



Smithsonian

Fiscal Year 2023

Submitted to the Committees on Appropriations
Congress of the United States

Smithsonian Institution

Fiscal Year 2023

Budget Justification to Congress

Revised
April 2022

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SMITHSONIAN INSTITUTION (SI)
Fiscal Year 2023 Budget Request to Congress
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A MOMENT OF PROMISE AND POSSIBILITY FOR THE SMITHSONIAN

Throughout history, some of our 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 coinciding with the growth of our global influence in the wake of World War II, and the expansion of voting rights and other civil liberties in response to the oppression of Jim Crow laws. Today, our country finds itself at another crossroads, facing the turning points of the global coronavirus pandemic, climate change, 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 keep 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, many 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 a duty to be an institution that transcends our physical location by reaching all Americans. This unique moment in our history has proven that we can 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, providing teachers, students, and scholars with more educational resources, and leading important discussions to examine this moment and help Americans everywhere navigate the "new normal" in our lives.

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. Even as medical experts and sound scientific data have informed our strategies for dealing with the pandemic, this moment has proven we are not standing still. Whether visitors are at our buildings or accessing us from their homes or schools, we will use our vast collections, research, data, and scholarship to improve communities locally and globally, and to fulfill the promise of our Strategic Plan's goals for "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 illuminated by the advent of the COVID-19 pandemic in early 2020. Although nothing replaces the authentic objects we display, we use all the digital tools available to us to ensure that our treasures still reach millions across the country and the globe who cannot visit us in person. In fiscal year (FY) 2021, for the first time, our websites received more than 200 million visitors. We have more than 19 million social media followers. The Smithsonian podcast *Sidedoor* is currently in its seventh season and has been downloaded more than 10 million times (and appears in the top 1 percent of podcasts as measured by average downloads) 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 34 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 nearly four million digital objects in our collections freely available for anyone to download, share, and reuse for any purpose. To date, people have viewed this content more than 125 million times and downloaded it nearly 8 million times, using our digital assets to explore, discover and create for themselves. Since the beginning of the pandemic, we have also seen a massive increase in the number of digital volunteers signing up to work at the Smithsonian Transcription Center. We now boast more than 56,000 active digital volunteers who transcribed 264,000 pages of archival material in FY 2021 alone.

Even with our building reopened to the public, the Smithsonian will continue to maximize our digital potential. We have created a new, Institution-wide Digital Steering Group that is developing concrete plans to make us a more virtual Smithsonian. In support of that goal, we hired a Head of Digital Transformation, the Smithsonian's first leadership role exclusively devoted to developing a pan-institutional digital strategy, to execute this plan. With her guidance, we will conceptualize, integrate and prioritize ongoing digital initiatives; consider and act on new and innovative ideas; and implement the cultural and structural reforms needed to support a "One Smithsonian" digital approach. By prioritizing innovative and ongoing digital initiatives, we will have a more expansive, integrated digital portfolio to reach audiences across the nation and around the world. It will allow people 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.

Expanding our reach also means looking beyond America's borders. As the world's largest museum, education, and research complex, we can engage audiences and populations across the globe. Today, the Smithsonian works in more than 100 countries and on every continent. We have active research and training facilities in Panama, Belize, and Kenya, where the next generation of global science and cultural scholarship intersects with and informs our own research programs at home. Through strong international collaborations and partnerships, the Smithsonian is helping to tackle some of the world's most pressing challenges: the climate crisis, global health, cultural conservation, and more. And in 2021, we launched our first-ever International Strategic Framework, setting a new course for international engagement to support the Smithsonian's global efforts.

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 where they live. Accordingly, we have launched several initiatives to help the public grapple with the nation's continuing racial divide. For example, *Our Shared*

Future: Reckoning with Our Racial Past, the first coordinated Smithsonian effort to explicitly address racism and racial equity, explores how Americans confront race, its impact on communities, and the way it shapes our nation's future. Since our first forum in August of 2021, the initiative has brought people together to talk, share, and learn from one another. In addition, the Smithsonian is continuing to help audiences explore how America's past informs its present, through exhibitions like *Make Good on the Promises: Reconstruction and Its Legacies* at the National Museum of African American History and Culture (NMAAHC) and *Food for the People: Eating and Activism in Greater Washington* at the Anacostia Community Museum (ACM).

The Smithsonian is also collecting contemporary items which deal 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 at this turning point in the life of our nation. The NMAAHC and the National Museum of American History (NMAH) are documenting the coronavirus pandemic for posterity and exploring how best to exhibit those collections. Those museums and the ACM are also collaborating to collect and preserve oral histories, homemade masks, and signs from Black Lives Matter protests in Lafayette Square Park, next to the White House, following George Floyd's tragic death at the hands of a police officer.

