCI director, with remaining funds used to strengthen conservation science research.

SMITHSONIAN LIBRARIES AND 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 2020 ENACTED | 115 | 14,458 | 14 | 1,929 | 5 | 1,166 | 0 | 0 |
| FY 2021 ENACTED | 115 | 15,106 | 14 | 1,767 | 6 | 1,548 | 0 | 0 |
| FY 2022 REQUEST | 117 | 16,056 | 15 | 1,804 | 6 | 1,625 | 0 | 0 |

Federal Resource Summary by Performance Objective and Program Category

| Performance Objective/ Program Category | FY 2021 | | FY 2022 | | Change | |
|---|------------|---------------|------------|---------------|----------|------------|
| | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| Enhanced Interdisciplinary Research | | | | | | |
| Research | | | | | | |
| Engage in impactful scientific research and discovery | 20 | 3,425 | 20 | 3,498 | 0 | 73 |
| Engage in vital arts and humanities research | 26 | 3,400 | 26 | 3,495 | 0 | 95 |
| | | | | | | |
| Expand Digital Technologies | | | | | | |
| Digitization and Web Support | | | | | | |
| Provide improved digitization and Web support | 18 | 2,255 | 19 | 2,421 | 1 | 166 |
| | | | | | | |
| Understand and Impact 21st Century Audiences | | | | | | |
| Exhibitions | | | | | | |
| Offer compelling, first-class exhibitions | 1 | 115 | 1 | 119 | 0 | 4 |
| Education | | | | | | |
| Engage and inspire diverse audiences | 1 | 111 | 1 | 115 | 0 | 4 |
| Public Programs | | | | | | |
| Provide relevant reference services and disseminate information to the public | 5 | 451 | 5 | 469 | 0 | 18 |
| | | | | | | |
| Preserve Our Natural and Cultural Heritage | | | | | | |
| Collections | | | | | | |
| Improve the stewardship of the national collections | 33 | 3,636 | 34 | 3,886 | 1 | 250 |
| | | | | | | |
| Enable Cost-Effective and Responsive Administration | | | | | | |
| Management Operations | | | | | | |
| Enable efficient and responsive administrative infrastructure | 11 | 1,713 | 11 | 2,053 | 0 | 340 |
| | | | | | | |
| Total | 115 | 15,106 | 117 | 16,056 | 2 | 950 |

BACKGROUND AND CONTEXT

The Smithsonian Libraries and Archives (SLA) was formally established with the approval of Congress in FY 2020 by integrating Smithsonian Libraries and Smithsonian Institution Archives. FY 2022 will provide the opportunity to complete the full integration of the two units under a unified budget and leadership operation. The creation of SLA is a timely opportunity to develop a new organization with redefined priorities to better help the Smithsonian meet existing and new challenges in a cost-effective manner.

The SLA serves as the institutional memory of a unique cultural organization and is responsible for ensuring institutional accountability. The SLA's archival collections document the history of the Smithsonian, from its founding in 1846 to the present, and the SLA supports the Smithsonian community, its scholars, and the public by acquiring, evaluating, and preserving the records of the Institution and related documentary materials. Accordingly, the SLA manages the care, storage, and retrieval services for the Institution's records in a wide variety of analog and digital formats. These permanent records are safeguarded and preserved in leased, specialized environments in facilities located in Washington, DC; Landover, Maryland; and Iron Mountain in Boyers, Pennsylvania. Additionally, other research library collections are part of the SLA network of libraries from the Republic of Panama to New York City.

The research library collections play a dynamic role in advancing scientific and cultural understanding. Collections acquired and managed by the SLA on behalf of Smithsonian researchers provide them with the resources and infrastructure needed to participate in the cycle of scholarly communication. The SLA develops policies, provides guidance for managing and preserving the Institution's vast archival collections, and offers a range of reference, research, and record-keeping services. The expert staff who manage and preserve these collections are a crucial resource for research and education communities at the Smithsonian, within the United States, and globally.

The FY 2022 budget request includes an increase of \$950,000. The increase includes \$421,000 for necessary pay and other related salary costs for existing staff funded under this line item; \$300,000 for Library subscription inflation, justified in the Fixed costs section of this budget submission; and a programmatic increase of 2 FTEs and \$229,000 for digitization and collections support.

MEANS AND STRATEGY

The core activity for FY 2022 will be to fully integrate the two existing units into the combined Smithsonian Libraries and Archives. Under the guidance of a new director of SLA, the integration strategy will incorporate the following areas:

- **Finance and Administration.** The combined SLA has leveraged and extended existing financial resources for maximum value to the Smithsonian by streamlining financial services and providing Smithsonian administrators with clear spending plans and resource needs.
- **Digital Infrastructure.** In addition to re-factoring and envisioning a combined, sustainable digital infrastructure to support SLA collections and services, the SLA digital infrastructure will continue growing to support expanding modes of research, scholarly communication, and public outreach. Key areas include linking data systems and services to help connect Smithsonian museum collections with SLA collections, research data management programs, and digital preservation. The SLA will also participate in the Smithsonian's Open Access Initiative.
- **Collections.** The SLA collections have long been a core component of scholarly research and knowledge creation. The scholarly communications cycle remains firmly based in the SLA research collections even while those collections are increasingly moving to a digital and online environment. Legacy physical library and archives collections will remain an important component of the overall Smithsonian culture and means of conducting deeper research. The official records of the Institution under the stewardship of trained archivists provide depth to Smithsonian history and fulfill legal requirements. The SLA will continue to build on and establish new processes and support structures to ensure staff can select, acquire, preserve, and provide access to the full spectrum of research materials.
- **Education and Internships.** The SLA will expand its current engagement across the Smithsonian's broader K–12 educational initiatives and continue expanding service to the unit-level education departments as well as support central Smithsonian education programs. Existing SLA internship programs will benefit from central SLA management, and the SLA will expand the diversity of the intern community and try to fully fund all internship opportunities.
- **Internal Management and Relationship Building.** The SLA will build upon the collaborative environment found at the Smithsonian to continue introducing staff across the Institution to relevant data sets and digital tools and services. The SLA will foster enhanced communications between the technology staff inside the SLA as well as Institution-wide. There will also be renewed efforts to streamline and develop more effective communications about the SLA services available for different stakeholders.

- **External Collaborations.** The SLA will build on existing national and global networks to promote Smithsonian resources for the public and the scholarly community. Robust involvement with organizations such as the Digital Public Library of America, the Society of American Archivists, the Biodiversity Heritage Library, the Coalition for Networked Information, Wiki-data information, and others promote not just SLA collections and services but provide a gateway for the Smithsonian to reach a broader professional community. The SLA will build on existing tools (e.g., Smithsonian Research Online and Smithsonian Profiles) as well as relationships with federal agency libraries around the country on topics of open science and public access to federally funded research and data.

EXPLANATION OF CHANGE

The FY 2022 budget request includes an increase of \$950,000. The increase includes \$421,000 for necessary pay and other related salary costs for existing staff funded under this line item; an increase of \$300,000 for Library subscription inflation, justified in the Fixed costs section of this budget submission; and a programmatic increase of 2 FTEs and \$229,000 for digitization and collections support.

Digitization (+\$100,000, +1 FTE)

The budget request includes an increase of \$100,000 and 1 FTE to establish a Digital and Research Information Management Program. This program will have complementary foci: digital preservation services for all Smithsonian digital assets regardless of origin, and research information management. With the addition of digital preservation services, this new program will provide central support for long-term access to and sustainability of these and other Smithsonian-created content. The program also will complement existing subject expertise in the units and data science and technology infrastructure currently being built in the Office of the Chief Information Officer's Office of Research Computing.

Collections Support (+\$129,000, +1 FTE)

The budget request includes an increase of \$129,000 and 1 FTE to establish a Collections_Management_System/Library Services Platform Technology office. The purpose of this request is to address the Institution's critical need for long-term management of digital collections and research data by building a Digital and Research Information Management Program within the SLA. Management of research information effectively documents and evaluates the research activities of Smithsonian staff and ensures their discoverability.

NONAPPROPRIATED RESOURCES — General trust funds help defray the costs of providing archival and information services to Smithsonian units, support outreach (including publications, social media, and public programs), and promote fund raising. Trust funds also help the SLA manage and preserve the collections of the Institution and provide professional conservation expertise throughout the Smithsonian and to other institutions and the public. In FY 2021 and beyond, the SLA will continue to raise funds through its own advancement efforts, as well as look for opportunities to leverage the deeper cataloguing of collections and the compelling stories they provide for fundraising potential. The SLA continues to build upon its education program, with special emphasis on creating content for K–12 learners, and includes education among its established priorities of supporting acquisitions, conservation, digitization, internships, 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 2020 ENACTED | 107 | 54,447 | 17 | 3,592 | 0 | 2,090 | 0 | 0 |
| FY 2021 ENACTED | 107 | 55,845 | 15 | 3,299 | 0 | 350 | 0 | 0 |
| FY 2022 REQUEST | 110 | 60,838 | 15 | 3,454 | 0 | 0 | 0 | 0 |

Federal Resource Summary by Performance Objective and Program Category

| Performance Objective/ Program Category | FY 2021 | | FY 2022 | | Change | |
|--|------------|---------------|------------|---------------|----------|--------------|
| | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| Enhanced Interdisciplinary Research | | | | | | |
| <i>Research</i> | | | | | | |
| Engage in impactful scientific research and discovery | 4 | 1,671 | 4 | 1,695 | 0 | 24 |
| | | | | | | |
| Expand Digital Technologies | | | | | | |
| <i>Digitization and Web Support</i> | | | | | | |
| Provide improved digitization and Web support | 15 | 4,807 | 15 | 4,896 | 0 | 89 |
| | | | | | | |
| Preserve Our Natural and Cultural Heritage | | | | | | |
| <i>Collections</i> | | | | | | |
| Improve the stewardship of the national collections | 11 | 2,717 | 11 | 2,782 | 0 | 65 |
| <i>Facilities and Safety</i> | | | | | | |
| Improve Smithsonian facilities operations and provide a safe and healthy environment | 10 | 1,975 | 10 | 2,034 | 0 | 59 |
| | | | | | | |
| Enable Cost-Effective and Responsive Administration | | | | | | |
| <i>Management Operations</i> | | | | | | |
| Enable efficient and responsive administrative infrastructure | 23 | 12,940 | 23 | 13,077 | 0 | 137 |
| <i>Information Technology</i> | | | | | | |
| Improve the Institution's information technology systems and infrastructure | 44 | 31,735 | 47 | 36,354 | 3 | 4,619 |
| | | | | | | |
| Total | 107 | 55,845 | 110 | 60,838 | 3 | 4,993 |

BACKGROUND AND CONTEXT

The Office of the Chief Information Officer (OCIO) provides vision, leadership, policy, applications, services, and oversight associated with managing and operating leading-edge information technology (IT) solutions for the Institution's strategic priorities, as well as for the Smithsonian's many museums and research and cultural centers.

The FY 2022 budget request includes an increase of 3 FTEs and \$4,993,000. The increase includes \$635,000 for necessary pay and other salary-related costs for existing staff, and an increase of \$2,858,000 to cover higher communication costs, which are both justified in the Fixed Costs section of this budget submission. In addition, an increase of 3 FTEs and \$1,500,000 is requested to support the Smithsonian's IT Security program.

MEANS AND STRATEGY

The OCIO will use best practices in the implementation, management, and operations of information technology to enhance the "increase and diffusion of knowledge" and achieve the Institution's strategic goals, Greater Reach, Greater Relevance, and Profound Impact. The OCIO collaborates with industry partners, cultural organizations, academia, and the public to develop innovative solutions for research and digitization challenges, and to realize the vision of creating a Virtual Smithsonian.

The following strategies are cross-cutting and central to the Smithsonian's strategic plan and mission of connecting Americans to their history and heritage, as well as to promote innovation, research, and discovery in science:

- Leverage commercially available and open-source technologies to provide digital platforms for the Institution to increase public access to digitized collections and research data;
- 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;
- Maintain and enhance the Institution's telecommunications infrastructure to provide reliable, secure, and cost-effective voice and data communications systems in support of the Smithsonian mission;
- Meet federal requirements for providing timely and accurate financial information;
- Increase the use of data science and artificial intelligence to drive innovation in research and collections management in a cost-effective manner;
- Invest strategically in creating a standard mass-digitization process that enables replicable, cost-effective, high throughput, and high-quality 2D digitization for all Smithsonian priority collections. Digitization efforts to implement this process have resulted in digital images for 3.8 million collection objects to date, thereby doubling the rate of digitization at the Smithsonian;
- Develop automation processes to scale up our 3D digitization efforts while ensuring that our 3D data models remain durable over time;
- Continue to improve and refine the Institution's IT Security Program; and
- Expand and refine offerings to support digital content production that addresses key Institution priorities such as racial equity and environmental sustainability.

EXPLANATION OF CHANGE

The FY 2022 budget request includes an increase of 3 FTEs and 4,993,000. The increase includes \$635,000 for necessary pay and other related salary costs for existing staff funded under this line item; \$2,858,000 for increased communication costs, which is further explained in the Fixed Costs section of this budget submission; and 3 FTEs and \$1,500,000 for the Smithsonian's IT Security program.

Smithsonian IT Security Program (+\$1,500,000 and +3 FTEs)

The FY 2022 budget request includes a programmatic increase of 3 FTEs and \$1,500,000 for the Smithsonian's IT Security program. These funds will support the end-of-life cyber-security software and contractor support to help with the increased number of alerts and continual assessment of the need for additional systems to manage and mitigate security risks. These positions will also assist with monitoring and investigation of internal threats to the Smithsonian network and help provide additional training and awareness for staff, contractors, volunteers, research Fellows, and other affiliated personnel who are constantly entering and leaving Smithsonian service.

NONAPPROPRIATED RESOURCES — General trust funds support salaries and benefits costs of personnel and other related costs of the OCIO. Donor/sponsor-designated funds cover costs related to 3D digitization projects and a portion of the biennial Digitization Fair first offered to the public in FY 2017.

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 2020 ENACTED | 193 | 36,132 | 202 | 36,646 | 11 | 10,193 | 1 | 454 |
| FY 2021 ENACTED | 196 | 38,391 | 211 | 32,695 | 18 | 7,016 | 2 | 675 |
| FY 2022 REQUEST | 203 | 40,700 | 205 | 33,982 | 17 | 7,806 | 2 | 380 |

Federal Resource Summary by Performance Objective and Program Category

| Performance Objective/ Program Category | FY 2021 | | FY 2022 | | Change | |
|---|------------|---------------|------------|---------------|----------|--------------|
| | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| Enhanced Interdisciplinary Research | | | | | | |
| <i>Research</i> | | | | | | |
| Engage in vital arts and humanities research | 0 | 0 | 0 | 0 | 0 | 0 |
| <i>Exhibitions</i> | | | | | | |
| Offer compelling, first-class exhibitions | 1 | 147 | 2 | 353 | 1 | 206 |
| <i>Education</i> | | | | | | |
| Engage and inspire diverse audiences | 4 | 899 | 6 | 1,171 | 2 | 272 |
| | | | | | | |
| Preserve Our Natural and Cultural Heritage | | | | | | |
| <i>Collections</i> | | | | | | |
| Improve the stewardship of the national collections | 3 | 506 | 4 | 693 | 1 | 187 |
| | | | | | | |
| Enable Cost-Effective and Responsive Administration | | | | | | |
| <i>Management Operations</i> | | | | | | |
| Enable efficient and responsive administrative infrastructure | 188 | 36,839 | 191 | 38,483 | 3 | 1,644 |
| | | | | | | |
| Total | 196 | 38,391 | 203 | 40,700 | 7 | 2,309 |

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 and Board of Regents; the Deputy Secretary/Chief Operating Officer, the Under Secretary for Museums and Culture, the Under Secretary for Science and Research, the Under Secretary for Education, and the Under Secretary for Administration. Other central activities include human resources, diversity, financial and contract management, and legal services.

The FY 2022 budget request includes an increase of \$2,309,000. The increase includes \$1,096,000 for necessary pay and other related salary costs for existing staff funded under this line item, as well as \$93,000 for the annual audit of the Smithsonian's financial statements, as justified in the Fixed Costs section of this budget submission; and a programmatic increase of 7 FTEs and \$1,120,000 for management operations.

MEANS AND STRATEGY

The Smithsonian will continue to use best practices in management to enhance its mission for the "increase and diffusion of knowledge" and to 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 and also help promote innovation, research, and discovery:

- Ensure the financial strength of the Smithsonian and provide the Institution with effective and efficient financial, contracting, and management support services, including reliable financial evaluation, auditing, and reporting.
- Provide oversight of the Smithsonian budget process as it is developed and executed to support the operating and facilities capital programs of the Institution, establish and enforce budgetary policies and procedures, and ensure that sufficient resources enable the Institution to achieve its goals.
- Conduct a comprehensive enterprise risk-management program to identify, monitor, and mitigate risk at all levels.
- Provide leadership and guidance for Institution-wide collections initiatives, policies, and programs to ensure the proper stewardship of the national collections.
- 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 non-collections property management and meeting increased demands for acquisition of goods and services.
- Provide legal counsel to the Board of Regents and the Institution on issues such as museum administration, intellectual and real property, collections management, contracts, privacy and cyber security, finance, employment, ethics, conflicts of interest, international agreements, and requests for information.
- Manage human resources, foster diversity, hire a skilled workforce in a timely manner, and align human capital with the Institution's goals and performance objectives. Conduct ongoing workforce and performance gap analyses, strengthen training and leadership policies and programs, develop succession planning, and evaluate and improve assessment tools for human resources performance.

- Provide 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 leadership, support, and resources to enable educators across the Smithsonian to share the depth and breadth of the Smithsonian's collections and research; connect with diverse audiences; invite dialogue and exchanges; and build on and contribute to best practices in teaching and learning.
- Increase the Latino Center's public and educational outreach in collaboration with Smithsonian units and affiliated institutions by developing exhibitions and programs on Latino history, art, culture, and scientific achievement; support Latino research, collections, exhibitions, publications, online content, and related projects; promote professional development opportunities for Latino youth leaders, emerging scholars, and museum professionals; continue innovation in new media, including the Latino Virtual Museum, social media, mobile applications, and educational games; and continue developing a Smithsonian Latino Gallery at the Arts and Industries Building.
- 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 programs on Asian Pacific American history, art, and culture; continue innovative online initiatives that provide educational, programmatic, and outreach materials nationwide; and form national partnerships with museums and research centers to enrich the Smithsonian's collections, research, and activities relating to Asian Pacific Americans.
- 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 presence in these communities.
- Coordinate efforts among the Secretary's executive diversity committee, Office of Human Resources, and the Office of Equal Employment and Supplier Diversity to ensure compliance with federal Equal Employment Opportunity Commission mandates, promote the Smithsonian's Equal Employment Opportunity (EEO) and workforce diversity policies, (in accordance with [Smithsonian Directive \[SD\] 214, Equal Employment Opportunity Program](#)), and advocate for the use of small, disadvantaged, woman- and veteran-owned businesses throughout Smithsonian procurement operations (in compliance with the revised [SD 216, Supplier Diversity Program](#)).

EXPLANATION OF CHANGE

The FY 2022 budget request includes an increase of \$2,309,000. The increase includes \$1,096,000 for necessary pay and other related salary costs for existing staff funded under this line item, as well as \$93,000 for the annual audit of the Smithsonian's financial statements, as justified in the Fixed Costs section of this budget submission; and a programmatic increase of 7 FTEs and \$1,120,000 for Institution-wide support.

Office of Human Resources (OHR) (+\$300,000, +2 FTEs) — This request provides for two human resources specialists to facilitate internal and external strategic change; adequately address hiring timeliness goals; provide quality, timely advice and service to Smithsonian units; minimize risks; and improve the response time for answering requests for guidance or information. OHR has seen a steady increase in the number of applications being received per vacancy announcement, while the size of the OHR staff has been steadily shrinking. The new specialists will enable the Institution to attract high-quality applicants, create a culture of diversity and excellence, and develop and retain a thriving workforce.

Asian Pacific American Center (APAC) (+\$200,000, +1 FTE) — The Smithsonian has a long tradition of raising private funds to design and install new exhibitions. For generations, these exhibitions have been the reason why millions of visitors have come to the National Mall. However, the Institution requires federal funding to manage these exhibits and leverage the private funding necessary to install and maintain these exhibitions. The APAC requires additional resources to continue to expand the Asian Pacific American presence in the Smithsonian's presentation of and research into the American experience. Specifically, the funds requested are for a director of exhibitions and programs needed for APAC's short-term and long-term sustainability. With the expected timeline for a dedicated Smithsonian Asian Pacific American gallery set for delivery in 2026, a director of exhibitions and programs is required to lead the exhibition development work, in addition to providing much-needed support to the APAC director. This position is modeled after the Smithsonian Latino Center's director of exhibitions and programs position.