As an institution that represents all Americans, we also take seriously the need to encompass diversity, equity, accessibility, and inclusion (DEAI) within the walls of our museums, research centers, and educational facilities. That is why we are working diligently to find a Head Diversity Officer who has the deep background and expertise to show us how we can provide leadership in this important area. This person will help us develop a "One Smithsonian" strategy, serving as a resource to support individual unit efforts and facilitating internal conversations about how we can model best practices in DEAI among cultural institutions.

With a focus on our top priorities to drive large, visionary, interdisciplinary research 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 such as 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. By rigorously studying important societal issues and serving as a model for the civil discourse needed to address different points of view, we will stay abundantly relevant to the 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 (SAWHM) and the National Museum of the American Latino (NMAL). We have selected advisory boards for each Museum and recently named Jorge Zamanillo the founding director of NMAL even as we also start the process of searching for permanent leadership for SAWHM. In 2022, the *Molina Family Gallery* will open at the NMAH. Dedicated to recognizing Latino contributions to the United States, this gallery will serve as a preview to the NMAL. With the success of the NMAAHC, we have proven expertise in creating poignant, powerful museums that tell the American story through different lenses. These forthcoming museums will help the Smithsonian further reimagine what new cultural institutions look

like in a post-pandemic world, expand the American narrative, and be an even more responsive, representative institution to better serve our fellow citizens.

As the leader of an influential scientific, cultural, and educational complex, 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, a deadly virus, or support for democracy in general. The Smithsonian, as a gift to the United States, has an obligation to work for the common good by giving back value to our country and increasing the public's ability to understand our universe, our history, and our shared future.

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 bring our virtual educational offerings in art, history, culture, and science, technology, engineering, and mathematics (STEM) to every state nationwide and countries around the world. Each year, Smithsonian educators and Affiliates bring knowledge, stories, curricula, and inquiry-based lessons to more than 8 million learners around the globe.

Our Smithsonian Learning Lab website is an example of the kind of educational impact we made even when our buildings were closed due to the pandemic. In the first month of school closures in the spring of 2020, 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 behind 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. That is why the Smithsonian works to bridge the digital divide by providing no-tech educational resources to students across the country. In June of 2020, we began partnering with *USA Today* to create a series of learning packets that offers hands-on activities to help kids and adults explore STEM, the arts, and history. To date, more than 600,000 print activity guides for children have been delivered, prioritizing learners in areas deemed "technology deserts," and 3.7 million printed newspaper inserts have been distributed for intergenerational learning. To date, we have reached more than 40 states and U.S. territories through distribution sites which include the Boys and Girls Clubs of America, Smithsonian Affiliate museums, Meals on Wheels of America, and the *FUTURES* exhibition at the Arts and Industries Building. Digital copies for all the publications are also available for learners via the Smithsonian Learning Lab. Building on this progress, the next

USA Today insert will be distributed nationwide in March of 2022, featuring content from the Smithsonian American Women's History Initiative.

In the coming years, the Smithsonian will continue developing our STEM education offerings, particularly for those populations that have been underrepresented in science and technology. We are thrilled to begin the process of building the new Bezos Learning Center at the National Air and Space Museum. The Center will feature programming, activities, and lessons to encourage students to pursue innovation and explore careers in STEM fields, as well as provide resources for STEM educators. And to kick off Women's History Month in 2022, the Smithsonian is celebrating women and girls in STEM with the new exhibition *#IfThenSheCan*. The exhibition will display 120 statues of contemporary women innovators and role models to highlight the extraordinary contributions women have made to STEM and inspire the next generation of learners.

Based on our history and respected reputation, I plan to continue applying 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 challenging and difficult 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, 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. As an example, in September of 2021 we hosted the first annual Smithsonian Educator's Day, a free, virtual conference for educators and administrators from around the nation to share classroom innovations, best practices, and resources with one another.

As all these projects 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 to serve the American people.

Looking Ahead

In 2022, we look forward to several landmark events, exhibitions, and anniversaries which will continue to engage our public, inspiring curiosity and wonder. Opening in the spring of 2022 at the National Postal Museum, *Baseball: America's Home Run* will commemorate historic, culture-defining moments and bring a unique perspective to America's national pastime. In May, the 50th anniversary of the Smithsonian American Art Museum's Renwick Gallery will enable people to reflect on the importance and legacy of boundary-pushing creativity in contemporary arts and crafts. Later in 2022, the Smithsonian will celebrate the 50th anniversary of giant pandas at the National Zoo, where our scientists have been leaders in biology, conservation, and international collaboration to save those rare animals as well as other endangered species around the world.

I am also excited by the new leadership across the Smithsonian that will make all these efforts possible. In the past year we have welcomed new directors at the National

Museum of the American Indian, Cooper Hewitt, Smithsonian Design Museum, the National Zoo, Smithsonian Libraries and Archives, and the National Museum of African Art, as well as a new Under Secretary for Administration. This professional management team is helping reimagine and reshape the future of the Smithsonian.