Office of the Under Secretary for Education (+\$250,000, +2 FTEs) — The Smithsonian has a long history of being a trusted educational resource. The Institution provides authentic and inspiring experiences for teachers and students by drawing on the scientific and engineering assets of the Federal Government, including scientists, laboratories, satellites, museums, and research centers. Accordingly, the Smithsonian plans to translate our nation's treasures and stories through digital technology and cultivate the next generation learners by sharing high-quality education content that can be used as tools to understand and solve real-world problems. As we continue to make new discoveries, we must share them with future generations. The Institution is dedicated to ensuring we are a

national leader in K–12 education, bringing the research and collections of the Smithsonian into classrooms across the nation through comprehensive, standards-aligned programming and accessible resources. Educational materials based on our science and scholarship can profoundly affect how students and teachers engage in 21st-century learning.

In addition, with the leveraging of private funds, the Institution will continue to develop and scale as a model for the future of education and museums, through a collaboration with the Washington, DC public school system. Sharing that work nationwide and abroad while drawing on best practices and lessons learned will expand our impact and help us make the most effective use of our resources. The additional resources will play an essential role for administering these programs and in serving schools and educators nationwide.

Diversity Support (+\$200,000, +1 FTE) — Diversity is one of the expressed values in the Smithsonian’s Strategic Plan. The ongoing success of the Supplier Diversity Program has Institution units, small businesses, and congressional representatives seeking more information and assistance on how the Smithsonian can continue to improve its supplier diversity status. Veteran-owned and other firms in Historically Underutilized Business (HUB) zones have poor representation in our base of suppliers and these small businesses and Congress are interested in how the Smithsonian is doing in these business communities. All of these concerns require increased staff and accompanying resources. In support of this funding request, the Institution’s Office of Equal Employment and Supplier Diversity issued its revised [Smithsonian Directive \(SD\) 216, Supplier Diversity Program](#), to better coordinate contracting and procurement operations between our central and branch units and small businesses.

Collections Support (+\$170,000, +1 FTE) — This budget request includes funds for a senior curator to support the Arts and Industries Building (AIB). In June of 2020, the AIB became an independent unit. Federal support is required to fulfill the base operations of the unit and support the Smithsonian’s strategy for using the building by renovating and reopening the facility as part of the Historic Core Renovation. The Smithsonian needs a small group of core staff to execute a near- and long-term vision for the building that includes convening conferences and special events, installing temporary exhibits, and participating in Institution-wide planning for the Renovation of the Historic Core.

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, family days, and leadership development.

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 2020 ENACTED | 27 | 4,077 | 0 | 0 | 0 | 0 | 0 | 0 |
| FY 2021 ENACTED | 27 | 4,184 | 0 | 0 | 0 | 0 | 0 | 0 |
| FY 2022 REQUEST | 27 | 4,295 | 0 | 0 | 0 | 0 | 0 | 0 |

Federal Resource Summary by Performance Objective and Program Category

| Performance Objective/ Program Category | FY 2021 | | FY 2022 | | Change | |
|---|-----------|--------------|-----------|--------------|----------|------------|
| | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| Enable Cost-Effective and Responsive Administration | | | | | | |
| <i>Management Operations</i> | | | | | | |
| Enable efficient and responsive administrative infrastructure | 27 | 4,184 | 27 | 4,295 | 0 | 111 |
| Total | 27 | 4,184 | 27 | 4,295 | 0 | 111 |

BACKGROUND AND CONTEXT

The Inspector General Act of 1978, as amended, 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 Inspector General, necessary or desirable. Furthermore, the Act requires the Inspector General to transmit a budget submission specifying the aggregate amount of funds requested for the operations of the OIG, including the amount needed to satisfy training requirements, as well as any resources necessary to support the Council of the Inspectors General on Integrity and Efficiency (CIGIE).

The FY 2022 budget request includes an increase of \$111,000 for necessary pay and other related salary costs for existing staff funded under this line item.

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.

The OIG's base funding includes \$60,000 for required training, and \$15,500 needed to support the CIGIE.

The Office of Audits conducts audits of the Smithsonian's existing and proposed programs and operations to help improve their efficiency and effectiveness. To align its oversight responsibility with available resources, the office develops an annual audit plan by conducting a comprehensive risk assessment of the Smithsonian's programs and operations and seeking input from Smithsonian stakeholders and Congress. The audit plan also includes mandatory audits, such as the annual financial statement audits that the OIG oversees.

The Office of Investigations pursues allegations of waste, fraud, abuse, gross mismanagement, employee and contractor misconduct, and criminal violations of law that impact the Smithsonian's programs and operations. It refers matters to federal, state, and local prosecutors for action whenever the OIG has reasonable grounds to believe there has been a violation of criminal law. The Office of Investigations also presents any evidence of administrative misconduct to Smithsonian senior management for appropriate disciplinary action.

NONAPPROPRIATED RESOURCES — The OIG 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 2020 ENACTED | 492 | 114,545 | 0 | 0 | 0 | 0 | 0 | 0 |
| FY 2021 ENACTED | 492 | 115,261 | 0 | 0 | 0 | 0 | 0 | 0 |
| FY 2022 REQUEST | 492 | 116,917 | 0 | 0 | 0 | 0 | 0 | 0 |

Federal Resource Summary by Performance Objective and Program Category

| Performance Objective/ Program Category | FY 2021 | | FY 2022 | | Change | |
|--|------------|----------------|------------|----------------|----------|--------------|
| | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| Preserve Our Natural and Cultural Heritage | | | | | | |
| Facilities and Safety | | | | | | |
| Deliver an aggressive and professional maintenance program | 486 | 107,453 | 486 | 109,089 | 0 | 1,636 |
| Security | | | | | | |
| Provide world-class protection for Smithsonian facilities, collections, staff, visitors and volunteers | 6 | 7,808 | 6 | 7,828 | 0 | 20 |
| Total | 492 | 115,261 | 492 | 116,917 | 0 | 1,656 |

BACKGROUND AND CONTEXT

The Facilities Maintenance program is responsible for the maintenance and repair of the infrastructure of just less than 14 million square feet of owned and leased buildings and structures, and 43,000 acres. This includes 19 museums, nine research centers, three cultural centers, and the National Zoological Park. The 680 buildings and structures range from historical, one-of-a-kind landmarks and well-known museums to essential state-of-the-art laboratories which support global efforts to save wildlife species from extinction and ensure the success of long-term and cutting-edge ecological research. The primary role of Facilities Maintenance is to identify and manage facility reliability risks that could adversely affect the Institution's operations or the preservation and conservation of our national treasures. This broad role can be divided into three smaller, more manageable roles: system downtime elimination; risk management; and system (or asset) life-cycle management. The goal is to prevent failures, ensure the full functionality of critical systems and maximize the useful life cycle of equipment and facilities.

The Facilities Maintenance program maintains all building systems (including heating, ventilation, and air-conditioning [HVAC], elevators/escalators, electrical and plumbing systems, roofing, interiors, exteriors, and the building

structure) as well as the grounds maintenance associated with the upkeep of Smithsonian sites. The program also maintains systems related to electronic security, screening equipment, radio systems, and perimeter barrier equipment. The mission of Smithsonian Facilities (SF) 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. Typically, the Smithsonian attracts about 25 million visits a year.

As new and renovated museum and research center spaces open, maintenance requirements rise due to increased square footage, technological advances, and the growing number of infrastructure-supporting systems. These systems are made up of assets with added functionality, new technology, and a new, more complex level of maintenance requirements.

SF benchmarks its maintenance staffing levels with other museums and professional organizations to ensure that resources are being effectively deployed. These include meeting standards set by the Leadership in Educational Facilities (referred to as APPA), the International Association of Museum Facility Administrators, and the International Facility Management Association. The Smithsonian is a past recipient of the prestigious Award of Excellence from the APPA in recognition of the Institution's excellence in facilities management and its efforts to establish measurable maintenance performance standards and staffing levels.

According to the National Research Council (NRC), "an appropriate budget allocation for routine maintenance and repair for a substantial inventory of facilities will typically be in the range of 2 to 4 percent of the aggregate current replacement value (CRV) of those facilities." The CRV for the Smithsonian is currently at \$9.45 billion.

The FY 2022 budget request includes an increase of \$1,656,000 for necessary pay and other related salary costs for existing staff funded under this line item.

MEANS AND STRATEGY

In support of the Institution's strategic goal to Preserve Our Natural and Cultural Heritage, SF continues an aggressive, long-range facilities maintenance and repair program, using the reliability-centered maintenance (RCM) approach, which is a widely accepted industry philosophy that incorporates a cost-effective mix of predictive, proactive, preventive, and reactive maintenance practices. With existing resources, the Smithsonian will operate at the lower end of APPA's maintenance Level 3 "Managed Care," which provides a minimal level of preventive maintenance and building system reliability to ensure that proper environmental conditions are maintained for collections and public expectations are met.

The Smithsonian's goal, which this request aims to further, is to reduce its maintenance backlog, currently estimated at \$1.13 billion, through the coordinated efforts of its maintenance and Facilities 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 proper 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.

Smithsonian Facilities will continue to identify efficiencies in managing existing resources to improve its current level of maintenance service in the most cost-effective manner possible. In addition, the Smithsonian will continue to improve electronic security systems and physical security measures which protect the Institution's facilities, collections, staff, visitors, and volunteers.

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 2020 ENACTED | 1,286 | 236,163 | 19 | 3,471 | 2 | -2,005 | 0 | 0 |
| FY 2021 ENACTED | 1,286 | 240,900 | 21 | 2,825 | 2 | 280 | 0 | 0 |
| FY 2022 REQUEST | 1,305 | 254,537 | 20 | 2,630 | 2 | 280 | 0 | 0 |

Federal Resource Summary by Performance Objective and Program Category

| Performance Objective/ Program Category | FY 2021 | | FY 2022 | | Change | |
|--|--------------|----------------|--------------|----------------|-----------|---------------|
| | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| Understand and Impact 21st Century Audiences | | | | | | |
| <i>Exhibitions</i> | | | | | | |
| Offer compelling, first-class exhibitions | 4 | 468 | 4 | 480 | 0 | 12 |
| | | | | | | |
| Preserve Our Natural and Cultural Heritage | | | | | | |
| <i>Facilities and Safety</i> | | | | | | |
| Improve Smithsonian facilities operations and provide a safe and healthy environment | 601 | 154,536 | 611 | 162,159 | 10 | 7,623 |
| <i>Security</i> | | | | | | |
| Provide world-class protection for Smithsonian facilities, collections, staff, visitors and volunteers | 681 | 85,896 | 690 | 91,898 | 9 | 6,002 |
| | | | | | | |
| Total | 1,286 | 240,900 | 1,305 | 254,537 | 19 | 13,637 |

BACKGROUND AND CONTEXT

The mission of Smithsonian Facilities (SF) 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 typically receives more than 30 million visits a year.

The Facilities Operations, Security, and Support (OSS) program operates, secures, and supports the Smithsonian's physical infrastructure in partnership with Smithsonian program staff. It provides operational security and support services for approximately 13 million square feet of owned and leased facilities, including 19 museums, nine research centers, three cultural 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; motor vehicle 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 FY 2022 budget request includes an increase of \$13,637,000. The increase includes \$3,801,000 for necessary pay and other related salary costs for existing staff funded under this line item, a programmatic increase of 19 FTEs and \$8,000,000 for security, operations, and support requirements, as well as a net increase of \$1,836,000 for utilities and other costs, which is justified in the Fixed Costs section of this budget submission.

MEANS AND STRATEGY

SF will pursue the Institution's strategic goal to Understand and Impact 21st Century Audiences by continuing to develop exhibits and public programs for horticulture, architectural history, and historic preservation.

To support the Institution's strategic goal to Preserve Our Natural and Cultural Heritage, OSS base resources will focus on meeting the growing operational requirements of the Institution's facilities. SF will continue to effectively and efficiently use 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, SF will continue benchmarking the Institution's custodial staffing and service levels with other museums and professional organizations, including Leadership in Educational Facilities (referred to as APPA). SF is committed to measuring performance and staffing levels to ensure that the highest affordable levels of cleanliness, as well as efficient operations, are maintained.

In addition to providing the highest level of facilities care, the Smithsonian is equally committed to maintaining the highest levels of security. In support of that goal, the Institution is continuing a strategic security staffing analysis to determine exactly how many security and law-enforcement staff are needed at each of the Smithsonian's major facilities. The ongoing analyses include pay levels, training/skill requirements, armed versus unarmed coverage, and the appropriate mix of Smithsonian officers versus contract security guards.

In addition, SF 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 local building codes, environmental regulations, and management best practices.

EXPLANATION OF CHANGE

The FY 2022 budget request includes programmatic increases of \$8,000,000 and 19 FTEs. The request will support the Institution's security and facilities operations requirements, as detailed below:

- **Security (+\$4,000,000, +9 FTEs)** — The Institution requests an increase to address essential security needs. To evaluate the effectiveness of existing security resources versus current requirements, the Smithsonian conducted a security staffing analysis for each of its major facilities. The facility analyses confirmed that the Smithsonian needs to provide a higher level of security around building perimeters and in interior public spaces such as galleries.

Consequently, the Smithsonian requests \$3,000,000 in funding to implement a new screening system that will minimize physical contact between visitors and Smithsonian guards. The new technology will help detect prohibited weapons/items, identify the location of any prohibited weapons/items, and decrease the transmission of germs/disease by reducing the acts of physically touching items during the screening process and making it possible to increase social distancing. The new screening system has already been successfully deployed at several high-profile venues throughout the country.

This request also includes \$800,000 and 8 FTEs to begin security coverage at the Arts and Industries Building for upcoming public use. This will include funding for both proprietary and contract security.

Finally, the Institution requests \$200,000 and 1 FTE for a physician to oversee the implementation of a medical standards program for security officers. These standards will ensure that security officers are medically capable of safely protecting visitors, staff, and collections and handling emergency situations.

- **Facilities Operations and Support (+\$4,000,000, +10 FTEs)** — The Institution requests additional funding to address high-priority operating and life-safety needs. Contracts for basic facility services, materials, and supplies have outpaced any budget growth the Smithsonian has seen. In addition, the Institution's operations and physical footprint have grown, further increasing requirements. The needs of our employees have also changed to meet new technology standards and other mandated requirements.

This increased funding will enable the Institution to effectively provide the proper cleaning and sanitizing services to approach APPA Level 2 cleaning. The funds will support much-needed services to manage the

growth in our building footprint and begin to address increasing workforce requirements.

Consequently, the Smithsonian requests \$3,500,000 and 10 FTEs for building service workers, an interdisciplinary architect/engineer, a program analyst, a computer-aided dispatch operator, safety professionals, and resources to help cover contract, supply, and material inflationary cost increases.

This request also includes \$500,000 for cleaning and custodial services at the Arts and Industries Building so it can be reopened to the public.

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, architectural history, and historic preservation projects.

FACILITIES CAPITAL

| | |
|-----------------|---------------|
| FY 2020 Enacted | \$253,700,000 |
| FY 2021 Enacted | \$214,530,000 |
| FY 2022 Request | \$230,000,000 |

Federal Resource Summary by Performance Objective and Program Category

| Performance Objective/ Program Category | FY 2020 | | FY 2021 | | FY 2022 | |
|---|-----------|----------------|-----------|----------------|-----------|----------------|
| | FTE | \$000 | FTE | \$000 | FTE | \$000 |
| <i>Facilities and Safety</i> | | | | | | |
| Improve Smithsonian facilities operations and provide a safe and healthy environment | 48 | 245,200 | 48 | 209,130 | 53 | 222,900 |
| <i>Security</i> | | | | | | |
| Provide world-class protection for Smithsonian facilities, collections, staff, visitors, and volunteers | 0 | 8,500 | 0 | 5,400 | 0 | 7,100 |
| Total | 48 | 253,700 | 48 | 214,530 | 53 | 230,000 |

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 help the Smithsonian provide modern facilities, often within our country’s national historic and culturally iconic buildings, which satisfy public programming needs, facilitate world-renowned research efforts, and house our priceless national collections.

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.

The Institution uses the National Research Council’s (NRC) Facility Condition Assessments to calculate a Facilities Condition Index (FCI) rating. The FCI is the industry standard for analyzing the condition of a facility or group of facilities that may vary in terms of age, design, construction methods, and materials. The FCI is calculated by dividing the sum of the deferred maintenance (based on the assessed

condition ratings) of eight building systems (roofs, electrical, plumbing, HVAC, conveyance — i.e., elevators and escalators — interior, exterior, and structure) by the Current Replacement Value (CRV) of the facilities. FCI values of less than 90 percent are considered “poor,” values above 90 percent, up to and including 95 percent are considered “fair,” and values above 95 percent are considered “good.” The Smithsonian’s FCI in FY 2020 was 88 percent. This percentage is based on an estimated overall CRV of \$9.450 billion and the estimated \$1.132 billion value of the Smithsonian’s backlog of deferred maintenance.

Funding for facilities’ routine maintenance and minor repairs is included in the Institution’s Salaries and Expenses request. These resources are used to realize the intended design life and full economic value of Smithsonian facilities and to protect the Institution’s investment in revitalization of its physical infrastructure.

EXPLANATION OF CHANGE

The Smithsonian requests \$230,000,000 and 53 FTEs for the Facilities Capital Program in FY 2022 to mitigate the FCI trend of many essential facilities, and to preserve and enhance our national treasures and cultural properties for generations to come. The requested funds will enable the Institution to continue the major renovation project at the National Air and Space Museum (NASM), begin construction of the Pod 6 Collections Storage Module developed under a special partnership between the Smithsonian and the National Gallery of Art, and start major renovation projects needed for the Smithsonian Institution Building (the “Castle”) and the Hirshhorn Museum and Sculpture Garden (HMSG). Revitalization of building systems and infrastructure will continue at the National Zoological Park (NZN), the National Museum of Natural History (NMNH), the Suitland Collections Center, and the Smithsonian Environmental Research Center (SERC) in Edgewater, Maryland. These funds will also continue to address safety and security hazards throughout the Institution.

The following chart summarizes the Institution’s request for the highest priority FY 2022 Facilities Capital projects.

SMITHSONIAN INSTITUTION
Federal Facilities Capital Program Summary
FYs 2020 – 2022

| CATEGORY | Federal Enacted | Trust* Estimate | Federal Enacted | Trust* Estimate | Congress Request | Trust* Estimate |
|--|--------------------|--------------------|--------------------|--------------------|---------------------|--------------------|
| | | | | | | |
| REVITALIZATION | | | | | | |
| <i>Major Projects</i> | | | | | | |
| Anacostia Community Museum | 0.5 | | | | | |
| Arts and Industries Building | | | | 10.0 | | |
| Cooper Hewitt, Smithsonian Design Museum | | | 3.0 | | 3.0 | |
| Donald W. Reynolds Center | 3.5 | 1.7 | 3.5 | 0.5 | 3.5 | 0.5 |
| Freer Gallery of Art | 2.0 | | 2.5 | | 2.0 | |
| Hirshhorn Museum and Sculpture Garden | 8.5 | 0.8 | 13.3 | | 17.7 | 10.8 |
| National Air and Space Museum | 135.0 | 53.3 | 55.0 | 60.0 | 56.0 | 50.0 |
| NASM Steven F. Udvar-Hazy Center | 18.4 | | | | 1.1 | |
| National Museum of American History | 3.0 | | 7.9 | 0.3 | 9.6 | |
| National Museum of the American Indian | | | 2.0 | | 4.5 | |
| National Museum of Natural History | 1.5 | | 6.0 | 0.1 | 14.3 | |
| National Zoological Park | 25.0 | 7.8 | 25.0 | 3.7 | 18.2 | |
| Quadrangle | 2.0 | | 1.6 | | 1.0 | |
| Smithsonian Astrophysical Observatory | 0.8 | | 3.4 | | 4.1 | |
| Smithsonian Environmental Research Center | | | 1.9 | 2.7 | 6.7 | 2.5 |
| Smithsonian Institution Building (Castle) | 1.0 | 5.0 | 24.8 | 25.0 | 9.0 | |
| Smithsonian Tropical Research Institute | 1.7 | 1.0 | 1.6 | 0.9 | 0.7 | |
| Collections Space and Support Program | 5.5 | 0.8 | 8.5 | 0.8 | 11.0 | |
| Fire-Alarm Panel Replacement and Transfer Switch | 2.0 | | 4.7 | | 2.0 | |
| Multiple Site Projects and General Capital Support | 14.0 | | 16.9 | 2.1 | 21.3 | |
| | | | | | | |
| PLANNING AND DESIGN | 29.3 | | 33.0 | | 36.8 | |
| SUBTOTAL | 253.2 | 70.4 | 214.5 | 106.1 | 222.4 | 63.8 |
| CONSTRUCTION | | | | | | |
| MSC Pod 6 Collections Storage Module | | | | | 7.6 | |
| SUBTOTAL | 0.0 | 0.0 | 0.0 | 0.0 | 7.6 | 0.0 |
| | | | | | | |
| TOTAL PROGRAM | 253.2 | 70.4 | 214.5 | 106.1 | 230.0 | 63.8 |

SUMMARY TABLES

REVITALIZATION

Investment in revitalization projects provides for the replacement of failing or failed major building systems and equipment, and for major renovation projects to sustain existing buildings and sites. The Revitalization Program addresses critical deficiencies in the exterior envelope, heating, ventilation, and air-conditioning (HVAC), electrical, and other utility systems at the Smithsonian's older buildings. Projects also ensure compliance with life-safety regulations, the Americans with Disabilities Act (ADA), and other code-compliance requirements. In addition, this program supports restoration, preservation, and repair of historic features, and modernization of the buildings to support current program needs and sustain the viability of the Institution's physical plant. Items listed on the Multiple Locations line are projects that cover several facilities or where the total cost of the museum and/or research center projects is less than \$1.0 million. These projects usually involve capital repair or replacement of individual systems or components.

| Facility | Project | \$000 |
|---|---|---------------|
| National Air and Space Museum (NASM) | Revitalize Building Envelope and Infrastructure | 56,000 |
| NASM Steven F. Udvar-Hazy Center (NASM-UHC) | Construct Site Utilities for Hazmat Storage Prefab Containers | 500 |
| | Construct Canopies at Exit Doors at Aviation Hangar | <u>550</u> |
| | Total | 1,050 |
| Smithsonian Institution Building (Castle) | Revitalize Historic Core | 9,000 |
| National Zoological Park (NZN) | Renovate Cheetah Conservation Station | 4,700 |
| | Renovate General Services Building | 3,300 |
| | Replace Roof and Envelope Assemblies at Lion/Tiger House | 2,000 |
| | Upgrade Water Utility Systems | 2,500 |
| | Upgrade HVAC and Electrical Systems | 2,800 |
| | Upgrade Living Collection's Life-Safety Infrastructure | <u>2,900</u> |
| | Total | 18,200 |
| National Museum of Natural History (NMNH) | Upgrade Electrical Systems and Components | 4,600 |
| | Upgrade Fire-Alarm Panels and Mass-Notification Systems | 6,900 |
| | Replace North Tower Air-Handling Units (AHUs) | 2,000 |
| | Improve West Wing Basement Drainage | <u>800</u> |
| | Total | 14,300 |

| Facility | Project | \$000 |
|---|---|--------------|
| National Museum of American History (NMAH) | Replace Fire-Alarm Panels | 8,900 |
| | Replace Fire-Stairwell Door Hardware | <u>700</u> |
| | Total | 9,600 |
| National Museum of the American Indian (NMAI) | Replace Air-Handling Units (AHUs) 1–4 (NY) | 4,500 |
| Hirshhorn Museum and Sculpture Garden (HMSG) | Replace Roof and Exterior Wall Panels | 5,900 |
| | Modernize Elevators | 700 |
| | Revitalize Sculpture Garden/Tunnel | 9,000 |
| | Renovate Exhibit and Sign Shop Office Spaces | 550 |
| | Modernize Electronic Security | <u>1,500</u> |
| Total | 17,650 | |
| Quadrangle | Refurbish Elevators and Escalator | 1,000 |
| Donald W. Reynolds Center (DWRC) | Replace Gallery Lighting | 3,500 |
| Smithsonian Tropical Research Institute (STRI) | Replace and Reinforce Library Roof | 700 |
| Smithsonian Astrophysical Observatory (SAO) | Replace MMT Bldg. Control System Drives (AZ) | 1,000 |
| | Stabilize Road at FLW Observatory (AZ) | 800 |
| | Refurbish SMA Summit Building (HI) | 2,000 |
| | Install Roof Platform at SMA Control Bldg. (HI) | <u>300</u> |
| Total | 4,100 | |
| Smithsonian Environmental Research Center (SERC) | Consolidate Maintenance Facilities | 4,100 |
| | Improve Site Infrastructure at Waterfront Complex | 1,200 |
| | Renovate Facilities and Infrastructure, GCREW Site | 500 |
| | Construct Turbidity Filter System | 500 |
| | Implement Stormwater Management Plan | <u>450</u> |
| Total | 6,750 | |
| Suitland Collections Center (multiple facilities) | Replace Museum Support Center (MSC) Lab Air-Handling Units (AHUs) | 4,500 |
| | Replace MSC Botany Greenhouse | 5,000 |
| | Upgrade Electrical Feeders | <u>1,500</u> |
| Total | 11,000 | |

| Facility | Project | \$000 |
|--|---|---------------------|
| Cooper Hewitt, Smithsonian Design Museum (CHSDM) | Repair Miller-Fox Façade and Envelope | 3,000 |
| Freer Gallery of Art | Restore Exterior Stonework and Courtyard Doors and Windows | 2,000 |
| Multiple Facilities | Replace Fire-Alarm Panels | 2,000 |
| Multiple Locations | Building projects less than \$1,000,000 and Miscellaneous Repairs | 11,800 |
| | Construction Supervision and Administration | <u>9,500</u> |
| | Total | 21,300 |
| TOTAL, REVITALIZATION PROJECTS | | \$185,650 |
| TOTAL, FACILITIES PLANNING AND DESIGN | | \$36,750 |
| Construction | | |
| Suitland-MSC | Construct Pod 6 | 7,600 |
| TOTAL, CONSTRUCTION | | <u>7,600</u> |
| FY 2022 TOTAL REQUEST | | \$230,000 |

REVITALIZATION PROJECTS

PROJECT TITLE: Revitalize Building Envelope and Infrastructure
INSTALLATION: National Air and Space Museum (NASM) — National Mall Building
LOCATION: Washington, DC

| | |
|--|------------------|
| <u>FY 2022 COST ESTIMATE (Thousands of Dollars):</u> | \$56,000* |
| <u>PRIOR-YEAR FUNDING:</u> | \$598,000* |
| <u>FUTURE-YEAR FUNDING:</u> | <u>\$23,500*</u> |
| Total | \$677,500* |

* Does not include funding in Facilities Planning and Design (\$52 million)

BUILDING BACKGROUND:

NASM was built in 1976 to commemorate the national development of aviation and space flight. The 747,877-gross-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. In recent years, the Museum has received an average of more than seven 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, show signs of aging and, in some cases, damage in the form of visible warping and cracks. The current marble primary weather seal does not provide a vapor barrier across the entire façade and the insulation is not consistent with current sustainable best practices and energy conservation. There is no secondary weather seal on the marble walls. This has created additional condensation and energy conservation problems.

NASM's mechanical systems are original to the 1976 building and were designed to support only two million visitors annually. Within six months of opening, five million visitors were recorded. Today, it remains among the most visited museums in the United States, with millions of visitors annually. As a result, decades of strain on these systems have led to frequent breakdowns and failures, increasing costs to repair. The systems have exceeded their useful lifespans and the mechanical systems are further burdened by the deteriorated condition of the exterior façade, which allows moisture into the building.

PROJECT DESCRIPTION:

The Smithsonian requests \$56.0 million in FY 2022 to fund construction activities, artifact de-installation and protection activities, and staff swing space. Since

construction started in September of 2018, unforeseen conditions have increased the price of the project. For example, deficiencies in both steel and concrete structural elements were discovered; de-installing and moving the large artifacts, which were installed more than 40 years ago, proved more complex than anticipated; switchgear equipment and transformers needed replacing; repairs to the plaza were required; and the COVID-19 pandemic has interrupted material supply chains and impaired labor productivity. Together, these factors require the NASM project to request additional funds.

The multi-year, multi-phase building systems and envelope renovation project will replace the building's marble façade, improve blast and earthquake resistance, upgrade the energy efficiency of the exterior envelope, replace the mechanical systems, and provide more secure access and egress. A primary goal for the planned heating, ventilation, and air-conditioning (HVAC) replacement portion of the project is to provide the collections area and all occupied spaces with appropriate temperature and humidity controls to better preserve artifacts and ensure the comfort of visitors and staff.

PROGRESS TO DATE:

Pre-construction services began in January of 2017 with award of the Construction Manager as Constructor (CMc) contract. Final construction documents were released in January of 2018, followed by the CMc submitting a Guaranteed Maximum Price (GMP) in May of 2018, which was revised in August of 2018 following a series of value-engineering proposals and scope clarifications. The construction contract was awarded to the CMc at the GMP on August 20, 2018 and a notice-to-proceed (NTP) was issued on September 17, 2018. On-site mobilization activities started in the first quarter of FY 2019, and construction started in the second quarter of FY 2019. By the third quarter of FY 2020, artifacts had been moved out of the affected area (or protected in place) and construction was well under way in Zones 1 through 4-South. The contract for the re-installation of artifacts in Zones 1 through 4-South has been awarded. Construction is planned to be completed in Zones 1 through 4-South by the second quarter of FY 2022. Construction in Zones 4 through 7-North will occur from the third quarter of FY 2022 through the third quarter of FY 2024. Currently, construction is approximately 36 percent complete.

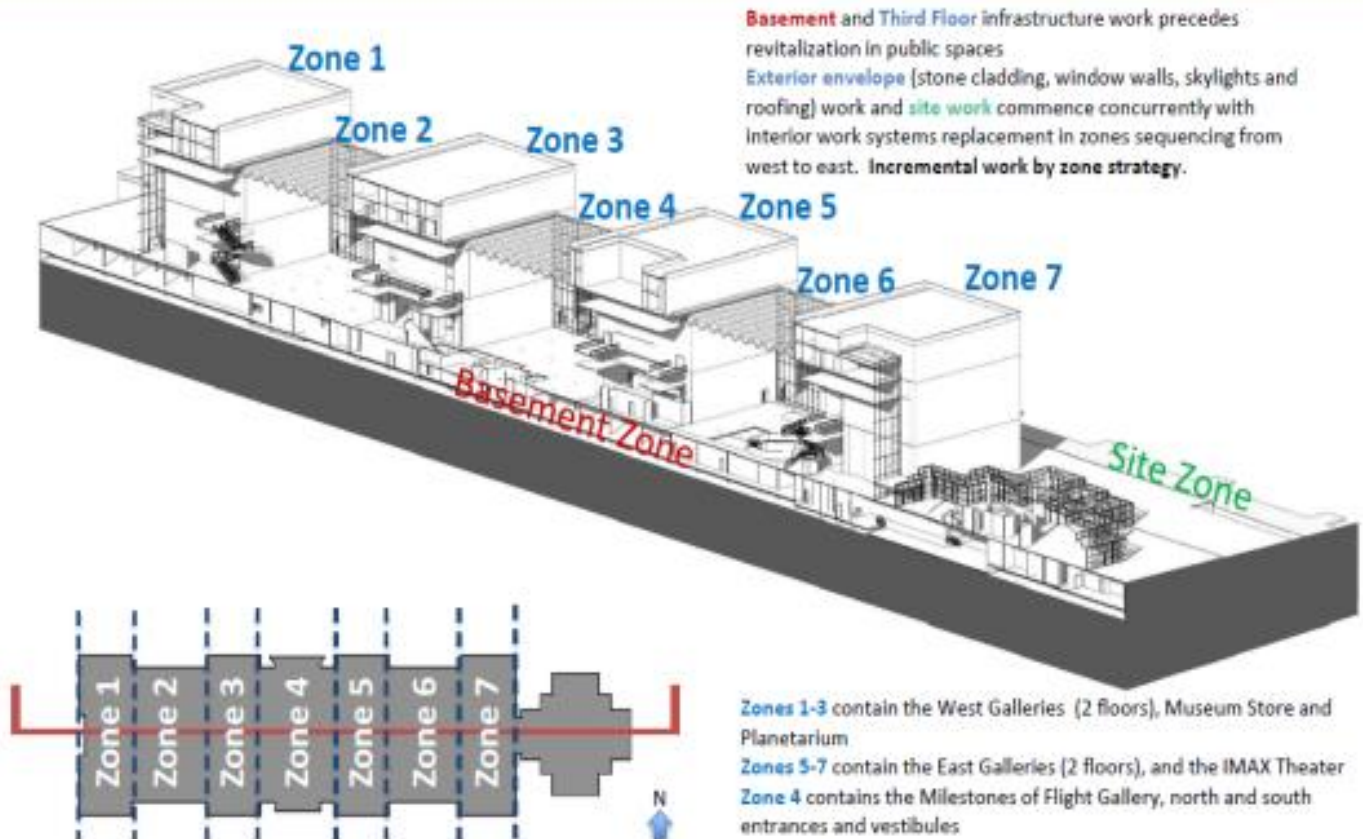
IMPACT OF DELAY:

During phased construction, building systems in zones yet to be renovated will remain open to the public and therefore must stay operational until they are ultimately replaced. If federal funding is delayed, the pace of revitalization work begun in FY 2018 will slow. The stone façade and building systems will continue to deteriorate, and the environmental conditions needed to safeguard the Museum's collections and the visiting public will not be maintained. Building system breakdowns will become more frequent and unpredictable and will likely result in emergency building closures.

The following diagram provides a high-level view of the incremental sequence approach the Smithsonian is taking throughout the renovation. The Smithsonian intends to keep approximately half of the Museum open during the project, while working on the exterior and interior projects in parallel by zone, as outlined below.

National Air and Space Museum (NASM) Major Systems / Exterior Envelope Revitalization Project

Building Zones and Incremental Work Sequence Approach



PROJECT TITLE: Construct Site Utilities for Hazmat Storage Prefab Containers
INSTALLATION: National Air and Space Museum (NASM)
LOCATION: Steven F. Udvar-Hazy Center (UHC), Chantilly, Virginia

| | |
|--|--------------|
| <u>FY 2022 COST ESTIMATE (Thousands of Dollars):</u> | <u>\$500</u> |
| Total | \$500 |

BUILDING BACKGROUND:

The Udvar-Hazy Center (UHC) in Chantilly, Virginia is the companion facility to the main Museum on the National Mall in Washington, DC. Opened in 2003, the 760,000-square-foot building provides approximately 346,000 square feet of exhibit display space for thousands of aviation and space artifacts, including a Lockheed SR-71 Blackbird, a Concorde supersonic jet, and the space shuttle *Discovery*. In addition, the UHC includes approximately 237,000 square feet of space dedicated to a restoration hanger and shop, collections storage, and archives. A special feature of the Restoration Hanger is that it allows the visiting public to observe the restoration of artifacts. The Restoration Hanger and shops are integral part of NASM's stewardship of its artifacts.

PROJECT JUSTIFICATION:

NASM is required to haul away all chemical waste generated from the restoration of collections and artifacts and dispose of it at an off-site location. However, before the waste can be hauled away, it is temporarily stored on site. Consequently, to meet the need for additional on-site storage capacity for hazmat waste, NASM is required to purchase prefabricated hazmat storage containers.

PROJECT DESCRIPTION:

The Smithsonian requests \$500,000 in FY 2022 to construct a concrete slab for the hazmat storage containers, as well as to install utilities, power, and water to use the hazmat storage containers safely.

PROGRESS TO DATE:

An on-site location has been identified in the mechanical yard behind the Restoration Hanger. The contract for design is planned to be awarded and the work completed in FY 2021.

IMPACT OF DELAY:

Delaying construction would put at risk NASM's ongoing restoration of artifacts identified for display in the Museum's transformation of exhibits for the Museum on the National Mall in Washington, DC, which is currently undergoing a major revitalization effort.

PROJECT TITLE: Construct Canopies at Exit Doors at Aviation Hangar
INSTALLATION: National Air and Space Museum (NASM)
LOCATION: Steven F. Udvar-Hazy Center (UHC), Chantilly, Virginia

| | |
|--|--------------|
| <u>FY 2022 COST ESTIMATE (Thousands of Dollars):</u> | <u>\$550</u> |
| Total | \$550 |

BUILDING BACKGROUND:

The Udvar-Hazy Center in Chantilly, Virginia is the companion facility to the Museum on the National Mall in Washington, DC. Opened in 2003, the 760,000-square-foot facility contains two large hangers — the barrel-roof Boeing Aviation Hangar (measuring approximately 293,000 square feet) and the James S. McDonnell Space Hangar (at approximately 53,000 square feet), where thousands of aviation and space artifacts, including a Lockheed SR-71 Blackbird, a Concorde supersonic jet, and the space shuttle *Discovery* are displayed. The Museum hosts an average of more than one million visitors a year.

PROJECT JUSTIFICATION:

During snowstorms, large amounts of snow suddenly slide down the Boeing Aviation Hangar barrel roof, blocking the Aviation Hangar emergency exit doors, and causing a safety risk for the staff and visiting public.

PROJECT DESCRIPTION:

The Smithsonian requests \$550,000 in FY 2022 to construct and install six engineered structural steel canopies to provide protection from sliding snow obstructing egress at the six pairs of exit doors from the Aviation Hangar.

PROGRESS TO DATE:

Design was completed in FY 2019.

IMPACT OF DELAY:

Inoperable and/or blocked emergency exit doors pose a significant danger to the staff and visiting public.

PROJECT TITLE: Revitalize Historic Core
INSTALLATIONS: Smithsonian Institution Building and Arts and Industries Building (AIB)
LOCATION: Washington, DC

| | |
|--|-------------------|
| <u>FY 2022 COST ESTIMATE (Thousands of Dollars):</u> | \$9,000* |
| <u>PRIOR-YEAR FUNDING:</u> | \$14,800* |
| <u>FUTURE-YEAR FUNDING:</u> | <u>\$583,200*</u> |
| Total | \$607,000* |

* Does not include funding in Facilities Planning and Design (\$43 million)

BUILDING BACKGROUND:

The Smithsonian Institution Building, often referred to as the “Castle,” is the Institution’s first home and its symbolic heart. The Arts and Industries Building opened in 1881 as the first home of the National Museum. Together, these two buildings make up the Smithsonian’s Historic Core. The Castle has historic architectural and institutional significance and is the public’s doorway to, and the symbol of, the Smithsonian Institution. Both buildings are listed by the Department of the Interior as National Historic Landmarks.

PROJECT JUSTIFICATION:

Both buildings need major revitalization work that will include new heating, air-conditioning, ventilation, electrical, and plumbing systems, as well as telecommunications, security, and life-safety systems. A major goal of the revitalization will be to provide efficient and accessible space for visitors and staff. Public spaces will be restored after years of piecemeal remodeling that has diminished their original proportions and appearance. The last comprehensive refurbishment of the Castle occurred more than 50 years ago. Although the exterior shell of the AIB was revitalized seven years ago, the interior is unfinished.

PROJECT DESCRIPTION:

The Smithsonian requests \$9.0 million in FY 2022 to begin moving collections and staff out of the Castle and awarding pre-construction services. Future funding of the project will include replacing or restoring all building elements and systems, including mechanical, electrical, plumbing, life-safety, security, telephone, and data systems. The Castle windows, roof, and exterior stonework will also be revitalized. Both buildings will be made compliant with modern construction and life-safety codes. Blast and seismic vulnerability issues will be addressed and resistance improved. A new, underground Central Utility Plant will provide mechanical and electrical infrastructure, and a newly expanded loading facility will improve the efficiency and safety of materials handling.

PROGRESS TO DATE:

Programming was completed in FYs 2019 and 2020. Design was initiated in FY 2020 and will continue in FY 2021.

IMPACT OF DELAY:

If this project does not move forward, the AIB will remain closed to the public and the Castle will remain at risk of catastrophic systems failure, which could require relocating all staff in the building and closing the facility to visitors.

PROJECT TITLE: Renovate the Cheetah Conservation Station
INSTALLATION: National Zoological Park (NZN)
LOCATION: Washington, DC

| | |
|--|----------------|
| <u>FY 2022 COST ESTIMATE (Thousands of Dollars):</u> | \$4,700* |
| <u>FUTURE-YEAR FUNDING:</u> | <u>\$5,000</u> |
| Total | \$9,700* |

* Does not include funding in Facilities Planning and Design

BACKGROUND:

The aging and soon-to-be obsolete Cheetah Conservation Station (CCS) is located at the 163-acre National Zoo's Rock Creek Park campus. Besides cheetahs, the station includes several other species of threatened and endangered wildlife such as Grevy's zebras, red river hogs, sitatunga and Abyssinian ground hornbills, lesser kudu and dama gazelles, as well as the scimitar-horned oryx, which is extinct in the wild. Several animals at the CCS share space in mixed-species exhibits, providing the animals an opportunity to interact just as they would in their native habitats and enhancing the visitor experience for public education.

PROJECT JUSTIFICATION:

Much of the CCS area has old and failing infrastructure. The mechanical, electrical, and plumbing systems can no longer be replaced, and their dilapidated condition is causing significant issues with plumbing backups and insufficient heating, cooling, and humidification. The current space also has no building automation system connectivity. In addition, the public and staff areas are deteriorating, causing unsafe working conditions. The animal habitats and housing are also inadequate, causing animal welfare and safety concerns and not allowing for appropriate behaviors and reproduction of the living collection. In many areas, erosion has caused tripping hazards and unsafe working conditions. These systems are vastly different from those required for non-living collections found elsewhere within our museum facilities. Consequently, it is a struggle to keep the facilities code-compliant with the constantly evolving animal care standards required to maintain accreditation by the Association of Zoos and Aquariums (AZA) and by the United States Department of Agriculture (USDA).