The past two years have been a once-in-a-generation stress test for the American people as we have all had to deal with the uncertainty, anxiety, and fear of these multiple crises. Despite this, our difficult circumstances have reinforced what an amazing group of people we have at the Smithsonian.

In 2021, the Smithsonian celebrated its 175th anniversary. Since our founding in 1846, we have used our collections, scientific research, scholarship, and education to serve the American people and the citizens of the world. Rather than take the opportunity of an anniversary to look back, however, we chose to look ahead to what is possible. The Smithsonian of tomorrow will ensure every home and classroom has access to the digital content of our nation's priceless treasures. We will work together to serve our public more nimbly and more effectively. We will be a trusted source of knowledge that explores and grapples with what it means to be American. We will harness our institutional expertise to elevate science in the global discourse. And we will engage with educational systems throughout the country to build and enrich a national culture of learning that reflects the best of what the United States can achieve when we work together in pursuit of our dreams.

With the funds requested in our FY 2023 budget submission, the Institution will continue to address our aging infrastructure needs, plan for developing two new museums, advance groundbreaking scientific research, strengthen the Smithsonian's support for education for learners of all ages, and help all Americans engage in constructive and much-needed conversations about the many challenges our nation faces today. From addressing global climate change, to overcoming structural racism and finding ways for us to reconcile our differences, and supporting the very structure of democracy itself by serving as a role model for civil discourse, the Smithsonian will put its federal appropriation to good use for the benefit of all our fellow citizens.

I am convinced 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 continue to welcome everyone to learn, marvel, and imagine, using our creativity and intellectual capital for the good of society. I look forward to seeing this hallowed Institution's continuing transformation into a cauldron of ideas, innovation, and understanding that reaches more people and has greater impact than ever before. Though we have been through storms in the recent past, our shared future remains bright.

Lonnie G. Bunch III
Secretary
Smithsonian Institution

SMITHSONIAN INSTITUTION FY 2023 BUDGET REQUEST SUMMARY

Account	FY 2021 Enacted	FY 2022 Enacted	FY 2023 Request
Salaries and Expenses	\$818,192,000	\$852,215,000	\$909,500,000
Facilities Capital	<u>\$214,530,000</u>	<u>\$210,000,000</u>	<u>\$265,000,000</u>
Total	\$1,032,722,000	\$1,062,215,000	\$1,174,500,000

For FY 2023, the Smithsonian's total request to fund essential operating expenses, priority program increases, and revitalization of the Institution's physical infrastructure is **\$1,174.5 million**. The total amount includes **\$909.5 million** for Salaries and Expenses (S&E) and **\$265.0 million** for the Facilities Capital account. A detailed summary and table of the increases are presented on the following pages.

SALARIES AND EXPENSES

FIXED COSTS INCREASES (+\$26,250,000)

This budget request provides funds for the 2.7 percent pay raise effective in January of 2022, and the 4.6 percent pay raise effective in January of 2023. The request also provides funding for inflation-related increases in utilities, software licenses, and other operating costs. Details are provided in the S&E section..

PROGRAM CHANGES (+\$31,035,000)

This budget request for FY 2023 aligns the programmatic increases among the broad categories of the Smithsonian's Strategic Plan, thereby linking the funds directly to the achievement of the Institution's overall mission and strategic goals. Details of the programmatic increases are provided in the S&E section of this budget submission.

FACILITIES CAPITAL PROGRAM

The request for the Facilities Capital Program (**\$265,000,000**) is essential to diminish 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 enable the Facilities Capital Program to address the priority revitalization projects scheduled for FY 2023.

**SMITHSONIAN INSTITUTION
FY 2023 BUDGET SUMMARY
BY APPROPRIATION ACCOUNT**

SALARIES AND EXPENSES	FTEs	Amount
FY 2022 Enacted	4,080	\$852,215,000
<u>FIXED COSTS INCREASES</u>		26,250,000
Salaries and Related Costs	0	21,220,000
Utilities, Rent, Communications, and Other	0	5,030,000
<u>PROGRAM INCREASES</u>		
New Museums	20	4,000,000
National Museum of the American Latino	11	2,000,000
Smithsonian American Women’s History Museum	9	2,000,000
Enhanced Interdisciplinary Research	20	8,150,000
Research Support	20	8,150,000
Expand Digital Technologies	16	6,750,000
Digital Support	14	5,000,000
Education Support	2	1,750,000
Understand and Impact 21st Century Audiences	7	935,000
Visitor Engagement	5	635,000
Exhibit Support	2	300,000
Preserve Our Natural and Cultural Heritage	11	5,100,000
Animal Welfare	1	600,000
Facilities Operations	10	4,000,000
Security	0	500,000
Enable Cost-Effective and Responsive Administration	14	6,100,000
Information Technology Security	3	3,600,000
Operations Support	11	2,500,000
Program Increases	88	31,035,000
Total Increases	88	57,285,000
Total FY 2023 Salaries and Expenses	4,168	\$909,500,000

**SMITHSONIAN INSTITUTION
FY 2023 BUDGET SUMMARY
BY APPROPRIATION ACCOUNT**

FACILITIES CAPITAL	FTEs	Amount
Revitalization		
Smithsonian Institution Building (Castle)		55,000,000
National Air and Space Museum (NASM)		23,000,000
National Zoological Park		20,400,000
National Museum of Natural History		15,300,000
National Museum of American History		7,300,000
Hirshhorn Museum and Sculpture Garden		8,700,000
Smithsonian Tropical Research Institute		8,400,000
Suitland Collections Center		8,000,000
Smithsonian Environmental Research Center		5,900,000
Cooper Hewitt, Smithsonian Design Museum		3,500,000
National Museum of the American Indian		2,000,000
Smithsonian Astrophysical Observatory		1,800,000
National Museum of African American History & Culture		1,000,000
Quadrangle		1,000,000
Multiple Location Revitalization Projects		11,300,000
Construction Supervision and Management	53	<u>9,500,000</u>
Total Revitalization		182,100,000
Facilities Planning and Design		46,900,000
Construction — Museum Support Center, Pod 6		36,000,000
Total FY 2023 Facilities Capital Projects	53	\$265,000,000
FY 2023 REQUEST, ALL ACCOUNTS	4,221	\$1,174,500,000

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**SMITHSONIAN INSTITUTION
SALARIES AND EXPENSES (S&E)
FY 2023 Request**

SALARIES AND EXPENSES	FTEs	Amount
FY 2022 Enacted	4,080	\$852,215,000
<u>FIXED COSTS INCREASES</u>		26,250,000
Salaries and Related Costs	0	21,220,000
Utilities, Rent, Communications, and Other	0	5,030,000
<u>PROGRAM INCREASES</u>		
New Museums	20	4,000,000
National Museum of the American Latino	11	2,000,000
Smithsonian American Women’s History Museum	9	2,000,000
Enhanced Interdisciplinary Research	20	8,150,000
Research Support	20	8,150,000
Expand Digital Technologies	16	7,250,000
Digital Support	14	5,000,000
Education Support	2	1,750,000
Understand and Impact 21st Century Audiences	7	935,000
Visitor Engagement	5	635,000
Exhibit Support	2	300,000
Preserve Our Natural and Cultural Heritage	11	4,600,000
Animal Welfare	1	600,000
Facilities Operations	10	4,000,000
Security	0	500,000
Enable Cost-Effective and Responsive Administration	14	6,100,000
Information Technology Security	3	3,600,000
Operations Support	11	2,500,000
Program Increases	88	31,035,000
Total Increases	88	57,285,000
Total FY 2023 Salaries and Expenses	4,168	\$909,500,000

SMITHSONIAN INSTITUTION												
Unit Detail of the FY 2021 Revised, FY 2022 Enacted, FY 2022 Revised and FY 2023 Request (\$s in Thousands)												
Page #	FTE = Full-Time Equivalent	FY 2021		FY 2022		FY 2023		ANALYSIS OF CHANGE				
		Revised		Enacted		Request		(FY 2023 Increases)				
		FTEs	\$000	FTEs	\$000	FTEs	\$000	Pay & Benefits \$000	Rent & Utilities \$000	Fixed Other \$000	Program Change	
										FTEs	\$000	
	MUSEUMS AND RESEARCH CENTERS											
43	National Air and Space Museum	131	20,945	131	21,552	134	22,788	828	0	0	3	408
	<i>Digital Support</i>										2	270
	<i>Visitor Engagement</i>										1	138
51	Smithsonian Astrophysical Observatory	88	25,226	88	25,733	88	26,412	679	0	0	0	0
56	Major Scientific Instrumentation	0	4,118	0	4,118	0	4,118	0	0	0	0	0
37	Universe Consortium	0	184	0	184	0	184	0	0	0	0	0
61	National Museum of Natural History	274	51,551	277	53,435	277	55,239	1,804	0	0	0	0
67	National Zoological Park	199	32,221	203	33,655	204	35,388	1,133	0	0	1	600
	<i>Animal Welfare</i>										1	600
72	Smithsonian Environmental Research Center	34	4,616	34	4,759	34	4,934	175	0	0	0	0
75	Smithsonian Tropical Research Institute	191	15,266	191	15,643	191	16,176	533	0	0	0	0
37	Biodiversity Consortium	0	1,543	0	1,543	20	6,063	20	0	0	20	4,500
	<i>Forest/Marine GEO</i>										13	2,500
	<i>Climate Change Coordination</i>										2	1,000
	<i>Research Data Managers Support</i>										5	1,000
12	79 Arthur M. Sackler Gallery/Freer Gallery of Art	45	6,461	45	6,689	46	7,058	229	0	0	1	140
	<i>Visitor Engagement</i>										1	140
83	Center for Folklife and Cultural Heritage	17	3,565	17	3,637	17	3,938	101	0	200	0	0
	<i>Fixed Costs - Festival Security</i>									200		
88	Cooper Hewitt, Smithsonian Design Museum	36	5,190	37	5,417	38	5,687	170	0	0	1	100
	<i>Digital Support</i>										1	100
91	Hirshhorn Museum and Sculpture Garden	31	5,007	33	5,339	34	5,699	220	0	0	1	140
	<i>Digital Support</i>										1	140
96	National Museum of African Art	32	5,140	32	5,257	34	5,769	182	0	0	2	330
	<i>Digital Support</i>										2	330
37	World Culture Consortium	0	792	0	792	0	792	0	0	0	0	0
100	Anacostia Community Museum	20	2,698	21	2,873	21	2,949	76	0	0	0	0
103	Archives of American Art	17	1,987	17	2,023	17	2,097	74	0	0	0	0