PROJECT DESCRIPTION:

The Smithsonian requests \$4.7 million in FY 2022 to begin renovating the Cheetah Conservation Station at the NZP in Washington, DC. Mechanical, electrical, plumbing, storm, and sanitary systems will be replaced, as well as the sidewalks and shelters in the yards. Due to erosion caused by intense storm run-off, the structural foundations for the station must be replaced and raised up to prevent future deterioration. Additional stormwater management site work is required to address the intense downpours that are responsible for the foundation erosion. The current containment fence, visitor barriers, and security systems need to be replaced to meet important AZA code requirements, reduce the deferred maintenance backlog, and improve visitor views of the cheetahs. Some additional structural alterations are also

required to meet best practices in animal welfare and management of their habitats and housing.

PROGRESS TO DATE:

Pre-design services were awarded in March of 2021. The design will focus heavily on mechanical, electrical, and plumbing (MEP) system upgrades, along with related building infrastructure improvements, stormwater management and yard renovations, added containment fencing, and pedestrian surface repairs.

IMPACT OF DELAY:

A delay in renovating the Cheetah Conservation Station could threaten the National Zoo's AZA accreditation and damage the Institution's reputation and mission. System failures will result in unnecessary operational emergency responses which are costly, disruptive, and preventable.

PROJECT TITLE: Renovate the General Services Building (GSB)
INSTALLATION: National Zoological Park (NZIP)
LOCATIONS: Washington, DC

FY 2022 COST ESTIMATE (Thousands of Dollars): \$3,300*

Total \$3,300*

* Does not include funding in Facilities Planning and Design

BACKGROUND:

The General Services Building (GSB) at the National Zoo's Rock Creek Park facility is a partly underground concrete structure built into the hillside along the Zoo's North Road. It provides essential NZIP functions, including the animal nutrition commissary, exhibit production shops, safety/maintenance offices, equipment storage, support, and loading dock functions, with Parking Lot C forming most of its roof. The building was designed and constructed from 1975–1977. Live loads were not accounted for in the original design, so the roof is at risk of sudden structural failure under dynamic loads from moving vehicles on Parking Lot C above.

PROJECT JUSTIFICATION:

The structural columns of the GSB can potentially “punch” through the Parking Lot C surface above, which would cause the catastrophic collapse of the parking deck and several stories of the GSB floors below, risking injury or death to the people there, as well as significant property damage. Structural reinforcement must be designed and installed to prevent this from occurring.

PROJECT DESCRIPTION:

The Smithsonian requests \$3.3 million to address potential structural failure at the GSB's Upper Parking Lot C. The work will require column capital and slab reinforcements to meet the dynamic vehicle-load situations present at the site. The structural repairs will be extensive, impacting the building roof envelope and disrupting working environments and core electrical distribution systems for essential functions in the office spaces, shops, the loading dock, and commissary.

PROGRESS TO DATE:

Construction procurement documents are complete and are ready for construction award once funding becomes available.

IMPACT OF DELAY:

Failure to reinforce the Parking Lot C structure over the GSB will continue putting the roof at risk of catastrophic collapse, potentially killing or severely injuring the staff housed below.

PROJECT TITLE: Replace Roof and Envelope Assemblies at Lion/Tiger House
INSTALLATION: National Zoological Park and Smithsonian Conservation Biology Institute (NZIP/SCBI)
LOCATIONS: Washington, DC and Front Royal, Virginia

| | |
|--|-----------------|
| <u>FY 2022 COST ESTIMATE (Thousands of Dollars):</u> | <u>\$2,000*</u> |
| Total | \$2,000* |

* Does not include funding in Facilities Planning and Design

BACKGROUND:

Multiple buildings, at both the Rock Creek, Washington, DC and Front Royal, Virginia locations, have major capital systems renewal needs due to failed and failing infrastructure, including the building envelopes, roofs, skylights, window walls, exterior cladding, curtain and exterior walls, and regular and overhead doors. Many of these envelope systems, including those at the Lion/Tiger House, were constructed before the 1970s-era energy crisis, after which the more effective thermal, air, water, and vapor-barrier assemblies commonly in use today were invented. The Smithsonian needs to renew these old building roofs and exteriors, replace failed and failing associated systems, and stop active leaks from allowing stormwater to penetrate the interiors, causing water damage and resulting in other indoor air-quality and adverse health issues to both human and animal occupants. When this work is complete, the buildings will be provided with state-of-the-art roof and wall assemblies to conserve energy by reducing heat and cooling loads, air infiltration, and interior condensation and mold. This project will use current building technologies with energy-efficient and environmentally sustainable designs.

PROJECT JUSTIFICATION:

The Lion/Tiger House roof also serves as the circular visitor path for outdoor viewing of the Great Cats exhibit. The asphalt pavement roof assembly has completely failed and is an ongoing safety and tripping hazard, allowing stormwater to leak through and flow into the offices, archives, and animal-holding spaces below. The roof and pedestrian walkway must be completely replaced to properly address the safety and water-infiltration issues. The roof and related pavement assemblies must be completely replaced to properly address water-infiltration issues and maintain an effective animal care program.

PROJECT DESCRIPTION:

The Smithsonian requests \$2.0 million in FY 2022 to replace the Lion/Tiger House roof and circular visitor path. The offices, animal-holding areas, and storage spaces in the building will be impacted by the roof replacement, and therefore must undergo renovations which are included in the project.

PROGRESS TO DATE:

Design is under way to fully replace the Lion/Tiger House roof assembly.

IMPACT OF DELAY:

Failure to replace the roof assemblies at the Rock Creek Park Lion/Tiger House would result in further leaking and accelerated deterioration, worsening water infiltration into offices, archives, and animal-holding areas below, and lead to operational emergency responses that are costly, disruptive, and preventable, as well as increased costs associated with the infrastructure damage. Delaying such system replacements and upgrades could result in serious harm to visitors and staff, as well as to the animals in our care, along with the loss of precious scientific research that is essential to the survival of rare and endangered species.

PROJECT TITLE: Upgrade Water Utility Systems
INSTALLATION: National Zoological Park and Smithsonian Conservation Biology Institute (NZP/SCBI)
LOCATIONS: Washington, DC and Front Royal, Virginia

FY 2022 COST ESTIMATE (Thousands of Dollars): \$2,500*

Total \$2,500*

* Does not include funding in Facilities Planning and Design

BACKGROUND:

Multiple facilities, at both the 163-acre National Zoo at Rock Creek Park in Washington, DC and the 3,200-acre research center in Front Royal, Virginia, have major capital systems renewal needs due to failed and failing living collections infrastructure required to run the NZP's endangered species program. The Smithsonian is required to operate and maintain site utilities at the NZP in Washington, DC and the SCBI in Front Royal, Virginia. These include a domestic potable water system; fire-suppression water distribution; emergency fire-hydrant systems; waste/recirculation; water-treatment plants for our aquatic exhibits; sanitary and storm-management sewers; and associated site structures. At Front Royal, the SCBI has to maintain a natural spring/well-water distribution system, links to a separate Front Royal city water distribution system, and water treatment plants.

PROJECT JUSTIFICATION:

The Washington, DC Department of Energy and the Environment (DOEE) requested that the NZP develop a 20-year stormwater management master plan to mitigate periodic flooding episodes. This project will begin to implement this plan. At the Front Royal, Virginia campus, the World War I-era natural spring and well-water distribution system does not meet current health safety standards and must be upgraded to prevent cross-contamination of potable and domestic city water systems. Aging post area utility systems, including city water, sewer, stormwater management, and electric power, are obsolete and must be upgraded to avoid the risk of service interruptions, and modernized to meet current safety codes and standards. This work is part of the ongoing major capital renewal project to replace site utilities, including infrastructure and safety systems throughout both the Rock Creek and Front Royal campuses.

PROJECT DESCRIPTION:

The Smithsonian requests \$2.5 million to upgrade water utility systems at both the Rock Creek Park and Front Royal Zoo locations. This includes \$2.0 million to modernize the World War I-era sewer and city domestic water-distribution utilities at the Front Royal campus, as well as upgrading the buried electric power lines, site lighting, and fiber-optic/data communications cables that run along the distribution system. This project will also replace the natural spring and well-water distribution systems that are now more than 100 years old. In addition, the Smithsonian requests \$500,000 in funding required for repairs to prevent stormwater flooding and upgrades to meet code compliance.

PROGRESS TO DATE:

Implementation of the DOEE-requested Stormwater Management Master Plan started in FY 2019 to mitigate periodic flooding at vulnerable areas. In addition, work on site utilities completed to date at Rock Creek Park includes steam-line replacement of approximately 85 percent of buried piping, new electrical substations at Parking Lot A and at the Lower Zoo, new site utilities serving the new Conservation Pavilion and Police Station, and the data and fiber-optic backbone along Olmsted Walk. At Front Royal, Phase 1 of the site utilities project was completed as part of the Smithsonian/George Mason University School of Conservation work in 2013. Phase 2 was completed in 2017, also serving the central post area of the campus, and Phase 3 is currently about 60 percent complete.

IMPACT OF DELAY:

Failure to upgrade the NZP/SCBI site utilities, infrastructure, and safety systems could result in increased emergency repairs which are costly, disruptive, and preventable, and could lead to the loss of NZP/SCBI's accreditation by the Association of Zoos and Aquariums. Delaying such system replacements and upgrades could result in serious harm to visitors, staff, and the animals in our care, along with the loss of scientific research essential to the survival of rare and endangered species. Failure to begin complying with the Environmental Protection Agency (EPA) requirements, as delegated to the DOEE, could result in hefty fines and penalties to the Smithsonian. Failure to make repairs and replacements, and to implement warning systems to account for the deteriorated interior and exterior faux rock, will continue to put animals, staff, and visitors at risk of serious injury. The failure to replace deteriorated pavement will make tripping hazards more likely, causing a safety hazard for visitors and staff. At the Front Royal, Virginia campus, failure to revitalize the obsolete spring and well-water system will continue contributing to a health and safety hazard, and failure to modernize utilities, including sewer, city water, electric power, site lighting, fiber-optic communication cable, and stormwater management facilities, will increase the risk of disrupted service to the public.

PROJECT TITLE: Upgrade HVAC and Electrical Systems
INSTALLATION: National Zoological Park and Smithsonian Conservation Biology Institute (NZP/SCBI)
LOCATIONS: Washington, DC and Front Royal, Virginia

| | |
|--|-----------------|
| <u>FY 2022 COST ESTIMATE (Thousands of Dollars):</u> | <u>\$2,800*</u> |
| Total | \$2,800* |

* Does not include funding in Facilities Planning and Design

BACKGROUND:

Multiple buildings, at both the Rock Creek Park, Washington, DC and Front Royal, Virginia locations, have major capital systems renewal needs due to failed and failing infrastructure in the buildings. These same facilities also do not meet current building and life-safety codes associated with obsolete electrical distribution systems which are undersized and do not comply with current building heating, ventilation, and air-conditioning (HVAC) system requirements.

PROJECT JUSTIFICATION:

At Front Royal, the current HVAC system is very poor and significantly exceeds the expected system life, resulting in the need for frequent repairs as well as interrupted operations which impact staff comfort and mission focus at the training center buildings 090 and 070. Working HVAC smoke-evacuation systems are required for safe operation.

PROJECT DESCRIPTION:

The Smithsonian requests \$2.8 million to upgrade building systems and meet Association of Zoos and Aquariums (AZA) code-compliance. This request includes \$1.5 million for HVAC and electrical upgrades for buildings 090 and 070, and \$1.3 million to address inadequate HVAC systems at many other buildings and residences, and to remove hazardous materials at the Front Royal, Virginia site.

PROGRESS TO DATE:

Multiple projects are in the planning and design stages for the current Five-Year Capital Plan to address HVAC deferred maintenance and AZA code-compliance needs.

IMPACT OF DELAY:

The continued failure to address the poor condition of the HVAC systems and to make progress on the deferred maintenance backlog impacts the SCBI training programs and significantly increases the research center's annual maintenance costs.

PROJECT TITLE: Upgrade Living Collection's Life-Safety and Infrastructure
INSTALLATION: National Zoological Park and Smithsonian Conservation Biology Institute (NZP/SCBI)
LOCATIONS: Washington, DC and Front Royal, Virginia

| | |
|--|-----------------|
| <u>FY 2022 COST ESTIMATE (Thousands of Dollars):</u> | <u>\$2,900*</u> |
| Total | \$2,900* |

* Does not include funding in Facilities Planning and Design

BACKGROUND:

Multiple facilities, at both the 163-acre National Zoo at Rock Creek Park in Washington, DC and the 3,200-acre research center in Front Royal, Virginia, have major capital systems renewal needs due to failed and failing living collections infrastructure. Replacements for these systems are required to fulfill the mission of the National Zoological Park's (NZP) endangered species program. These systems are vastly different from those required for non-living collections found elsewhere within other Smithsonian facilities. It is difficult to keep the facilities code-complaint with the constantly evolving animal care standards required to maintain accreditation by the Association of Zoos and Aquariums (AZA), and by the United States Department of Agriculture (USDA). Necessary work may include: improvements to animal habitats and yards; refurbishment of perimeter and interior separation/containment fences and barriers; human/animal safety separation barriers, which include shift gates, chutes, ladders, and dig barriers; predation and invasive species exclusion systems; highly pathogenic avian influenza (HPAI) mitigation; pools/water systems: and quality improvements and controls required for the humane and responsible stewardship of captive animals.

PROJECT JUSTIFICATION:

At most of the living collection locations, the faux rock has an unpainted rebar structure that forms the rock shape but has been rapidly deteriorating, causing delamination of the thin material used to resemble the rocks. This has increased the probability of structural failure and the exposed rebar has caused tripping hazards. Staff regularly climb these rock walls to manage the living collections, which creates the potential for severe injury or death to animals and staff from tripping or structural failure. This condition must be addressed with repairs or replacements, as well as warning signage and safety rails for humans and hot wires to deter animals from climbing on these structures. At the Rock Creek Park, Washington, DC site, Small Mammal House (SMH) maintenance staff must climb above animal cage enclosures to access electrical power receptacles and lighting and heat lamps positioned above the cages, risking falls into the animal exhibit cages below. Fall-protection methods must be developed and installed to allow maintenance staff safe access to service these devices. At the Front Royal, Virginia campus, there are buildings requiring removal of hazardous materials and demolition to mitigate unsafe conditions for both staff and animals. In addition, funds are needed to upgrade living-collections infrastructure at the Front Royal, Virginia site to meet animal health, safety, and welfare (HSW) requirements mandated by the AZA and the USDA. These requirements are enforced with five-year cycle inspections, which are next due in 2023. This infrastructure includes animal pools and containment

fences, including anti-predator measures to keep out local bears, coyotes, and foxes. Required improvements to the animal-containment facilities include taller fences, hot wires, and electrical infrastructure, dig barriers, animal-shift gates, human-access safety gates, and climbing structures for animal exercise.

PROJECT DESCRIPTION:

The Smithsonian requests \$2.9 million in FY 2022 to upgrade living collections care, life-safety, and infrastructure, including \$400,000 for various smaller critical living collections infrastructure needs, such as animal shelters and climbing structures; \$200,000 for animal-containment projects at the Smithsonian Conservation Biology Institute at Front Royal, Virginia; \$500,000 to comply with AZA and USDA requirement upgrades to ensure the HSW of captive animals under the stewardship of the Smithsonian; \$1.0 million to repair/replace deteriorated interior and exterior faux-rock installations at Rock Creek Park; \$500,000 to reduce fall hazard risks at the SMH; and \$300,000 for abating hazardous materials and removing unsafe structures.

PROGRESS TO DATE:

Previously completed living collections infrastructure projects include numerous animal gates, fences, and stainless-steel exterior cable containment systems; dig-barriers; hotwire and hot grass containment improvements; chutes; animal-holding areas with AZA code-required fire systems at Front Royal; cushioned concrete floor coatings in hoof stock stalls at the Veterinary Hospital in Front Royal; installation of thermal heating and cooling systems at the quarantine holding rooms at the Veterinary Hospital at Rock Creek Park; and predator prevention fencing at the Rivinus Barn complex at Front Royal.

IMPACT OF DELAY:

Delaying these improvements and repairs could threaten AZA accreditation and damage the Institution's reputation, as well as cause harm to visitors, staff, and animals. Other negative effects of delaying the projects could be animal predation of extinct-in-the-wild and highly endangered species, as well as animal escapes. Failure to upgrade the living collections infrastructure could result in the need for emergency responses which are costly, disruptive, and preventable.

PROJECT TITLE: Upgrade Electrical Systems and Components
INSTALLATION: National Museum of Natural History (NMNH)
LOCATION: Washington, DC

| | |
|--|-----------------|
| <u>FY 2022 COST ESTIMATE (Thousands of Dollars):</u> | \$4,600* |
| <u>PRIOR-YEAR FUNDING:</u> | <u>\$7,500*</u> |
| Total | \$12,100* |

* Does not include funding in Facilities Planning and Design

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. In addition to its wide array of public exhibits, the 1.5-million-square-foot-building houses more than 60 million specimen collections (used by both resident and visiting researchers), and educational, scientific, and administrative facilities serving approximately 1,200 people. The NMNH is one of the most visited museums in the world and usually hosts between seven and eight million visitors annually.

PROJECT JUSTIFICATION:

Most of the building's electrical systems were installed in the early 1960s and need major replacement. Breakdowns of the systems are frequent, repair parts are often difficult to find, and the systems are not code-compliant, presenting a safety hazard to visitors and collections. The reliability of the entire electrical system is compromised by the deteriorated condition of the antiquated switchboards, bus ducts, network protectors, generators, transfer switches, and distribution and branch circuit panel boards.

PROJECT DESCRIPTION:

The Smithsonian requests \$4.6 million in FY 2022 to continue the ongoing renovation process, with a particular focus on upgrading the electrical systems. To accomplish this, specific electrical work includes correcting all inadequate short-circuit rating equipment, replacing obsolete equipment, installing new dedicated life-safety panels, and abating hazardous materials encountered during this upgrade. In addition, the project will improve many life-safety systems by upgrading the stairwell pressurization fans and tying vital systems, such as the building automation and information technology (IT) systems, to the uninterruptable power source.

PROGRESS TO DATE:

As part of ongoing renovations, an exhaustive survey and analysis of current electrical systems was completed to inform a feasibility study. In 2018 the scope was expanded to include relocation of life-safety circuits to new panels and coordinate changes with the Building Automated System. The contract documents were completed in March of 2020. For each discreet area of the building — the Main Building, wings, and courts — there is a plan for what needs to be replaced and

upgraded, including emergency device coordination. This well-defined infrastructure renovation plan is essential to maintain the NMNH's continued service to the public. The invitation to bid on construction contracts was forwarded to small businesses in June of 2020. The low-bid acceptable contractor was selected in July of 2020, with the subsequent award issued in October of 2020.

IMPACT OF DELAY:

Electrical currents introduce large amounts of destructive energy into a facility in the form of heat and magnetic force. The reliability and safety of an electrical system depends on protective devices and electrical equipment being updated regularly and checked for code compliance. If a building is not properly protected, equipment will be damaged and maintenance personnel will be at risk of injury. An upgrade is required to protect the Museum's collections, staff, and visiting public. Ultimately, a compromised electrical system would also impede the Museum's ability to maintain regular operations and delay the exhibit re-installation program.

PROJECT TITLE: Upgrade Fire-Alarm Panels and Mass-Notification Systems
INSTALLATION: National Museum of Natural History (NMNH)
LOCATION: Washington, DC

| | |
|--|-----------------|
| <u>FY 2022 COST ESTIMATE (Thousands of Dollars):</u> | \$6,900* |
| <u>PRIOR-YEAR FUNDING:</u> | \$5,000* |
| <u>FUTURE-YEAR FUNDING:</u> | <u>\$7,500*</u> |
| Total | \$19,400* |

* Does not include funding in Facilities Planning and Design

PROJECT JUSTIFICATION:

The current NMNH fire-alarm panels are out of date and became obsolete when their production ended in September of 2018. Over time, parts will become difficult or impossible to find and eventually they will be incompatible with newer equipment. A simultaneous upgrade to the mass-notification system is well-timed because the two systems are integrated. Currently, the NMNH has no comprehensive way to notify the public and staff during emergencies. The speakers installed as part of the fire-alarm upgrade would provide that mass-notification capability.

PROJECT DESCRIPTION:

The Smithsonian requests \$6.9 million in FY 2022 to continue upgrading the fire-alarm panels and installing the mass-notification system. The Museum's existing Siemens MXL panels must be upgraded to the new Siemens XLS panels, and a comprehensive mass-notification system needs to be designed and implemented as well. There is economy and efficiency in combining the fire-alarm panel replacement with the new speaker installation. The speaker layout for the mass-notification system will account for the Museum's acoustic issues, which are significant due to the grand and historic nature of the building with its many echoing high ceilings and large galleries.

PROGRESS TO DATE:

The final feasibility report, completed in March of 2019, provided the basis for the design contract scope, which was awarded in July of 2019, with expected completion in the spring of 2021. The construction contract award is planned for the fourth quarter of FY 2021.

IMPACT OF DELAY:

An aging and out-of-date system runs the risk of failure and the possibility of endangering collections, visitors, and staff. In the worst-case scenario, a malfunctioning fire-alarm system could shut down the building. In addition, mass-notification systems are rapidly becoming an essential feature in public buildings, because they are necessary to quickly broadcast life-saving information in the event of natural or manmade emergencies.

PROJECT TITLE: Replace North Tower Air-Handling Units (AHUs)
INSTALLATION: National Museum of Natural History (NMNH)
LOCATION: Washington, DC

| | |
|--|-----------------|
| <u>FY 2022 COST ESTIMATE (Thousands of Dollars):</u> | \$2,000* |
| <u>FUTURE-YEAR FUNDING:</u> | <u>\$2,400*</u> |
| Total | \$4,400* |

* Does not include funding in Facilities Planning and Design

PROJECT JUSTIFICATION:

The air-handling units (AHUs) and their components, located in the mechanical rooms in the northeast and northwest air towers, were installed as part of the East and West Wing construction project in the early 1960s. The systems service the third floor of the Museum's main building. These 60+-year-old systems are obsolete. Maintenance, repair, and piecemeal part replacement of the systems are frequent. Due to their obsolescence, the systems are unreliable, expensive to operate, and create a liability for NMNH in terms of potential loss of valuable collections and to the extent they present unhealthy conditions for Museum staff. Furthermore, the asbestos-containing material that made up the insulation of the associated utility and condensate lines poses a health hazard for maintenance personnel.

PROJECT DESCRIPTION:

The Smithsonian requests \$2.0 million in FY 2022 to begin replacing and modernizing of the MEC-3 and MWC-3 air-handling units. In addition to the AHU replacement, this project will replace corresponding return-air fans and the electrical panels and power components; repair the mechanical room infrastructure; and abate the asbestos insulation on hot and chilled water and condensate lines. In addition, the inefficient steam-heating system and the corresponding reheating coils will be replaced with a hot-water system and installation of variable air-volume fans for ease of control. As part of the project, air will be provided to maintain the optimal temperature and pressure for the safety and welfare of the staff and preservation of the Museum's collections.

PROGRESS TO DATE:

Contract award for the initial schematic and design development is planned for the end of 2020. The complete design with construction documentation is planned for November of 2021, and the final construction award is planned for the third quarter of FY 2022.

IMPACT OF DELAY:

The normal life expectancy of an AHU is about 30 years. These 60+-year-old obsolete systems are at least 30 years beyond their useful life and their risk of failure is very real. Deferring the project will only exacerbate the deteriorating condition of these AHUs to the point of complete failure, endangering the Museum collections, negatively affecting the health of the Smithsonian staff, and potentially resulting in the

closure of the third floor of the main building. The presence of asbestos-containing insulation presents a health risk to maintenance personnel and requires frequent monitoring and air testing to ensure that asbestos remains encapsulated and non-friable. In addition, these old systems use a lot of energy due to the outdated standards they were designed under and because of their current deteriorated condition. These inefficient systems will continue to consume excessive energy until they are replaced, so delaying this project would also result in deferring the cost savings that the NMNH would otherwise recognize by doing this work now.

PROJECT TITLE: Improve West Wing Basement Drainage
INSTALLATION: National Museum of Natural History (NMNH)
LOCATION: Washington, DC

| | |
|--|---------------|
| <u>FY 2022 COST ESTIMATE (Thousands of Dollars):</u> | <u>\$800*</u> |
| Total | \$800* |

* Does not include funding in Facilities Planning and Design

PROJECT JUSTIFICATION:

The West Wing basement of the National Museum of Natural History houses the wing's main electrical transformers/switchgear room, horticulture storage, small equipment parking, the Smithsonian Maintenance Central Shop offices and equipment, Office of Protection Services' central lock and technical quarters, the mechanical/steam and fire-pump room, and housekeeping and supply storage. The West Wing basement and loading dock ramp have experienced extensive flooding in recent years. Serious flooding occurred in 2006 and additional flooding was reported between 2006 and 2020 and continues to be a major concern. The two most recent major floods occurred in July of 2019 and June of 2020 after heavy rainfall.

PROJECT DESCRIPTION:

The Smithsonian requests \$800,000 in FY 2022 to implement corrective measures by redirecting the rainwater from the West Wing ramp and basement. The project will repair/replace a blocked, 18-inch buried drainage pipe immediately west of the facility, connecting the west-side drainage to the outfalls; repair and replace the associated backflow preventer to prevent flood water from flowing back into the facility; and tie the drainage system to the 80,000-gallon underground detention tank designed to capture excess water.

PROGRESS TO DATE:

A concept study to identify options for corrective action was completed in April of 2020. The survey and full design package were awarded in December of 2020, with the completion of design expected by July of 2021. The award of the construction project contract is planned for the first quarter of FY 2022.

IMPACT OF DELAY:

Flood water can destroy infrastructure and equipment. Flooding in the basement can cause extensive damage to the electrical transformer and switchgear equipment, and impair fire-pump operations, which provide the necessary water pressure for the Museum's sprinkler system. Water damage could be extensive to expensive equipment stored in the basement of the Museum, as well as to maintenance operations, space for Smithsonian security forces, and Smithsonian Gardens. Infrastructure contaminated with flood water can produce mold and mildew which create environmental hazards for Smithsonian staff. Continued flooding in the basement will also weaken the basic structural integrity of the facility.

PROJECT TITLE: Replace Fire-Alarm Panels
INSTALLATION: National Museum of American History (NMAH)
LOCATION: Washington, DC

| | |
|--|-----------------|
| <u>FY 2022 COST ESTIMATE (Thousands of Dollars):</u> | \$8,900* |
| <u>PRIOR-YEAR FUNDING:</u> | <u>\$4,900*</u> |
| Total | \$13,800* |

* Does not include funding in Facilities Planning and Design

BUILDING BACKGROUND:

The National Museum of American History (NMAH), *Kenneth E. Behring Center*, opened to the public in 1964 and is one of the Smithsonian’s most visited museums. This classic modern building (752,000 gross square feet) contains various exhibitions that explore America’s technological, scientific, cultural, and political history. A 2006 master plan generated a series of public space renewal projects, clarifying circulation, modernizing building systems and finishes, and incorporating innovative black-box galleries for exhibit installations. To date, renewal of public floors one, two, and three, totaling approximately 240,000 square feet in the center core and West Wing of the Museum, is complete. The future East Wing public space renewal project will begin in FY 2026. An updated master plan, completed in 2018, contains recommendations for continued modernization of building systems, renovations of the spaces on the remaining floors of the building, primarily containing workspaces, collections storage and food service, and improvements to the extensive grounds surrounding the Museum, including flood protection.

PROJECT JUSTIFICATION:

This project is necessary to replace obsolete fire-alarm panels to improve public and staff safety.

PROJECT DESCRIPTION:

The Smithsonian requests \$8.9 million in FY 2022 to replace the existing MXL and System 3 fire-alarm panels with new XLS fire-alarm panels that comply with current building and life-safety codes, including all associated initiation and notification devices.

PROGRESS TO DATE:

Design began in FY 2017 and was completed in FY 2020. The construction contract is expected to be awarded in FY 2021.

IMPACT OF DELAY:

Delaying this project will increase the risk of failure of these obsolete fire-alarm panels, for which replacement parts are no longer manufactured, thereby putting the safety of visitors, employees, and the collections at risk.

PROJECT TITLE: Replace Fire-Stairwell Door Hardware
INSTALLATION: National Museum of American History (NMAH)
LOCATION: Washington, DC

FY 2022 COST ESTIMATE (Thousands of Dollars): \$700*

Total \$700*

* Does not include funding in Facilities Planning and Design

BUILDING BACKGROUND:

The National Museum of American History (NMAH), *Kenneth E. Behring Center*, opened to the public in 1964 and is one of the Smithsonian’s most visited museums. This classic modern building (752,000 gross square feet) contains various exhibitions that explore America’s technological, scientific, cultural, and political history. A 2006 master plan generated a series of public space renewal projects, clarifying circulation, modernizing building systems and finishes, and incorporating innovative black-box galleries for exhibit installations. To date, renewal of public floors one, two, and three, totaling approximately 240,000 square feet in the center core and West Wing of the Museum, is complete. The future East Wing public space renewal project will begin in FY 2026. An updated master plan, completed in 2018, contains recommendations for continued modernization of building systems, renovations of the spaces on the remaining floors of the building, primarily containing workspaces, collections storage, and food service, and improvements to the extensive grounds surrounding the Museum, including flood protection.

PROJECT JUSTIFICATION:

The hardware for the fire-stairwell doors does not meet current life-safety and building codes and needs to be replaced.

PROJECT DESCRIPTION:

The Smithsonian requests \$700,000 in FY 2022 to replace hardware on fire-stairwell doors and frames which do not comply with new safety code requirements.

PROGRESS TO DATE:

This project is at the stage of finalizing the 100 percent design documents.

IMPACT OF DELAY:

Delaying this project could endanger the life and safety of Museum staff and visitors.

PROJECT TITLE: Replace Air-Handling Units (AHUs) 1–4
INSTALLATION: National Museum of the American Indian (NMAI-NY)
LOCATION: New York City, New York

| | |
|--|-----------------|
| <u>FY 2022 COST ESTIMATE</u> (Thousands of Dollars): | \$4,500* |
| <u>PRIOR-YEAR FUNDING:</u> | <u>\$5,500*</u> |
| Total | \$10,000* |

* Does not include funding in Facilities Planning and Design

BUILDING BACKGROUND:

The National Museum of the American Indian in New York (George Gustav Heye Center) opened on October 30, 1994 and occupies approximately 80,000 square feet of the Alexander Hamilton U.S. Custom House Building in lower Manhattan. The Museum occupies portions of the basement, first, and second floors. The Smithsonian NMAI-NY has its own chiller plant, heating plant, and air-handling systems dedicated to serving only the portions of the building occupied by the NMAI. The building is operated by the General Services Administration (GSA) and the Smithsonian holds a 99-year lease. The rest of the building is occupied by other U.S. Government tenants.

The United States Custom House at 1 Bowling Green, New York, New York dates from 1907 and was designed by architect Cass Gilbert. It is a National Historic Landmark listed on the National Register of Historic Places. This beaux arts monument to sea trade, the United States Customs Service, and the City of New York, is as rich in historic associations as it is in architectural details and intelligent planning. Its site in an open and historic space, and unashamed exuberance, internationality, and pride make this very large building an important cultural artifact and easy to admire.

PROJECT JUSTIFICATION:

Air-handling units (AHUs) 1–4 were installed in the initial construction of the NMAI-NY in the 1990s and serve the galleries and support space in the basement, first, and second floors. They are at least 25 years old and are at or past most estimates of useful AHU service life. Reliability and increased maintenance due to age are issues with the operation of the AHUs.

PROJECT DESCRIPTION:

The Smithsonian requests \$4.5 million in FY 2022 to continue replacing the four main AHUs. This project will also replace and enlarge the existing hot-water plant to support the conversion from steam to hot water for the new AHU preheat coils. Sequential implementation is proposed for FYs 2021–2022 and will be accomplished by first replacing AHUs 2 and 4 in the west mechanical room, followed by replacement of AHUs 1 and 3 in the east mechanical room. To maintain a continual flow of conditioned air to the Museum, a temporary air handler and connecting ductwork located outside the building will shift from the west side of the building to the east side in support of the work sequence. The new AHUs will efficiently deliver conditioned air and supplement the new chillers and cooling towers recently installed and activated through a predecessor project. The Museum should benefit from a significant improvement to its

energy use profile, and see reduced energy costs, after the total AHU system replacement is completed.

PROGRESS TO DATE:

A study was completed in April of 2017 to provide physical requirements and the basis of design for new AHUs to replace the existing ones, as well as the timing, sequence, and logistics of installing the replacements. Construction documents will be completed in the third quarter of FY 2021, and the project will be ready for procurement and contract award in the fourth quarter of FY 2021.

IMPACT OF DELAY:

Air-handling equipment will continue to degrade, and increased maintenance will be required if this work is not done soon. Collections in the exhibition spaces and visitor comfort will be at higher risk due to potential failures and emergency shutdowns. The energy efficiency anticipated from installing a fully renewed heating, ventilation, and air-conditioning (HVAC) system will not be achieved.

PROJECT TITLE: Building Envelope — Replace Roof and Exterior Wall Panels
INSTALLATION: Hirshhorn Museum and Sculpture Garden (HMSG)
LOCATION: Washington, DC

| | |
|--|------------------|
| <u>FY 2022 COST ESTIMATE (Thousands of Dollars):</u> | \$5,900* |
| <u>PRIOR-YEAR FUNDING:</u> | <u>\$21,400*</u> |
| Total | \$27,300* |

* Does not include funding in Facilities Planning and Design

BUILDING BACKGROUND:

The Hirshhorn Museum and Sculpture Garden (HMSG), the Smithsonian Institution's Museum of modern and contemporary art, was designed by architect Gordon Bunshaft, FAIA, of Skidmore, Owings, and Merrill, and opened to the public in 1974. The Museum is located at the northwest corner of 7th Street and Independence Avenue, SW, and the Sculpture Garden is north of the Museum across Jefferson Drive. The building is cylindrical in shape, 231 feet in diameter, and raised 14 feet above a paved plaza, on four concrete piers. The building is clad with precast concrete panels with crushed pink granite aggregate. The center of the drum is a circular courtyard with a large, shallow, bronze fountain. The Museum building has four above-ground stories and a lower level below the plaza that surrounds the building.

PROJECT JUSTIFICATION:

The building's envelope components have reached the end of their useful life and need to be replaced. The roof is more than 25 years old, and the section located directly above collections storage on the fourth floor occasionally leaks and needs to be replaced. The galvanized steel attachments for the exterior concrete wall panels have deteriorated and are beginning to corrode. The exterior wall lacks insulation and a vapor barrier, which causes problems with condensation and poor thermal performance.

PROJECT DESCRIPTION:

The Smithsonian requests \$5.9 million in FY 2022 to replace the roof and exterior wall panels at the HMSG. This is a multi-year funded project that will begin in FY 2021. The project includes replacing the precast concrete panels and their attachment system, adding insulation and a vapor barrier at the exterior wall, and replacing the roof and balcony storefront system to ensure continuity of waterproofing. Future building envelope projects will include replacement of waterproofing at the plaza level and new glazing at the lobby and courtyard windows when the Museum closes for major revitalization of the building systems.

PROGRESS TO DATE:

A study of the building envelope was completed in FY 2017, followed by testing in FY 2018 to obtain additional information. Construction drawings were completed in January of 2020.

IMPACT OF DELAY:

Continued corrosion of the exterior panel attachment system puts the panels at risk of becoming detached and falling to the plaza below, causing a public safety hazard. Water damage to the collections on the fourth floor could result if the roof replacement is delayed any longer.

PROJECT TITLE: Modernize Elevators
INSTALLATION: Hirshhorn Museum and Sculpture Garden (HMSG)
LOCATION: Washington, DC

| | |
|--|-----------------|
| <u>FY 2022 COST ESTIMATE (Thousands of Dollars):</u> | \$700* |
| <u>PRIOR-YEAR FUNDING:</u> | <u>\$3,400*</u> |
| Total | \$4,100* |

* Does not include funding in Facilities Planning and Design

BUILDING BACKGROUND:

The Hirshhorn Museum and Sculpture Garden (HMSG), located on the National Mall, is the Smithsonian's Museum of modern and contemporary art and was designed by architect Gordon Bunshaft, FAIA, of Skidmore, Owings, and Merrill. The HMSG opened to the public in 1974. The building is cylindrical in shape, 231 feet in diameter, and raised 14 feet above a paved plaza, on four concrete piers. The building is clad with precast concrete panels with crushed pink granite aggregate. The center of the drum is a circular courtyard with a large, shallow, bronze fountain. The Museum building has four above-ground stories and a lower level below the plaza that surrounds the building.

PROJECT JUSTIFICATION:

The passenger and freight elevators at the Museum are more than 20 years past their life expectancy and frequently break down. Parts are becoming obsolete or difficult and expensive to obtain, which creates a delay in repairs. There is only one passenger elevator and one freight elevator, with no redundancy if an elevator breaks down.

PROJECT DESCRIPTION:

The Smithsonian requests \$700,000 in FY 2022 to modernize the elevators at the HMSG. This is a multi-year funded project that begins in FY 2021. Major steel parts in the hoist-way will remain, but the controls, motors, and cabs will be replaced. The elevators and machine rooms will be brought up to current building safety codes, and the passenger elevator will comply with Americans with Disabilities Act standards.

PROGRESS TO DATE:

A Vertical Transportation Study was funded in FY 2018 and is now completed. This study was a comprehensive analysis of the deficiencies of the current elevators, the escalators, and the loading dock lifts. The design documents for the elevator replacement were completed in July of 2020. Escalator repair and replacement of the loading dock lifts will be separate projects.

IMPACT OF DELAY:

A continued delay in modernizing the elevators poses the risk of more frequent breakdowns with longer repair times. The passenger elevator is the only way that visitors with strollers and people with disabilities can reach the galleries on the lower level, second, and third floors. Also, a functional freight elevator is essential for moving art and for the daily operations of the Museum.

PROJECT TITLE: Revitalize Sculpture Garden and Tunnel
INSTALLATION: Hirshhorn Museum and Sculpture Garden (HMSG)
LOCATION: Washington, DC

FY 2022 COST ESTIMATE (Thousands of Dollars): \$9,000*

FUTURE-YEAR FUNDING: \$8,950*

Total \$17,950*

* Does not include funding in Facilities Planning and Design

BUILDING BACKGROUND:

The Hirshhorn Museum and Sculpture Garden (HMSG), the Smithsonian Institution’s Museum of modern and contemporary art, was designed by architect Gordon Bunshaft, FAIA, of Skidmore, Owings, and Merrill, and opened to the public in 1974. The Museum is located at the northwest corner of 7th Street and Independence Avenue, SW, and the Sculpture Garden is north of the Museum across Jefferson Drive. The building is cylindrical in shape, 231 feet in diameter, and raised 14 feet above a paved plaza, on four concrete piers. The building is clad with precast concrete panels with crushed pink granite aggregate. The center of the drum is a circular courtyard with a large, shallow, bronze fountain. The Museum building has four above-ground stories and a lower level below the plaza that surrounds the building. The Sculpture Garden occupies 1.56 acres on the north side of Jefferson Drive, and is connected to the Museum plaza by a tunnel below the street. Between 1977 and 1981, Lester Collins was charged with transforming Bunshaft’s original design for the Sculpture Garden into the current blended plan, which focused on improved functionality and accessibility. Around the same time, the tunnel below Jefferson Drive was closed to pedestrians, and fitted out to house the Museum’s art education center.

PROJECT JUSTIFICATION:

The exposed aggregate walls of the Sculpture Garden are degrading due to “concrete disease” caused by additives commonly used in concrete during the period of construction. The garden floods after significant rain events due to a lack of adequate stormwater drainage. The tunnel below Jefferson Drive lacks adequate waterproofing and is prone to leaks. In addition, the current configuration of the garden does not suit the programmatic needs of the Museum for the display of large-scale artworks or for performance art.

PROJECT DESCRIPTION:

The Smithsonian requests \$9.0 million in FY 2022 to revitalize the Sculpture Garden. This is part of a multi-year project that will continue until FY 2024. The concrete perimeter retaining walls will be reconstructed, and new walls will be built along the garden’s interior. Accessible entries to the garden will be provided from both the Mall and Jefferson Drive. The structure of the tunnel below Jefferson Drive will be properly waterproofed and reopened to pedestrian traffic between the Sculpture Garden and the Museum plaza. Improved stormwater management will alleviate the flooding problem.

The HMSG has commissioned the world-renowned artist Hiroshi Sugimoto as the “Design Architect” to reimagine the HMSG Sculpture Garden. The revitalized Sculpture Garden will incorporate design characteristics from both Gordon Bunshaft’s original design and Lester Collins’s revision. There will be more flexible and responsive exhibition spaces for contemporary art installations, site-specific installations, and live performances. An enlarged pool in the central space will incorporate a stage for performance art, and an enlarged gallery area in the west section of the garden will enable the Museum to display larger works of art for which space is not currently available. On the east side of the garden, the renovated walls will create intimate gallery areas more suitable for the display of the Museum’s significant collection of bronze sculptures.

PROGRESS TO DATE:

The design for the garden was 35 percent complete in June of 2020, and the construction documents are expected to be completed in April of 2021.

IMPACT OF DELAY:

Delaying the revitalization of the Sculpture Garden will allow the concrete walls to continue to decay and leave the art in the garden at risk of repeated flooding. It would also leave the tunnel walls and roof prone to further damage from water infiltration. Longer term, the Hirshhorn Museum building is slated for revitalization, and postponing the garden revitalization project would put the start of that project in jeopardy because the limited size of the site prevents both projects from happening simultaneously.