SMITHSONIAN INSTITUTION													
Unit Detail of the FY 2021 Revised, FY 2022 Enacted, FY 2022 Revised and FY 2023 Request (\$s in Thousands)													
		FY 2021		FY 2022		FY 2023		ANALYSIS OF CHANGE					
		Revised		Enacted		Request		(FY 2023 Increases)					
								Pay & Benefits	Rent & Utilities	Fixed Other	Program Change		
Page #	FTE = Full-Time Equivalent	FTEs	\$000	FTEs	\$000	FTEs	\$000	\$000	\$000	\$000	FTEs	\$000	
	107	National Museum of African American History & Culture	145	33,751	148	34,853	148	35,767	914	0	0	0	0
	113	National Museum of American History, Behring Center	160	26,581	160	27,331	163	28,742	1,051	0	0	3	360
		<i>Digital Support</i>										3	360
	120	National Museum of the American Indian	190	34,891	190	35,680	190	36,762	1,082	0	0	0	0
	124	National Museum of the American Latino	5	1,307	17	8,324	28	10,392	68	0	0	11	2,000
		<i>New Museum Support</i>										11	2,000
	129	National Portrait Gallery	57	6,983	57	7,176	59	7,808	297	0	0	2	335
13		<i>Digital Support</i>										1	200
		<i>Visitor Engagement</i>										1	135
	136	National Postal Museum	6	1,854	8	2,105	8	2,160	55	0	0	0	0
	140	Smithsonian American Art Museum	90	10,938	90	11,263	91	11,861	448	0	0	1	150
		<i>Digital Support</i>										1	150
	145	Smithsonian American Women's History Museum	0	500	13	7,500	22	9,568	68	0	0	9	2,000
		<i>New Museum Support</i>										9	2,000
	37	American Experience Consortium	0	600	0	600	0	600	0	0	0	0	0
		Total for Museums and Research Centers	1,768	303,915	1,809	327,481	1,864	348,951	10,207	0	200	55	11,063

SMITHSONIAN INSTITUTION												
Unit Detail of the FY 2021 Revised, FY 2022 Enacted, FY 2022 Revised and FY 2023 Request (\$s in Thousands)												
		FY 2021		FY 2022		FY 2023		ANALYSIS OF CHANGE				
		Revised		Enacted		Request		(FY 2023 Increases)				
								Pay & Benefits	Rent & Utilities	Fixed Other	Program Change	
Page #	FTE = Full-Time Equivalent	FTEs	\$000	FTEs	\$000	FTEs	\$000	\$000	\$000	\$000	FTEs	\$000
	MISSION ENABLING											
	Program Support and Outreach											
150	Outreach	51	9,717	51	9,924	53	10,525	301	0	0	2	300
	Exhibit Support										2	300
155	Communications	18	2,915	18	2,982	20	3,297	93	0	0	2	222
	Visitor Engagement										2	222
159	Institution-wide Programs	0	23,284	0	15,734	0	23,934	0	0	0	0	8,200
	Digital Support Pool											3,050
	Research Program Initiatives Pool											3,650
	Education Initiatives Pool											1,500
168	Smithsonian Exhibits	28	3,266	29	3,498	29	3,627	129	0	0	0	0
171	Museum Support Center	18	1,949	18	1,991	18	2,044	53	0	0	0	0
173	Museum Conservation Institute	22	3,459	22	3,562	22	3,770	208	0	0	0	0
178	Smithsonian Libraries and Archives	106	15,106	107	15,956	108	16,935	579	0	300	1	100
	Fixed Costs - Library Subscription Inflation									300		
	Digital Support										1	100
	Subtotal, Program Support and Outreach	243	59,696	245	53,647	250	64,132	1,363	0	300	5	8,822
14	182 Office of the Chief Information Officer	107	55,845	107	59,388	110	65,895	895	0	2,012	3	3,600
	Fixed Costs - Communications									2,012		
	Information Technology Security										3	3,600
185	Administration	196	38,391	198	39,950	213	44,188	1,110	0	78	15	3,050
	Management Operations (Smithsonian Civil Program)										2	500
	Education Support Office of the Under Secretary of Education)										2	250
	Digital Support (Digital Transformation Office)										2	300
	Operations Support (Human Resources and Diversity)										9	2,000
	Fixed Costs - Annual Audit costs									78		
189	Office of the Inspector General	23	4,184	23	4,295	23	4,426	131	0	0	0	0
	Facilities Services											
191	Facilities Maintenance	470	115,261	470	116,917	470	119,258	2,341	0	0	0	0
193	Facilities Operations, Security, and Support	1,219	240,900	1,228	250,537	1,238	262,650	5,173	2,440	0	10	4,500
	Facilities Operations										10	4,000
	Utilities								2,440			
	Security										0	500
	Subtotal, Facilities Services	1,689	356,161	1,698	367,454	1,708	381,908	7,514	2,440	0	10	4,500
	Total for Mission Enabling	2,258	514,277	2,271	524,734	2,304	560,549	11,013	2,440	2,390	33	19,972
	SALARIES AND EXPENSES TOTAL	4,026	818,192	4,080	852,215	4,168	909,500	21,220	2,440	2,590	88	31,035