PROJECT TITLE: Renovate Exhibit and Sign Shop Office Space
INSTALLATION: Hirshhorn Museum and Sculpture Garden (HMSG)
LOCATION: Washington, DC

FY 2022 COST ESTIMATE (Thousands of Dollars): \$550*

* Does not include funding in Facilities Planning and Design

BUILDING BACKGROUND:

The Hirshhorn Museum and Sculpture Garden (HMSG), the Smithsonian Institution's Museum of modern and contemporary art, was designed by architect Gordon Bunshaft, FAIA, of Skidmore, Owings, and Merrill, and opened to the public in 1974. The Museum is located at the northwest corner of 7th Street and Independence Avenue, SW, and the Sculpture Garden is north of the Museum across Jefferson Drive. The building is cylindrical in shape, 231 feet in diameter, and raised 14 feet above a paved plaza, on four concrete piers. The building is clad with precast concrete panels with crushed pink granite aggregate. The center of the drum is a circular courtyard with a large, shallow, bronze fountain. The Museum building has four above-ground stories and a lower level below the plaza that surrounds the building.

PROJECT JUSTIFICATION:

The exhibit and facilities management office space is inadequate to accommodate the current staff needed to manage the Museum. The space needs to be expanded, asbestos removed, and proper ventilation installed for the safety of the staff.

PROJECT DESCRIPTION:

The Smithsonian requests \$550,000 to renovate the exhibit and facilities management staff office to expand capacity. Work includes demolition, limited removal of asbestos-containing materials, and construction of the new office areas, along with the associated electrical and heating, ventilation, and air-conditioning (HVAC), and other engineering work.

PROGRESS TO DATE:

The design for the project is under way, and the construction documents will be completed in FY 2021.

IMPACT OF DELAY:

Delaying the project will leave both the exhibition and facilities management staff in less than adequate space. This is especially relevant given the current need for social distancing of employees because of COVID-19 safety restrictions, which the new workplan can better accommodate.

PROJECT TITLE: Modernize Electronic Security System
INSTALLATION: Hirshhorn Museum and Sculpture Garden (HMSG)
LOCATION: Washington, DC

FY 2022 COST ESTIMATE (Thousands of Dollars): \$1,500*

* Does not include funding in Facilities Planning and Design

BUILDING BACKGROUND:

The Hirshhorn Museum and Sculpture Garden (HMSG), the Smithsonian Institution's Museum of modern and contemporary art, was designed by architect Gordon Bunshaft, FAIA, of Skidmore, Owings, and Merrill, and opened to the public in 1974. The Museum is located at the northwest corner of 7th Street and Independence Avenue, SW, and the Sculpture Garden is north of the Museum across Jefferson Drive. The building is cylindrical in shape, 231 feet in diameter, and raised 14 feet above a paved plaza, on four concrete piers. The building is clad with precast concrete panels with crushed pink granite aggregate. The center of the drum is a circular courtyard with a large, shallow, bronze fountain. The Museum building has four above-ground stories and a lower level below the plaza that surrounds the building.

PROJECT JUSTIFICATION:

The building's electronic security systems are reaching the end of their useful life expectancy and need to be upgraded to meet current Smithsonian security standards.

PROJECT DESCRIPTION:

The Smithsonian requests \$1.5 million to upgrade electronic security systems to meet current security standards. The Hirshhorn's electronic security systems modernization project will include fiber-optic infrastructure, data-gathering panels, network video recorders (NVRs), access readers, cameras, intercoms, and intrusion-detection devices.

PROGRESS TO DATE:

Design work will be completed in FY 2021.

IMPACT OF DELAY:

Delaying the project will leave the Hirshhorn with security devices which are near the end of their useful life, making them more prone to failure. It will also leave the building out of compliance with current Smithsonian and industry best practice security standards.

PROJECT TITLE: Refurbish Elevators and Escalator
INSTALLATION: Quadrangle
LOCATION: Washington, DC

| | |
|--|--------------|
| <u>FY 2022 COST ESTIMATE (Thousands of Dollars):</u> | \$1,000 |
| <u>PRIOR-YEAR FUNDING:</u> | <u>\$600</u> |
| Total | \$1,600 |

BUILDING BACKGROUND:

The Quadrangle Building, which includes the National Museum of African Art, the Arthur M. Sackler Gallery, and the Ripley Education Center, is a three-story, underground building that opened to the public in 1987. There are pavilion entrances to the three facilities located in the Haupt Garden, the structure's green roof. The 389,000-square-foot building was designed by Shepley, Bullfinch, and Abbott, architects.

PROJECT JUSTIFICATION:

The building's elevators and escalators are original to the building and more than 30 years old. Although the elevators used by the visiting public have been upgraded, those in staff areas have not, nor has the public escalator. The escalator and the staff elevators break down with increasing frequency, inconveniencing both visitors and staff.

PROJECT DESCRIPTION:

The Smithsonian requests \$1.0 million in FY 2022 to complete the refurbishment of the Quadrangle elevators and escalator.

PROGRESS TO DATE:

The escalator refurbishment will begin in FY 2021.

IMPACT OF DELAY:

If not funded, the required equipment upgrades will be further postponed, increasing the probability of catastrophic failure of these essential systems.

PROJECT TITLE: Replace Gallery Lighting
INSTALLATION: Donald W. Reynolds Center (DWRC)
LOCATION: Washington, DC

| | |
|--|----------------|
| <u>FY 2022 COST ESTIMATE (Thousands of Dollars):</u> | \$3,500 |
| <u>PRIOR-YEAR FUNDING:</u> | <u>\$8,000</u> |
| Total | \$11,500 |

BUILDING BACKGROUND:

Originally constructed as the Patent Office Building in 1840, the Donald W. Reynolds Center is an excellent example of a Greek Revival public office building. The South Wing is the original building and is distinguished by a monumental Greek Doric-style portico. The East, West, and North Wings, added between 1852 and 1867, expanded the building to occupy two entire blocks between 7th and 9th Streets and between F and G Streets NW, in Washington, DC. The total gross square footage is 669,931 square feet. A major renovation of the building was completed in 2006 by Hartman Cox. In 2007, the center courtyard was enclosed by a glass canopy designed by Norman Foster.

PROJECT JUSTIFICATION:

The track lighting at the Reynolds Center overheats, causing a hazardous situation. Repairing the track requires replacement parts; however, the current type of track lighting used is no longer being manufactured and parts are no longer available for repairs. Track lighting throughout the building must be replaced. The new light-emitting diode (LED) fixtures will provide greater flexibility and improved energy efficiency.

PROJECT DESCRIPTION:

The Smithsonian requests \$3.5 million in FY 2022 to continue replacing the existing track lighting in the galleries, and other locations at the Reynolds Center, with a new LED track lighting system. This is a multi-year funded project that began in FY 2019 and will be completed in FY 2022.

PROGRESS TO DATE:

Design for the new lighting system was completed in March of 2019 and installation of the new LED fixtures began the same year. A detailed schedule was developed for the sequence of work in the galleries and has been coordinated with exhibit dates and museum programs. The project is on schedule and is expected to remain within the budget allocated.

IMPACT OF DELAY:

Without the funds requested, there could be damage to the collections and safety risks to staff and visitors, due to fire hazards. Sensors have been installed to provide a warning that the light track is overheating but the risk needs to be eliminated by replacing the track and fixtures.

PROJECT TITLE: Tupper, Replace and Reinforce Library Roof
INSTALLATION: Smithsonian Tropical Research Institute (STRI)
LOCATION: Panama

| | |
|--|---------------|
| <u>FY 2022 COST ESTIMATE (Thousands of Dollars):</u> | \$700* |
| <u>FUTURE-YEAR FUNDING:</u> | <u>\$300*</u> |
| Total | \$1,000* |

* Does not include funding in Facilities Planning and Design

BUILDING BACKGROUND:

The Tupper Center’s Library Building was built in the 1980s as part of the Tupper Campus Complex. It has served for many years as one of the most complete and diverse libraries in the world for tropical biology publications, with enormous historical and scientific research value. The building is made up of two main wings: the library-reading and office area, and the storage-deposit area for books, other publications, and special collections.

PROJECT JUSTIFICATION:

Preservation of this facility and the publications within it is essential to STRI’s historical mission. Maintenance repairs have continued through the years to stop water from leaking into the reading space wing, but the roof material and its entire construction is reaching the end of its projected life.

PROJECT DESCRIPTION:

The Smithsonian requests \$700,000 in FY 2022 to begin replacing and reinforcing the library roof. The project will also require a structural evaluation of the existing framing system, which will support the new roofing material.

PROGRESS TO DATE:

A scope of work for design services is being prepared.

IMPACT OF DELAY:

Delaying this project will increase the need for costly emergency and temporary repairs to keep the roof from leaking. Water leakages create safety hazards to STRI’s staff and visitors and could damage precious historical and research publications and books inside the building.

PROJECT TITLE: Replace MMT Building Control System Drives (AZ)
INSTALLATION: Smithsonian Astrophysical Observatory (SAO)
LOCATION: Amado, Arizona

FY 2022 COST ESTIMATE (Thousands of Dollars): \$1,000*

* Does not include funding in Facilities Planning and Design

PROJECT BACKGROUND:

SAO's Fred Lawrence Whipple Observatory in Arizona conducts world-renowned astrophysical research from the MMT (Multiple Mirror Telescope) building on the summit of Mt. Hopkins. In order to track the celestial firmament, the MMT Observatory uses a 6.5m-diameter reflecting telescope located in a co-rotating enclosure. The telescope and building, or enclosure, are not mechanically coupled together, and each has its own dedicated motion control system. The building is estimated to weigh 600 tons and is supported by four bogies that roll on a circular steel track. The approximately 40-year-old wheel, drive, and braking system is no longer manufactured, and the current system is at the end of its service life.

PROJECT DESCRIPTION:

The Smithsonian requests \$1.0 million in FY 2022 to refurbish the wheel-and-drive system. Most of the electronic components used on the existing building drive system are obsolete and no longer supported. While much effort has been made to maintain an adequate inventory of spare parts, the MMT is now in a situation where certain components, such as the original type of drive amplifiers, are no longer available. As a result, to maintain telescope operation for the next 25 years, the building drive system should be modernized. However, the modernization work should include replacing all of the servo-control electronics, direct-current (DC) rectifiers, and amplifiers located in the building drive control rack. The replacement is also expected to include the existing DC motors, tachometers, and brakes, but not necessarily gearboxes or drive wheels. A rigorous preventive maintenance program has been followed to extend the life of the system components, and the gearboxes and wheel assemblies are believed to be in good condition. However, the purchase of a spare gearbox is required to ensure overall system reliability.

PROGRESS TO DATE:

The design work will be completed in FY 2021.

IMPACT OF DELAY:

If the wheel-drive system fails, scientific operations at the MMT will come to a grinding halt, and valuable cutting-edge astrophysical research will cease. Telescope time is reserved years in advance so any shutdown would significantly delay the research of renowned scientific organizations around the world.

PROJECT TITLE: Stabilize Road at Fred L. Whipple Observatory (AZ)
INSTALLATION: Smithsonian Astrophysical Observatory (SAO)
LOCATION: Amado, Arizona

| | |
|--|-----------------|
| <u>FY 2022 COST ESTIMATE (Thousands of Dollars):</u> | \$800* |
| <u>PRIOR-YEAR FUNDING:</u> | \$2,500* |
| <u>FUTURE-YEAR FUNDING:</u> | <u>\$2,400*</u> |
| Total | \$5,700* |

* Does not include funding in Facilities Planning and Design

PROJECT BACKGROUND:

The Smithsonian Astrophysical Observatory (SAO) is located at the summit of Mt. Hopkins, at an elevation of 8,550 feet, reachable only by Mt. Hopkins Road, a 12-mile-long, unimproved, single-lane access road. The Smithsonian built the road more than 50 years ago to accommodate traffic by SAO research faculty, staff, and students, as well as contractors and some members of the public. Telescopes are sited on the summit peaks. SAO activities on Mt. Hopkins require access to and from its facilities at the Base Camp (located at 4,500 feet) and the summit to conduct basic operations, research, and educational activities that form its core mission.

PROJECT DESCRIPTION:

The Smithsonian requests \$800,000 in FY 2022 to continue stabilizing the road and replacing the metal culverts with concrete culverts to mitigate life-safety issues. The surface of the single-lane road is largely unpaved, outsloped to the canyons 1,300 feet below, and is uneven with numerous switchbacks. Several sections are sloped at a 24-percent grade, which is well beyond the anticipated capability of most drivers, standard vehicles, and pedestrians. Most crucially, in addition to ongoing repair and replacement/extension of guardrails, SAO has identified six sections of the road which have been stabilized against collapse by 60–70-year-old landing mats and steel cables. There has been significant movement and rupture of this system that must be corrected immediately. In addition, the road has numerous metal drainage culverts close to the 13-kilovolt (KV) power line that services the summit. These culverts require frequent clean-out operations, during which the power to the mountain is shut off because of their proximity to the power line. This is also why the metal culverts are being replaced with concrete ones.

PROGRESS TO DATE:

Project design is complete. Construction for the first four of the prioritized six sections was completed in FYs 2019–2020. The requested funds will continue to stabilize sections five and six as well as replace guardrails and culverts.

IMPACT OF DELAY:

Until funding is available to complete the necessary road work, SAO staff, visitors, and scientists will continue to face increased life-safety risks when driving to and from the Observatory.

PROJECT TITLE: SMA Summit Building Refurbishment (HI)
INSTALLATION: Smithsonian Astrophysical Observatory (SAO)
LOCATION: Mauna Kea, Hawaii

FY 2022 COST ESTIMATE (Thousands of Dollars): \$2,000*

* Does not include funding in Facilities Planning and Design

PROJECT BACKGROUND:

The Submillimeter Array (SMA) is the world's first imaging interferometric telescope to operate in the major atmospheric windows from 0.3 mm to 1.3 mm. Water vapor in the Earth's atmosphere absorbs much of the light at the wavelengths observed by the SMA, which is why the Observatory is located at the summit of Mauna Kea, 13,368 feet above sea level. This location is usually above more than 90 percent of the water vapor in the atmosphere. The array consists of eight 6-meter movable antennas which can be positioned in different locations to provide the highest angular resolution that is equivalent to a huge single antenna with a diameter of 0.5 km (0.3 miles) across. The SMA control building was constructed in 1992 with a gross exterior area of 3,561 square feet of interior space. Adjacent to the control building is the SMA Antenna Maintenance Building, commonly referred to as the SMA Hanger. The gross exterior area of this facility is 3,022 square feet. Together, these structures support the science that investigates the mysteries of dying stars, star formation, the solar system, and the center of our own Milky Way galaxy.

PROJECT DESCRIPTION:

The Smithsonian requests \$2.0 million in FY 2022 to refurbish the summit facility building envelope and interior. The facility is nearly 20 years old and many of the building skin fasteners are failing, and the exterior has also deteriorated. The ridge cap on the roof requires repair and the fall-protection anchors there will need to be upgraded to meet current safety code requirements. Interior refurbishment will include enclosing an office area under the hangar mezzanine for technicians, installing new carpet and flooring, repainting the interior, repairing cracks near the galley window, and replacing control room seals.

PROGRESS TO DATE:

Project design is scheduled to begin and be completed in FY 2021.

IMPACT OF DELAY:

If not funded, the delay will cause this state-of-the-science research center to deteriorate further, requiring more expensive repairs to be made later and putting important scientific research at risk. In addition, there is a life-safety issue for personnel who need to access the roof and ridge cap atop the building.

PROJECT TITLE: Install Roof Platform at SMA Control Building (HI)
INSTALLATION: Smithsonian Astrophysical Observatory (SAO)
LOCATION: Mauna Kea, Hawaii

| | |
|--|--------------|
| <u>FY 2022 COST ESTIMATE (Thousands of Dollars):</u> | <u>\$300</u> |
| Total | \$300 |

PROJECT BACKGROUND:

The Submillimeter Array (SMA) is the world's first imaging interferometric telescope to operate in the major atmospheric windows from 0.3 mm to 1.3 mm. Water vapor in the Earth's atmosphere absorbs much of the light at the wavelengths observed by the SMA, which is why the Observatory is located at the summit of Mauna Kea, 13,368 feet above sea level. This location is usually above more than 90 percent of the water vapor in the atmosphere. The array consists of eight 6-meter movable antennas which can be positioned in different locations to provide the highest angular resolution that is equivalent to a huge single antenna with a diameter of 0.5 km (0.3 miles) across. The SMA control building was constructed in 1992 with a gross exterior area of 3,561 square feet of interior space. Adjacent to the control building is the SMA Antenna Maintenance Building, commonly referred to as the SMA Hanger. The gross exterior area of this facility is 3,022 square feet. Together, these structures support the science that investigates the mysteries of dying stars, star formation, the solar system, and the center of our own Milky Way galaxy.

PROJECT DESCRIPTION:

The Smithsonian requests \$300,000 in FY 2022 to create a safe access walkway and platform on the roof, which will include railings and all associated code-compliant harness attachment points. Presently, there is no safe access to the equipment on the high-pitched roof of the SMA Control Building directly over the maintenance hangar. The SMA facility, located at 13,492 feet above sea level, is subject to very extreme and suddenly changing climate conditions which include gale-force winds and heavy ice. Personnel attempting to service this equipment are at a significant risk to their personal safety.

PROGRESS TO DATE:

Project design is scheduled to begin and be completed in FY 2021.

IMPACT OF DELAY:

A delay will impose life-safety risks to SAO/Smithsonian staff who maintain the equipment on the roof and the personnel who maintain the roof.

PROJECT TITLE: Consolidate Maintenance Facilities
INSTALLATION: Smithsonian Environmental Research Center (SERC)
LOCATION: Edgewater, Maryland

| | |
|--|-----------------|
| <u>FY 2022 COST ESTIMATE (Thousands of Dollars):</u> | \$4,100* |
| <u>FUTURE-YEAR FUNDING:</u> | <u>\$5,500*</u> |
| Total | \$9,600* |

* Does not include funding in Facilities Planning and Design

PROJECT BACKGROUND:

Expansion of the SERC facilities during the last decade has increased the Center's campus-wide maintenance needs and placed an increasing burden on the existing facilities maintenance resources. This need was identified by the Smithsonian's Office of Facilities Management and Reliability (OFMR) in 2004 and validated again in the 2008 SERC Master Plan. This need must now be addressed to support existing facilities as well as future mission-critical initiatives.

PROJECT DESCRIPTION:

The Smithsonian requests \$4.1 million in FY 2022 to begin construction of the facility, which will consolidate the grounds maintenance functions (previously at the Research Core) along the Dock Road location, allowing de-intensification of the Research Core, and to prepare the site by installing utilities, lighting, staging areas, communications, and stormwater management systems. The project will also renovate the auto-shops and hazmat functions. In addition to reducing utility and maintenance costs, the project will improve maintenance response times, enhance physical safety, build future flexibility, increase the lifespan of equipment, support sustainable operations, streamline operations, and increase productivity.

PROGRESS TO DATE:

Project design is complete. Construction documents were completed in April of 2021 and procurement is expected to begin in the first quarter of FY 2022.

IMPACT OF DELAY:

The impact of a delay will be continued loss of productivity, more deterioration of equipment and structures, longer response times to requests for service, and an increased cost of all maintenance activities at SERC.

PROJECT TITLE: Improve Site Infrastructure at Waterfront Complex
INSTALLATION: Smithsonian Environmental Research Center (SERC)
LOCATION: Edgewater, Maryland

| | |
|--|-----------------|
| <u>FY 2022 COST ESTIMATE (Thousands of Dollars):</u> | \$1,200* |
| <u>FUTURE-YEAR FUNDING:</u> | <u>\$1,200*</u> |
| Total | \$2,400* |

* Does not include funding in Facilities Planning and Design

PROJECT BACKGROUND:

The SERC master plan, completed in 2008 and updated in 2019, outlines a broad strategy for development through a network of connected spaces or “nodes” across the site, and provides a development strategy for the campus spanning a 20-year period between 2008 and 2028, including the Waterfront complex.

PROJECT DESCRIPTION:

The Smithsonian requests \$1.2 million in FY 2022 to continue implementing the master plan as revised in 2019 for the Waterfront complex. The project includes plans to improve access to the Reed Center, as well as parking, landscape, and infrastructure enhancements, and an expansion of the existing boat ramp.

PROGRESS TO DATE:

The concept and design development are planned to begin in FY 2021.

IMPACT OF DELAY:

A delay of the project will impair accessibility to the Reed Center and limit access to the entire Waterfront complex.

PROJECT TITLE: Renovate Facilities and Infrastructure, GCREW Site
INSTALLATION: Smithsonian Environmental Research Center (SERC)
LOCATION: Edgewater, Maryland

FY 2022 COST ESTIMATE (Thousands of Dollars): \$500*

Total \$500*

* Does not include funding in Facilities Planning and Design

PROJECT BACKGROUND:

Located south of the main SERC complex, the Global Change Research Wetland (GCREW) site's ongoing mission is to unravel the complex ecological processes which help stabilize coastal marshes as they respond to global environmental change. This 70-hectare brackish marsh is home to several long-term collaborative experiments designed to predict what the future holds for coastal wetland ecosystems as they adapt to an accelerated rise in sea levels. The operations site is quite primitive, consisting of a double-wide building that only provides an office and a small space for research equipment storage. Access to the operations facility is difficult and the building does not have a bathroom due to the lack of a septic system.

PROJECT DESCRIPTION:

The Smithsonian requests \$500,000 in FY 2022 to modify the operations building by increasing its office space and storage capacity for research equipment, as well as to install a septic system and a permanent bathroom for Smithsonian staff and visitors.

PROGRESS TO DATE:

The design for the project is planned for FY 2021.

IMPACT OF DELAY:

Due to limited storage space, research equipment items are stacked on top of one another or are stored outside in the weather where they are exposed to the salty marsh environment. Currently, the staff and visitors are using rented portable toilets. However, this situation has proven unsanitary for long-term use and is made worse by inconsistent support for sewer services from the rental contractor. Failure to fund this modest project will result in continued unsanitary working conditions for staff as well as visitors.

PROJECT TITLE: Construct Turbidity Filter System
INSTALLATION: Smithsonian Environmental Research Center (SERC)
LOCATION: Edgewater, Maryland

| | |
|--|---------------|
| <u>FY 2022 COST ESTIMATE (Thousands of Dollars):</u> | <u>\$500*</u> |
| Total | \$500* |

* Does not include funding in Facilities Planning and Design

PROJECT BACKGROUND:

As part of its sustainable practices, SERC plans to use a water reclamation system to provide non-potable water to serve the campus. Reclaimed water would be processed through a treatment system located at the core campus. The intent is to be able to pump this reclaimed water to a 300,000-gallon water storage tower located on the northern hillside. This non-potable water will be used for fire protection and other purposes not requiring potable water. Construction of the SERC fire-protection water-distribution system, which included the non-potable water tower, was completed in 2015 and a turbidity filter was added to the treatment system in 2018. Since that time, the performance of the turbidity filter has been insufficient for the reclaimed water to be used as intended. Because of these problems, and SERC's continued inability to use the system with the turbidity filter as currently installed, a study completed in October of 2019 assessed the existing water reclamation system and recommended improvements to the turbidity filter as part of the overall system.

PROJECT DESCRIPTION:

The Smithsonian requests \$500,000 in FY 2022 to construct a new cloth-disk filter facility adjacent to the existing ultraviolet (UV) disinfection building, and to install a new cloth-disk filtration system.

PROGRESS TO DATE:

A study to review the current water reclamation system and provide phased-approach recommendations was completed in October of 2019. Design for the project is planned for FY 2021 and the construction contract award is expected by the second quarter of FY 2022.

IMPACT OF DELAY:

Existing infrastructure is in place for non-potable use of reclaimed water. Delaying the installation of the new filtration system will require SERC to continue using potable water unnecessarily while the existing reclamation system remains idle.

PROJECT TITLE: Implement Campus Plan for Stormwater Management
INSTALLATION: Smithsonian Environmental Research Center (SERC)
LOCATION: Edgewater, Maryland

| | |
|--|-----------------|
| <u>FY 2022 COST ESTIMATE (Thousands of Dollars):</u> | \$450* |
| <u>PRIOR-YEAR FUNDING:</u> | \$400* |
| <u>FUTURE-YEAR FUNDING:</u> | <u>\$2,350*</u> |
| Total | \$3,200* |

* Does not include funding in Facilities Planning and Design

PROJECT BACKGROUND:

As identified in the 2008 SERC Comprehensive Facilities Master Plan, and pursuant to current federal Clean Water Act regulations, SERC has prioritized environmentally responsible stormwater management responses which are now reflected in the current Stormwater Management Campus Plan. This plan identified the Reed Education Center site, at the foot of the waterfront's Dock Road, as the highest priority. Continued flooding has entered the Reed Center, which is visited by 5,000–7,000 schoolchildren a year, and mitigation has been necessary to prevent mold from forming on surfaces.

PROJECT DESCRIPTION:

The Smithsonian requests \$450,000 in FY 2022 to continue implementing all of the required stormwater management mitigation measures necessary to protect the site and structures. This will involve relocating existing drainage patterns, constructing bioswales for erosion control, repaving to re-route stormwater away from the Reed Center, and repairing, removing, and replacing drains, culverts, and outfalls as necessary.

PROGRESS TO DATE:

The design for phase one is complete. The design for the follow-on project is expected to be complete by the winter of 2022.

IMPACT OF DELAY:

The impact of a delay will be continued deterioration of the Reed Education Center and risk to the visitors and staff using the structure, as well as continued non-compliance with current local government mandates.

PROJECT TITLE: Replace Museum Support Center (MSC) Lab Air-Handling Units
INSTALLATION: Suitland Collections Center (SCC)
LOCATION: Suitland, Maryland

FY 2022 COST ESTIMATE (Thousands of Dollars): \$4,500*

FUTURE-YEAR FUNDING: \$7,000*

Total \$11,500*

* Does not include funding in Facilities Planning and Design

BUILDING BACKGROUND:

The Museum Support Center (MSC) at the Smithsonian Institution’s SCC is the Smithsonian’s largest collections storage facility. Opened in 1983, the three-story structure has five separate storage areas (Pods), as well as laboratories and office areas to support the care and analysis of the Institution’s valuable collections of objects and documents. The storage pods and labs/offices are separated by an access corridor (known as the “Street”) that allows movement of objects within the building.

PROJECT JUSTIFICATION:

Eleven of the air-handling units (AHUs) supporting the heating, ventilation, and air-conditioning (HVAC) system in Pods 1, 2, and 4, the “Street,” and the lab/office areas are original to the building and have exceeded their useful lives. They urgently require replacement.

PROJECT DESCRIPTION:

The Smithsonian requests \$4.5 million in FY 2022 to begin replacing AHUs 1 and 2 in the labs. The AHU replacements will occur in four sequenced projects. Each multi-year project will be funded over two years. This is the second of the four sequenced projects. The AHUs will be replaced one at a time to ensure that the controlled collections environment is maintained in the facility throughout the process.

PROGRESS TO DATE:

The design for the pod AHU replacement was completed in June of 2017 and designs for the lab/office and “Street” AHU replacements were completed in January of 2020. The contract for construction of the first project (Replace Labs 3 and 4), funded in FYs 2020 and 2021, was awarded in September of 2020. The second project in the sequence (this project) replaces the AHUs in Labs 1 and 2 with construction funded in FYs 2022 and 2023. The third project will follow in FYs 2024 and 2025, with the fourth project funding requests planned for FYs 2026 and 2027.

IMPACT OF DELAY:

Failure to continue replacing the AHUs in a timely manner will put the facility’s collections environment, and the priceless objects contained in the pods, at risk.

PROJECT TITLE: Replace Botany Greenhouse at Museum Support Center (MSC)
INSTALLATION: Suitland Collections Center (SCC)
LOCATION: Suitland, Maryland

| | |
|--|-----------------|
| <u>FY 2022 COST ESTIMATE (Thousands of Dollars):</u> | \$5,000* |
| <u>PRIOR-YEAR FUNDING</u> | <u>\$2,000*</u> |
| Total | \$7,000* |

* Does not include funding in Facilities Planning and Design

BUILDING BACKGROUND:

The Museum Support Center (MSC) at the Smithsonian Institution's Suitland Collections Center (SCC) is the Smithsonian's largest collections storage facility. Opened in 1983, the three-story structure has five separate storage areas (Pods), as well as laboratories and office areas to support the care and analysis of the Institution's valuable collections of objects and documents.

PROJECT DESCRIPTION:

The Smithsonian requests \$5.0 million in FY 2022 to continue constructing the greenhouse complex on the Suitland Campus to accommodate the National Museum of Natural History's (NMNH) greenhouse contents, which will be displaced by the upcoming MSC Pod 6 addition.

PROGRESS TO DATE:

The design for this project is at the concept phase and will be completed in FY 2021.

IMPACT OF DELAY:

Failure to construct a new botany greenhouse before the existing NMNH greenhouse is demolished will result in the need to lease greenhouse space to continue NMNH's core mission of research into botany-related science, resulting in much higher collections storage costs.

PROJECT TITLE: Upgrade Electrical Feeders at Museum Support Center (MSC)
INSTALLATION: Suitland Collections Center (SCC)
LOCATION: Suitland, Maryland

FY 2022 COST ESTIMATE (Thousands of Dollars): \$1,500*

* Does not include funding in Facilities Planning and Design

BUILDING BACKGROUND:

The Museum Support Center (MSC) at the Smithsonian Institution's Suitland Collections Center (SCC) is the Smithsonian's largest collections storage facility. Opened in 1983, the three-story structure has five separate storage areas (Pods), as well as laboratories and office areas to support the care and analysis of the Institution's valuable collections of objects and documents.

PROJECT DESCRIPTION:

The Smithsonian requests \$1.5 million in FY 2022 to provide redundant electrical feeders to the MSC. Power outages are frequent at the MSC, especially during summer months when electrical demand is at a peak, so it is essential to have backup systems in place to ensure that controlled environmental conditions can be maintained to preserve the priceless National Collections.

PROGRESS TO DATE:

The design work for this project will be completed in FY 2021. A study is now under way to assess electrical requirements at MSC, including a determination of the power and size requirements of the feeders.

IMPACT OF DELAY:

Failure to provide redundant feeder cables will leave the MSC poorly protected, with just a single point of failure for the supply of electricity, thereby putting the priceless objects and specimens at risk.

PROJECT TITLE: Repair Miller-Fox Façades and Envelope
INSTALLATION: Cooper Hewitt, Smithsonian Design Museum (CHSDM)
LOCATION: New York, New York

| | |
|--|-----------------|
| <u>FY 2022 COST ESTIMATE (Thousands of Dollars):</u> | \$3,000* |
| <u>PRIOR-YEAR FUNDING:</u> | \$3,000* |
| <u>FUTURE-YEAR FUNDING:</u> | <u>\$2,000*</u> |
| Total | \$ 8,000* |

* Does not include funding in Facilities Planning and Design

BUILDING BACKGROUND:

The 64-room Carnegie Mansion, designed by the architectural firm of Babb, Cook & Willard, was built between 1899 and 1902. It was the first private residence in the United States to have a structural steel frame and one of the first in New York City to have a residential Otis passenger elevator (now in the collection of the Smithsonian's National Museum of American History). The Mansion was transferred to the Smithsonian in 1972 and the Museum opened there in 1976. In 1996, the adjacent Miller and Fox houses were acquired and a major renovation to link the houses to the Mansion was begun, creating the full campus that presently houses the Museum.

PROJECT JUSTIFICATION:

The façade elements of the Cooper Hewitt Miller and Fox houses have deteriorated and become a source of water leaks and structural concern. Stone coping and decorative elements require repair, and masonry mortar joints require repointing and, in some cases, rebuilding due to instability. Copper-clad bows and bays have aged and become a source of water and air leaks. Window frames have deteriorated from winter condensation and many if not all of them need to be repaired or replaced. Numerous water leaks have occurred in recent years, disrupting staff and putting collections at risk.

PROJECT DESCRIPTION:

The Smithsonian requests \$3.0 million in FY 2022 to continue the Miller-Fox façade and envelope repairs. Areas of highest risk to the public, staff, and collections will be prioritized. Because scaffolding will be necessary to perform the work, sequencing may be planned to repair one façade at a time. This will include brick and stone masonry repairs, fixing copper bows and sheathing for the bays, and window repairs/replacements.

PROGRESS TO DATE:

Construction documents for the repair of the copper façade bows and bays were completed in 2017, but execution was delayed due to the absence of funding. The architect-engineering (A-E) design contract for the masonry and window repairs was awarded in the second quarter of FY 2020 and design is expected to be completed in the second quarter of FY 2021. The combined scope documentation for the repair of the

Miller-Fox façade and envelope is planned to be procured for construction by the fourth quarter of FY 2021.

IMPACT OF DELAY:

Delaying this project further will continue to risk damage to collections areas and interruptions to staff operations due to water intrusion and condensation from uninsulated window units. In addition, failure to repair deteriorated stone and masonry elements, which are adjacent to the 90th Street sidewalks, will pose potential harm to pedestrians and present a public safety risk.

PROJECT TITLE: Restore Exterior Stonework and Courtyard Doors and Windows
INSTALLATION: Freer Gallery of Art
LOCATION: Washington, DC

FY 2022 COST ESTIMATE (Thousands of Dollars): \$2,000

Total \$2,000

BUILDING BACKGROUND:

The 225,000-square-foot Freer Gallery of Art was constructed between 1916 and 1923 on the National Mall to house the art collections of Charles Lang Freer. It was the first Smithsonian Museum devoted to the fine arts.

PROJECT JUSTIFICATION:

The building's stone façade and the bronze and glass doors at the courtyard require refurbishment. The stonework is soiled, chipped, and in need of selective repointing. The courtyard doors and windows require repairs to the bronze frames, hardware, and ornaments.

PROJECT DESCRIPTION:

The Smithsonian requests \$2.0 million in FY 2022 to begin refurbishing the stone façade and conserving the bronze doors and windows.

PROGRESS TO DATE:

The design specifications of the repairs will be completed in FY 2021.

IMPACT OF DELAY:

If not funded, the required repairs will be further postponed, resulting in the continued deterioration of these character-defining elements of the building, loss of original building masonry material, and potential water infiltration and interior damage.

PROJECT TITLE: Replace Fire-Alarm Panels
INSTALLATION: Multiple Facilities
LOCATION: Institution-wide

| | |
|--|----------------|
| <u>FY 2022 COST ESTIMATE (Thousands of Dollars):</u> | \$2,000 |
| <u>PRIOR-YEAR FUNDING:</u> | <u>\$8,000</u> |
| Total | \$10,000 |

PROJECT DESCRIPTION:

The Smithsonian requests \$2.0 million in FY 2022 to continue the phased replacement of MXL fire-alarm panels with XLS panels at the remaining buildings at the National Zoological Park's (NZIP) Rock Creek campus in Washington, DC, and at the Smithsonian Conservation Biology Institute (SCBI) in Front Royal, Virginia. Manufacture of the existing MXL fire-alarm panels has been discontinued and the parts will cease to be available once supplies run out. As many as 75 panels at various facilities throughout the Smithsonian were identified as requiring replacement. As the old MXL panels are replaced, they will be salvaged and used for spare parts until all panels are upgraded to the XLS models. The new fire-alarm panels can be linked to future mass-notification systems, which will permit the use of specific emergency notification messages about events such as active shooters, fires, and terrorist attacks in buildings throughout the Institution. With the funds received from FYs 2018 to 2020, panel replacements were completed at the Donald W. Reynolds Center (DWRC), have begun at the NZIP Rock Creek Park campus and at the Garber facilities on the Suitland Collections Center campus in Maryland. In FY 2021, fire-alarm panel replacements will begin at the National Museum of the American Indian in New York (NMAI-NY). In future years, the program will continue replacing fire-alarm panels at the National Air and Space Museum's Udvar-Hazy Center (NASM-UHC) in Chantilly, Virginia.

PROJECT TITLE: Building Projects Less than \$1,000,000 and Miscellaneous Repairs
INSTALLATION: Multiple Locations
LOCATION: Institution-wide

FY 2022 COST ESTIMATE (Thousands of Dollars): \$11,800

PROJECT DESCRIPTION:

This request includes smaller individual projects of less than \$1 million each, which usually involve replacement of individual systems or components and miscellaneous capital repairs needed for unplanned emergencies. In addition, this funding supports other Smithsonian operations, such as library support and security guard services, collections upgrades, electronic security system modernizations, and conservation and related studies.

PROJECT TITLE: Construction Supervision and Administration
INSTALLATION: Multiple Locations
LOCATION: Institution-wide

FY 2022 COST ESTIMATE (Thousands of Dollars): \$9,500

PRIOR-YEAR FUNDING: \$7,000

PROJECT DESCRIPTION:

This request is for the direct and indirect support required to perform specialized work associated with Facilities Capital Program projects. A total of 53 FTEs will be funded from the \$9.5 million. These positions will consist of permanent and temporary construction management and cost-engineering staff, program managers in branch offices, five contract specialists, a historic preservation specialist, term and temporary staff required to perform the specialized work associated with Facilities Capital Program projects, and additional staff necessary to begin creating the two newest museums mandated by Congress, the National Museum of the American Latino (NMAL) and the Smithsonian American Women's History Museum (SAWHM), with planning, design, site selection, programming, cost estimating, and environmental assessments.

Construction management staff supervise and administer construction contracts. They directly supervise construction contractors to ensure that quality work is performed safely, resolve issues that arise during construction, negotiate change orders, approve payments, and perform other administrative functions as contracting officers' technical representatives (COTRs). A central construction management administration section coordinates all funding, contract changes, technical issues, and project physical and fiscal closeout. Cost engineers develop Independent Government Estimates for every stage of project development, as well as analyze consultant-prepared construction cost estimates and contractor cost proposals for construction contract awards and change orders. On-site program managers ensure adequate oversight of projects in branch offices by using scope, schedule, and budget controls to directly lead major construction projects, as well

as many smaller projects. Contract specialists support the procurement of contract services to obtain the essential expertise required to execute the Facilities Capital Program, thereby ensuring the timely award of planning, design, and construction contracts. The historic preservation specialist supports capital projects for five National Historic Landmarks, as well as all of the historic Smithsonian buildings on the National Mall, thus fulfilling the federal requirements of the National Historic Preservation Act of 1966. This includes working with the Advisory Council on Historic Preservation; guiding the Section 106 federal program working with the Washington, DC Historic Preservation Officer; managing consultants who help prepare Historic Structures Reports and assist in the conservation of building materials; and providing general in-house architectural history research, technical reviews, and consultations.

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, such as those functions performed 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 approximately 15 percent of the following year's program is required each year. The funding requested for FY 2022 will complete designs for projects planned for FY 2023 and will provide necessary planning and design to the 35 percent stage for most projects included in the planned FY 2024 program. 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 **\$36,750,000** for planning and design in FY 2022. These funds will be used for site evaluations, early planning and support for two new museums established by Congress in the Consolidated Appropriations Act of 2021: the Smithsonian American Women's History Museum and the National Museum of the American Latino (\$2.5 million), as well as to complete design for the Revitalization of the Historic Core (\$4.0 million). In addition, these funds will continue design for the Hirshhorn Museum and Sculpture Garden's major revitalization (\$3.3 million) and complete design for the new Museum Support Center (MSC)-Suitland Pod 6 collections storage building (\$3.0 million), which will be shared with the National Gallery of Art under a special partnership agreement. These funds will also be used for other major revitalization projects at the National Museum of Natural History (NMNH, at \$2.0 million); the National Zoological Park (\$3.5 million); the National Museum of American History (\$500,000); and the National Museum of the American Indian (NMAI, at \$500,000); as well as to design the replacement of the Pod 5 roof at the MSC in Suitland, Maryland (\$500,000). Planning and design funds for security-related projects will include electronic security system modernizations at the Garber collections storage facilities in Suitland (\$1.0 million) and at the NMNH (\$2.0 million), as well as glass blast-mitigation projects at the Freer Gallery of Art (\$500,000) and the NMNH (\$500,000). In addition, this request includes funding for a preliminary design to expand collections storage spaces at the NMAI's Cultural Resource Center in Suitland, Maryland (\$1.0 million), preparations to update the master plan for the NMNH (\$1.0 million), and support for conducting an infrastructure and programmatic needs study for the National Postal Museum (\$750,000). These funds will also be used to design many smaller revitalization projects and security upgrades, and for space utilization studies and smaller master planning initiatives (\$10.2 million), which will help guide future facilities decisions and ensure more effective use of existing space.

CONSTRUCTION

PROJECT TITLE: Construct Pod 6
INSTALLATION: Suitland Collections Center (SCC)
LOCATION: Suitland, Maryland

| (Dollars in \$000s) | | | |
|-----------------------|--------------|--------------------------------|--------------------------------|
| | | Smithsonian Institution | National Gallery of Art |
| FY 2022 Cost Estimate | Design | \$3,000 | \$0 |
| FY 2022 Cost Estimate | Construction | \$7,600 | \$11,458 |
| Prior-Year Funding | Design | \$6,850 | \$2,610 |
| Future-Year Funding | Construction | \$74,290 | \$27,302 |
| TOTAL | | \$91,740 | \$41,370 |

BUILDING BACKGROUND:

The Paul E. Garber Facility in Suitland, Maryland is one of the first off-site storage spaces for the Smithsonian Institution’s (SI) collections. The structures were originally constructed as 10–15-year temporary buildings in the 1950s but have been in use ever since and still serve as one of the primary off-site collections storage spaces for the Smithsonian. A recent evaluation of SI collections storage space identified the Garber collections storage site as containing almost 50 percent of the Smithsonian’s unacceptable collections space. Much of the more than 384,700 square feet of space at Garber does not meet current building code requirements for structural support, is compromised by hazardous materials, and does not provide the proper environmental conditions to adequately preserve the nation’s priceless artifacts stored there.