SALARIES AND EXPENSES

FY 2021 Enacted	\$818,192,000
FY 2022 Enacted	\$852,215,000
FY 2023 Request	\$909,500,000

For fiscal year (FY) 2023, the Smithsonian requests **\$909.5 million** in the Salaries and Expenses (S&E) account. Within the total increase requested, approximately 46 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 (+\$21,220,000) — The Institution requests an increase of \$ 21.2 million for higher salary and pay-related costs. The request funds the annualization of the 2.7 percent pay raise effective in January of 2022 and a 4.6 percent increase for a civilian pay raise in January of 2023.

Salary and Related Costs:

	<u>Request</u>
▪ Annualization of 2022 pay raise (1/4 year at 2.7%)	3,803,000
▪ Proposed 2023 pay raise (3/4 year at 4.6%)	17,710,000
▪ Workers' Compensation	<u>- 293,000</u>
Total	\$21,220,000

- **Annualization of the requested January 2022 Pay Raise of 2.7 percent (+\$3,803,000)** — This request funds the annualization of the enacted 2.7 percent pay raise in January of 2022 for the first quarter of FY 2023.

- **Funding of the proposed January 2023 Pay Raise of 4.6 percent (+\$17,710,000)** — This request funds the proposed 4.6 percent pay raise in January of 2023 for the last three quarters of FY 2023.

- **Workers' Compensation (-\$293,000)** — This supports the provisions of Section 8147(b) of Title 5, *United States Code*. The Workers' Compensation bill for FY 2023 is **\$2,419,000**, based on a Department of Labor invoice for costs incurred from July 1, 2020 through June 30, 2021. This represents a -\$293,000 decrease from the FY 2022 Workers' Compensation costs (\$2,712,000).

FY 2023 Increased Pay Costs (Dollars in Thousands)

Line Item	FY 2023 Pay Raise and FY 2022 Pay Annualization
National Air and Space Museum	828
Smithsonian Astrophysical Observatory	679
National Museum of Natural History	1,804
National Zoological Park	1,133
Smithsonian Environmental Research Center	175
Smithsonian Tropical Research Institute	533
Biodiversity Consortium	20
Arthur M. Sackler Gallery/Freer Gallery of Art	229
Center for Folklife and Cultural Heritage	101
Cooper Hewitt, Smithsonian Design Museum	170
Hirshhorn Museum and Sculpture Garden	220
National Museum of African Art	182
Anacostia Community Museum	76
Archives of American Art	74
National Museum of African American History & Culture	914
National Museum of American History, Behring Center	1,051
National Postal Museum	55
National Museum of the American Indian	1,082
National Museum of the American Latino	68
National Portrait Gallery	297
Smithsonian American Art Museum	448
Smithsonian American Women's History Museum	68
Outreach	301
Communications	93
Museum Support Center	53
Museum Conservation Institute	208
Smithsonian Libraries and Archives	579
Smithsonian Exhibits	129
Office of the Chief Information Officer	895
Administration	1,403
Workers' Compensation (Administration)	-293
Inspector General	131
Facilities Maintenance	2,341
Facilities Operations, Security, and Support	5,173
Total Pay-Related Costs	21,220

UTILITIES, POSTAGE, RENT, COMMUNICATIONS, AND OTHER FIXED COSTS (+\$5,030,000) — For FY 2023, the Institution requests an increase of \$5,030,000 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 2022 and 2023. The details that follow address the specific changes affecting the FY 2023 accounts.

**Federal Utilities, Postage, Rent, Communications, and
Other Fixed Costs
FYs 2022–2023**
(Dollars in Thousands)

	FY 2022 Estimate	FY 2023 Estimate	Change
Utilities:			
Electricity	20,707	20,921	214
Chilled Water	3,008	2,589	-419
Steam	8,169	7,844	-325
Natural Gas	3,284	3,332	48
DC Gov't Water/Sewer	8,775	11,679	2,904
Other Water and Fuel Oil	<u>1,240</u>	<u>1,258</u>	<u>18</u>
Subtotal, Utilities	45,183	47,623	2,440
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	24,396	26,408	2,012
Other Support	5,920	6,498	578
Total	\$125,930	\$130,960	\$5,030

UTILITIES (+\$2,440,000) — 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 (+\$214,000)** — 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 2023 include an anticipated 3.1 percent increase for PEPCO along with minor increases throughout the Institution and the change to electricity from chilled water at the National Air and Space Museum.
- **Chilled Water (-\$419,000)** — 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. This decrease is due to the change from chilled water to electricity at the National Air and Space Museum (NASM).
- **Steam (-\$325,000)** — 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 (+\$48,000)** — 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 (+\$2,904,000)** — 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 2021.
- **Other Water and Fuel Oil (+\$18,000)** — 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 2023.

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 2023.

RENTAL SPACE (\$0) — No increase is requested for rental space because of the purchase of an Administration Headquarters Building in the Washington, DC area and the subsequent savings expected in FY 2023. These savings will offset any anticipated escalation costs in other leased properties in FY 2023.

COMMUNICATIONS (+\$2,012,000) — The communications base supports the operations of the Institution's voice and data telecommunications infrastructure upgrade and maintenance. This request covers increases in the cost of infrastructure service for our Voice-over Internet Protocol (VoIP) system and increased license costs for our financial system tied to the overall budget of Institution; an increase to the Endpoint Replacement Program to address the increased cost of the switch to laptops to enable the flexible workplace; and funding to replace uninterruptable power supplies (UPS) and batteries in communications closets that are operating beyond the manufacturer's recommended lifespan and that can lead to safety hazards. Also included are increases for higher license maintenance costs to support our facilities management systems and funds for license costs to support various centrally provided software for all staff.

The requested increases will enable high-tech solutions which have been implemented to support telework for staff and distance education for the public as well as employees. The increases will keep business-critical systems 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. This will result in more cost-effective and efficient workspaces.

OTHER SUPPORT (+\$578,000) — An additional \$578,000 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.

In addition, the Institution requests an increase (+\$200,000) to support the Smithsonian Folklife Festival's compliance with National Park Service (NPS) regulations in its management of the National Mall. Because of the continued issues of security on and around the Mall, the NPS has called for stronger security measures for the Festival, including greater numbers of officers, specialized armed officers, and enhanced security camera surveillance. The Institution must cover these necessary costs to maintain public safety and security.

Finally, the Institution requests an increase (+\$78,000) 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 2023 S&E PROGRAM CHANGES

	FY 2022 Baseline (\$000s)	FY 2023 Request (\$000s)	FY 2023 FTE Changes
New Museums		+4,000	+20
• National Museum of the American Latino	8,324	+2,000	+11
• SI American Women’s History Museum	7,500	+2,000	+9
Enhanced Interdisciplinary Research		+8,150	+20
• Scientific Research	76,981	+8,150	+20
Digital Support and Education		+6,750	+16
• Digital Support	19,769	+5,000	+14
• Education Support	22,653	+1,750	+2
Understand and Impact 21st Century Audiences		+935	+7
• Visitor Engagement	31,743	+635	+5
• Exhibit Support	68,987	+300	+2
Preserve Our Natural and Cultural Heritage		+5,100	+11
• Animal Welfare	10,503	+600	+1
• Facilities Operations	169,107	+4,000	+10
• Security	94,150	+500	0
Enable Responsive Administration		+6,100	+14
• Information Technology Security	50,609	+3,600	+3
• Operations Support	96,007	+2,500	+11
Total S&E Program Increases		+\$31,035	+88

Note: For a complete list of program categories, see page 35.

NEW MUSEUMS

<u>Category</u>	FY 2023 Program Increase (\$000s)	FY 2023 FTEs Increase
NEW MUSEUMS		
• National Museum of the American Latino	+2,000	+11
• Smithsonian American Women’s History Museum	+2,000	+9
Total Increase	+\$4,000	+20

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 so all people can better understand how it reflects the depth, complexity, and promise of the American experience, and also

to serve as a national forum for collaborating on and celebrating Latino American history and culture through educational and social institutions.

More specifically, the NMAL 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, as well as to serve as a gateway for visitors to view Latino exhibitions, collections, and programming at other Smithsonian Institution facilities and museums nationwide.

In FY 2022, the resources from the Latino Initiatives Pool (\$5,000,000) were transferred to the NMAL line item to support the new Museum.