Construction of Pod 6 is the last phase of the Museum Support Center (MSC) complex that began years ago at the Suitland Collections Center (SCC) campus and was one of the first projects identified in the SCC master plan. It is a three-story collections storage module to be built adjacent to the Pod 4 storage module and will be shared with the National Gallery of Art (NGA) under a special partnership agreement. Approximately two-thirds of the building will be occupied by the Smithsonian and one-third will be occupied by the NGA. Accordingly, the Smithsonian will fund two-thirds of the total design and construction costs and one-third of the costs will be funded by the NGA.

The completion of Pod 6 will allow Phase 1 of the 40-year SCC master plan to begin and will enable the Smithsonian to move a significant number of its remaining collections out of the aging buildings of the Paul E. Garber Facility in Suitland, Maryland, while also providing permanent state-of-the-art collections storage facilities for both the Smithsonian and the National Gallery of Art.

PROJECT JUSTIFICATION:

The 2014 Collection Space Framework Plan (CSFP) identified increasing collections storage capacity as a primary goal for the Smithsonian Institution to address unacceptable conditions, allow decompression, anticipate future growth, and reduce

reliance on and the recurring costs of leased collections storage space. Concurrently, the NGA identified a similar need for a permanent, non-leased, climate-controlled facility to properly house, process, and conserve their priceless works of art. Their existing off-site storage, leased from a third party, is not adequate in terms of quality or quantity, and can no longer accommodate the NGA's collections growth. Constructing the Pod 6 collections storage module will be a cost-effective first step in meeting these goals for both institutions.

PROJECT DESCRIPTION:

The Smithsonian requests \$7.6 million in FY 2022 to begin construction of Pod 6, the last phase of the MSC complex. A feasibility study completed in FY 2016 envisioned a 130,000-square-foot addition on the west side of the MSC. The module will include space for collections from the National Museum of American History, the National Museum of Natural History, the National Postal Museum, the Hirshhorn Museum and Sculpture Garden, and the NGA. This custom-designed module will give the Smithsonian Institution and the NGA a well-planned and executed structure that will provide conservation and preservation for some of the most significant historical artifacts and prestigious works of art in the world. The module will maintain these national treasures under strict and efficient humidity and temperature controls, thus ensuring their preservation for generations to come. Pod 6 will provide the Smithsonian with its verified need of 130,000 square feet of storage space while also providing the NGA with 52,860 square feet. Project design will be completed in November of 2021, with construction award expected in July of 2022.

PROGRESS TO DATE:

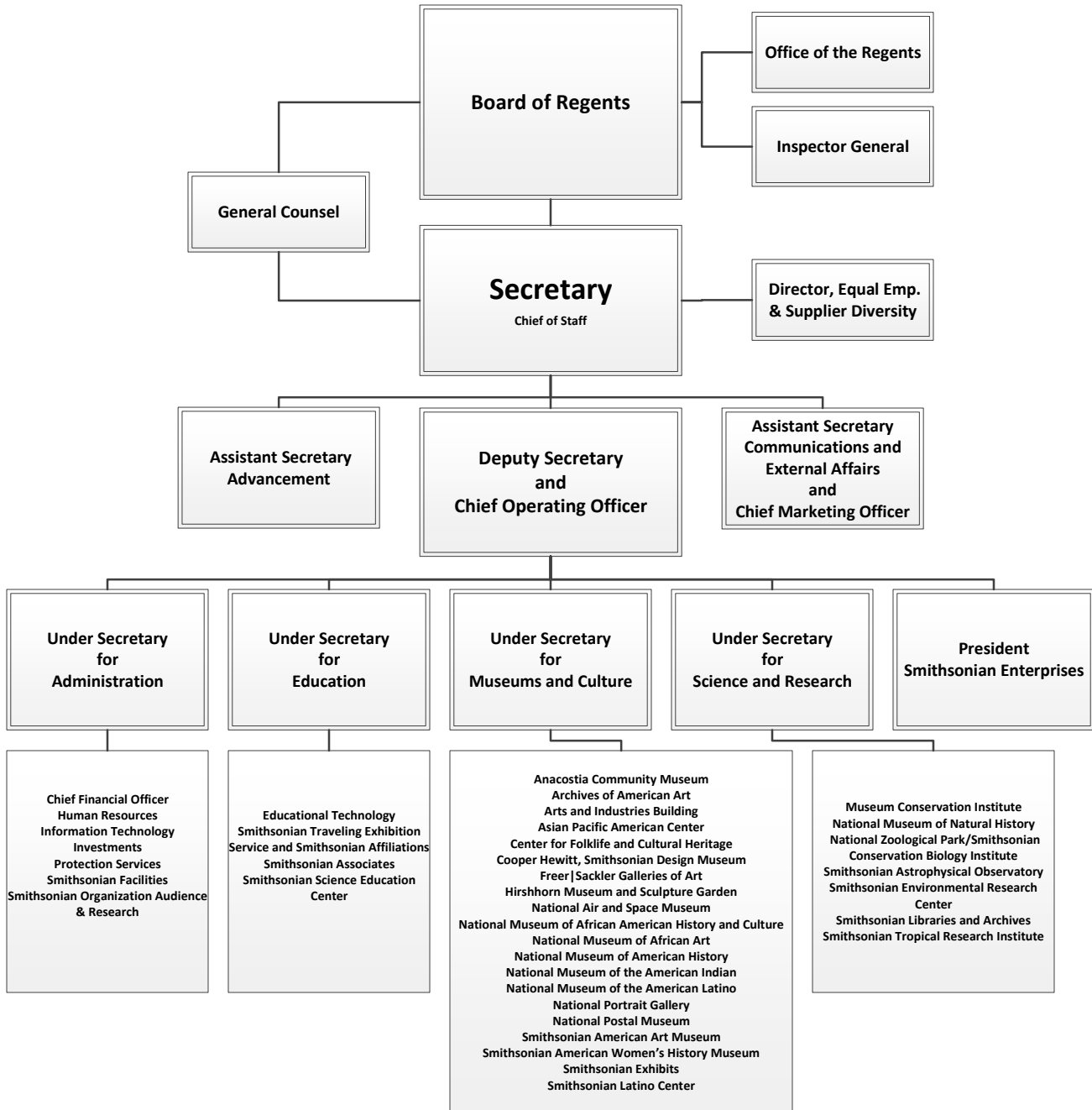
The schematic design phase is complete. A Project Definition Rating Index (PDRI) meeting was held in June of 2020, ensuring that the design is moving forward in accordance with the Construction Industry Institute (CII) standards. Thirty-five (35) percent design was submitted in September of 2020 and a Value Engineering (VE) study was completed in late 2020 to identify where cost savings and efficiencies can be realized. Sixty-five (65) percent design was received in April of 2021. In addition, a Memorandum of Understanding for the design, construction, and use of Pod 6 has been signed by the senior leaders of both the Smithsonian Institution and the National Gallery of Art.

IMPACT OF DELAY:

A delay of the Pod 6 project will require both the Smithsonian and the NGA to continue storing precious artifacts in areas with substandard conditions, such as the basements of the Mall museums which are often subject to flooding. In addition, without this new module, the NGA will need to continue leasing substandard collections storage space at a substantial cost. A delay will also set back other museum renovation projects because part of the intended use of Pod 6 is to provide swing space for collections which need to be stored during other essential construction projects. Finally, such a delay would impair the Smithsonian's private-sector fund raising because benefactors and donors are more likely to endow museums when they know there will be permanent safekeeping of their gifts for the public good.

SMITHSONIAN INSTITUTION

PROPOSED MARCH 2021



VISITS TO THE SMITHSONIAN
FYs 2016–2020

| <u>MUSEUM</u> | <u>FY 2016</u> | <u>FY 2017</u> | <u>FY 2018</u> | <u>FY 2019</u> | <u>FY 2020</u> |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| MALL | | | | | |
| SI Castle | 1,094,311 | 1,131,280 | 1,082,016 | 955,949 | 298,325 |
| A&I Building ¹ | 56,427 | 64,343 | 18,329 | 27,514 | 1,599 |
| Natural History | 6,942,276 | 6,103,289 | 5,177,357 | 4,228,940 | 1,465,253 |
| Air and Space | 7,354,352 | 7,120,722 | 6,382,500 | 3,869,046 | 749,475 |
| American Indian | 1,120,359 | 1,157,460 | 1,109,424 | 985,781 | 358,732 |
| Freer Gallery ² | 88,989 | 0 | 294,866 | 300,066 | 110,412 |
| Sackler Gallery | 187,473 | 195,051 | 142,548 | 153,213 | 57,339 |
| African Art | 209,239 | 165,343 | 144,175 | 130,414 | 51,270 |
| Ripley Center | 155,548 | 164,853 | 127,850 | 150,663 | 60,799 |
| American History | 3,849,115 | 3,914,493 | 4,026,325 | 3,061,396 | 741,281 |
| Hirshhorn | 647,915 | 1,097,847 | 808,498 | 982,816 | 299,090 |
| African American History and Culture ³ | 83,802 | 2,508,403 | 2,039,364 | 1,923,563 | 836,768 |
| OFF MALL | | | | | |
| DW Reynolds Center (AA/PG) | 1,224,282 | 1,242,707 | 2,118,434 | 1,819,355 | 706,155 |
| Anacostia | 28,458 | 31,775 | 37,562 | 11,038 | 10,064 |
| Cooper Hewitt | 408,846 | 355,672 | 316,732 | 267,948 | 99,284 |
| American Indian ⁴ (Heye Center/CRC) | 472,124 | 439,325 | 417,829 | 357,554 | 147,234 |
| Renwick | 829,735 | 371,201 | 795,523 | 430,101 | 134,210 |
| National Zoo | 2,593,559 | 2,025,148 | 1,664,579 | 1,885,116 | 816,703 |
| Postal | 359,562 | 470,723 | 525,168 | 489,120 | 189,021 |
| Udvar-Hazy Center | <u>1,592,416</u> | <u>1,570,706</u> | <u>1,546,780</u> | <u>1,317,082</u> | <u>589,120</u> |
| TOTAL^{5/6} | 29,298,788 | 30,130,341 | 28,775,859 | 23,346,675 | 7,722,134 |

¹ The Arts and Industries (A&I) Building closed to the public in January of 2004 and hosts special events only.

² The Freer Gallery closed to the public in January of 2016 for renovation and reopened in October of 2017.

³ The National Museum of African American History and Culture opened in September of 2016.

⁴ Includes the George Gustav Heye Center in New York City and the Cultural Resources Center (CRC) in Suitland, Maryland.

⁵ The drop in visits in FY 2019 is due to the federal Government shutdown (in January of 2019), the partial closure of the National Air and Space Museum for a major renovation project, and a revised counting methodology.

⁶ The drop in visits in FY 2020 is due to the COVID-19 Pandemic closures in March of 2020.

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 are raised 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 2020 Actuals | FY 2021 Estimates |
|---------------------------------|--------------------|----------------------|
| General Trust | 52.7 | 57.1 |
| Donor/Sponsor-Designated | 270.1 | 235.8 |
| Government Grants and Contracts | 106.4 | 112.0 |
| Total Available for Operations | \$429.2 | \$404.9 |

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; 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 2021 general trust funds total \$57,100,000. 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 2021 are projected to total \$235,800,000. 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 2021, Government grants and contracts are projected to total \$112,000,000. Of this amount, \$92,707,300 is planned for astrophysical research and development programs conducted 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 175-year history, although additional authority for many of the Institution’s programs and operations has been enacted over the years. Selected provisions of those statutes, along with selected provisions of the Smithsonian charter and prior-year appropriations acts, are cited below as authority for the Smithsonian Institution’s FY 2021 appropriations language included in the Department of Interior, Environment and Related Agencies Appropriations Act, 2021, Division G of the Consolidated Appropriations Act, 2021 (Public Law 116-260, approved December 27, 2020).

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 “(a)...the Board [of Regents] 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 “(b)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...”

20 U.S.C. § 80r-2(b)(1) provides that “(b) The purpose of the [National] Museum [of African American History and Culture] shall be to provide for-- (1) the collection, study and establishment of programs relating to African American life, art, history and culture that encompass [certain periods of the African American diaspora]...”

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 [of Regents] 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 “...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 “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 “...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 “(a)...the Board [of Regents] 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. § 80r-2(b)(3) provides that “(b) The purpose of the [National] Museum [of African American History and Culture] shall be to provide for-- ...(3) the collection and study of artifacts and documents relating to African American life, art, history, and culture...”

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 “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 “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 “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 “...the Smithsonian Institution shall collect, preserve, and exhibit military objects of historical interest and significance.”

20 U.S.C. § 80m(a)(2) provides that “(a)...the Board [of Regents] may--...(2)...display...any property of whatsoever nature acquired [for the Museum of African Art]...”

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. § 80r-2(b)(3) provides that “(b) The purpose of the [National] Museum [of African American History and Culture] shall be to provide for--...(3) the collection and study of artifacts and documents relating to African American life, art, history, and culture...”

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 “(a)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)(3) provides that “(a)...the Board [of Regents] may-- ... (3) conduct programs of research and education [in the Museum of African Art]....”

Section 2 of Public Law 114-151 (May 9, 2016), to protect and preserve international cultural property, provides that the Smithsonian Institution should be included in an interagency coordinating committee to...”consult with governmental and nongovernmental organizations, including... museums, educational institutions, and research institutions, and participants in the international art and cultural property market on efforts to protect and preserve international cultural property.”

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. § 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 “(a)...the Board [of Regents] 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 “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) provides that “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 “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, 20___, 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 herein;

10. of which not to exceed \$_____ for the instrumentation program, collections acquisition, exhibition reinstallation, 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; reinstallation of museum exhibitions; and the repatriation of skeletal remains.

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...”

13. *Provided further*, That the Smithsonian Institution may expend Federal appropriations designated in this Act for lease or rent payments, as rent payable to the Smithsonian Institution, and such rent payments may be deposited into the general trust funds of the Institution to be available as trust funds for expenses associated with the purchase of a portion of the building at 600 Maryland Avenue, S.W., Washington D.C. to the extent that Federally supported activities will be housed there: *Provided further*, That the use of such amounts in the general trust funds of the Institution for such purpose shall not be construed as Federal debt service for, a Federal guarantee of, a transfer of risk to, or an obligation of the Federal Government: *Provided further*, That

no appropriated funds may be used directly to service debt which is incurred to finance the costs of acquiring a portion of the building at 600 Maryland Avenue, SW, Washington DC, or of planning, designing, and constructing improvements to such building: *Provided further*, That any agreement entered into by the Smithsonian Institution for the sale of its ownership interest, or any portion thereof, in such building so acquired may not take effect until the expiration of a 30 day period which begins on the date on which the Secretary of the Smithsonian submits to the Committees on Appropriations of the House of Representatives and Senate, the Committees on House Administration and Transportation and Infrastructure of the House of Representatives, and the Committee on Rules and Administration of the Senate a report, as outlined in the explanatory statement described in section 4 of the Further Consolidated Appropriations Act, 2020 (Public Law 116-94; 133 Stat. 2536) on the intended sale.

Wording added by the Congress in Department of Interior, Environment and Related Agencies Appropriations Act, 2020, as enacted by Division D of the Further Consolidated Appropriations Act, 2020 (Public Law 116-94, approved December 20, 2019).

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 \$ _____ shall be for services as authorized by 5 U.S.C. 3109.

5 U.S.C. § 3109(b) provides that “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.”

Adjustments for FY 2021
(Dollars in Thousands)

| Unit | FY 2021 Enacted \$000s | Reorganizations and Reprogrammings \$000s | FY 2021 Revised Estimate \$000s |
|--|------------------------------|--|--|
| MUSEUMS AND RESEARCH CENTERS | | | |
| <i>Unlocking the Mysteries of the Universe</i> | | | |
| National Air and Space Museum | 20,945 | 0 | 20,945 |
| Smithsonian Astrophysical Observatory | 25,226 | 0 | 25,226 |
| Major Scientific Instrumentation | 4,118 | 0 | 4,118 |
| Universe Consortium | 184 | 0 | 184 |
| Subtotal, <i>Unlocking the Mysteries of the Universe</i> | 50,473 | 0 | 50,473 |
| <i>Understanding and Sustaining a Biodiverse Planet</i> | | | |
| National Museum of Natural History | 51,551 | 0 | 51,551 |
| National Zoological Park | 32,221 | 0 | 32,221 |
| Smithsonian Environmental Research Center | 4,616 | 0 | 4,616 |
| Smithsonian Tropical Research Institute | 15,266 | 0 | 15,266 |
| Biodiversity Consortium | 1,543 | 0 | 1,543 |
| Subtotal, <i>Understanding and Sustaining a Biodiverse Planet</i> | 105,197 | 0 | 105,197 |
| <i>Valuing World Cultures</i> | | | |
| Arthur M. Sackler Gallery/Freer Gallery of Art | 6,461 | 0 | 6,461 |
| Center for Folklife and Cultural Heritage | 3,565 | 0 | 3,565 |
| Cooper Hewitt, Smithsonian Design Museum | 5,190 | 0 | 5,190 |
| Hirshhorn Museum and Sculpture Garden | 5,007 | 0 | 5,007 |
| National Museum of African Art | 4,972 | 168 V | 5,140 |
| World Cultures Consortium | 792 | 0 | 792 |
| Subtotal, <i>Valuing World Cultures</i> | 25,987 | 168 | 26,155 |
| <i>Understanding the American Experience</i> | | | |
| Anacostia Community Museum | 2,698 | 0 | 2,698 |
| Archives of American Art | 1,987 | 0 | 1,987 |
| National Museum of the American Latino | 0 | 1,307 V | 1,307 |
| Smithsonian American Women's History Museum | 0 | 500 V | 500 |
| National Museum of African American History & Culture | 33,751 | 0 | 33,751 |
| National Museum of American History, Behring Center | 26,581 | 0 | 26,581 |
| National Museum of the American Indian | 34,654 | 237 V | 34,891 |
| National Portrait Gallery | 6,983 | 0 | 6,983 |
| National Postal Museum | 1,854 | 0 | 1,854 |
| Smithsonian American Art Museum | 10,938 | 0 | 10,938 |
| American Experience Consortium | 600 | 0 | 600 |
| Subtotal, <i>Understanding the American Experience</i> | 120,046 | 237 | 122,090 |
| TOTAL, MUSEUMS AND RESEARCH CENTERS | 301,703 | 2,212 | 303,915 |

Adjustments for FY 2021 (Dollars in Thousands)

| Unit | FY 2021 Enacted \$000s | Reorganizations and Reprogrammings \$000s | FY 2021 Revised Estimate \$000s |
|--|------------------------------|--|--|
| MISSION ENABLING | | | |
| Program Support and Outreach | | | |
| Outreach | 9,717 | 0 | 9,717 |
| Communications | 2,915 | 0 | 2,915 |
| Institution-wide Programs | 25,284 | -2,000 | 23,284 |
| Smithsonian Exhibits | 3,266 | 0 | 3,266 |
| Museum Support Center | 1,949 | 0 | 1,949 |
| Museum Conservation Institute | 3,459 | 0 | 3,459 |
| Smithsonian Libraries and Archives | 15,106 | 0 | 15,106 |
| Subtotal, Program Support and Outreach | 61,696 | -2,000 | 59,696 |
| Office of the Chief Information Officer | 55,845 | 0 | 55,845 |
| Administration | 38,366 | 25 | 38,391 |
| Office of the Inspector General | 4,184 | 0 | 4,184 |
| Facilities Services | | | |
| Facilities Maintenance | 115,261 | 0 | 115,261 |
| Facilities Operations, Security, and Support | 241,137 | -237 | 240,900 |
| TOTAL, MISSION ENABLING | 516,489 | -2,212 | 514,277 |
| GRAND TOTAL, SMITHSONIAN INSTITUTION | 818,192 | 0 | 818,192 |

Footnotes for FY 2021 Estimate:

- \1 Transfer of \$168,000 from Administration to the National Museum of African Art for operational support.
- \2 Transfer of \$807,000 from Administration (Smithsonian Latino Center) to establish the National Museum of the American Latino.
- \3 Transfer of \$1,000,000 from Institution-wide Programs to establish the National Museum of the American Latino.
- \4 Transfer of \$500,000 from the National Museum of the American Latino to Administration to provide central administrative support for the new Museum.
- \5 Transfer of \$1,000,000 from Institution-wide Programs to establish the Smithsonian American Women's History Museum.
- \6 Transfer of \$500,000 from the Smithsonian American Women's History Museum to Administration to provide central administrative support for the new Museum.
- \7 Transfer of \$237,000 from Facilities Operations, Security, and Support to the National Museum of the American Indian for security requirements in New York City.