The FY 2023 budget estimate includes a program request of 11 FTEs and \$2,000,000 to continue recruiting and selecting initial personnel; forming planning and coordination teams to develop exhibitions, public programs, education, research, collections acquisition, technology, and capital fund raising; implementing a site-selection evaluation process; and developing the capacity for administrative operations.

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 documenting 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 will document the full spectrum of the experiences of women in the nation, represent a diverse range of viewpoints, experiences, and backgrounds, more accurately depict the history of our country, and add value to the Smithsonian Institution for the American people.

In FY 2022, the resources from the American Women’s History Initiatives Pool (\$5,000,000) were transferred to the SAWHM line item to support the new Museum.

The FY 2023 budget estimate includes a program request of 9 FTEs and \$2,000,000 to continue recruiting and selecting initial personnel; forming planning and coordination teams to develop exhibitions, public programs, education, research, collections acquisition, technology, and capital fund raising; implementing a site-selection evaluation process; and developing the capacity for administrative operations.

ENHANCED INTERDISCIPLINARY RESEARCH

The Smithsonian’s FY 2023 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 Institution will continue implementing its Strategic Plan, with the following requested increases for Enhanced Interdisciplinary Research:

<u>Category</u>	FY 2023 Programs Increase (\$000s)	FY 2023 FTEs Increase
ENHANCED INTERDISCIPLINARY RESEARCH		
Research Program Initiatives	+3,650	0
Biodiversity Research	+4,500	+20
• Global Earth Observatories	+2,500	+13
• Climate Change Monitoring	+1,000	+2
• Research Data Management	+1,000	+5
Total Increases	+\$8,150	+20

Research Program Initiatives — FY 2023 Increase: (+\$3,650,000)

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 essential financial support necessary to execute world-class science. Priority will be given to high-risk, high-reward activities that build technical capabilities within the Smithsonian’s established areas of research. This program will help the Institution recruit and retain the finest scientific talent, support postdoctoral researchers, and 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 and volcanic eruptions). The funds will be distributed by both competitive and more 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 funds to address diversity and inclusion and to account for the impact of COVID-19 telework on researchers just starting their careers, especially women.

Examples of relevant research 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 affects all these areas. In addition, in the areas of astronomy and planetary science, the research would include how to 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 on this request is provided in the Institution-wide section of this budget submission.

Biodiversity Research — FY 2023 Increase: (+\$4,500,000, +20 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. The Institution's assets include one of the world's largest groups of scientists working on the biology of whole plants and animals, a network of Earth observation platforms and field stations, and huge collections of specimens and libraries of resources. Additional information on this request is provided in the Enhanced Research Initiatives section of this budget submission.

- **Global Earth Observatories, ForestGEO and MarineGEO — FY 2023 Increase: (+\$2,500,000, +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 2023, the Institution requests funding (+\$1,500,000 and +5 FTEs) for the Forest GEOs. 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 development through Fellowships and training to build the human resources needed to solve the global forest crisis. Together, these steps will provide an exciting 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 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 expand the network beyond the initial sites.

- **Climate Change Coordination and Monitoring — FY 2023 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 meet 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.

- **Research Data Management — FY 2023 Increase: (+\$1,000,000, +5 FTEs)**

The Smithsonian manages a vast array of increasingly critical environmental data that are comparable to the Institution's world-renowned collections of objects. Global demand for Smithsonian environmental data has grown rapidly to help natural resource managers and policy makers quantify the pace and scale of climate change and develop strategies for ecosystem-based mitigation and adaptation. These unique data resources allow scientists and the public to track and propose nature-based solutions to the extraordinary declines in biodiversity of key regions and the entire planet. When harmonized and synthesized, these data resources have the potential to provide crucial insights into the function, health, and sustainability of ecosystems through time, their resilience to human impacts, and the tipping points beyond which ecosystems permanently change. The Smithsonian has the obligation to share its data according to **FAIR** data standards that meet the emerging principles of [Findability](#), [Accessibility](#), [Interoperability](#), and [Reusability](#).

To meet this challenge, the Smithsonian requests **+\$1,000,000 and +5 FTEs** for essential resources to curate, analyze, and synthesize large volumes of data in diverse formats, such as image and acoustic data, instrument data streams, including real-time data from laboratory and field instruments, biodiversity and genomic data, and environmental DNA. This will ensure the Institution is supporting the conservation of biodiversity to support cultures, livelihoods, and social equity.

EXPAND DIGITAL SUPPORT AND EDUCATION

<u>Category</u>	FY 2023 Programs Increase (\$000s)	FY 2023 FTEs Increase
Digital Support		
• Digital Support Pool	+3,050	0
• Digital Unit Support	+1,950	+14
Education Support		
• Education Initiatives Pool	+1,500	0
• Education Unit Support	+250	+2
Total Increase	+\$6,750	+16

Digital Support — FY 2023 Increase: (+\$5,000,000 and +14 FTEs)

The Institution requests an increase of **\$5,000,000 and 14 FTEs** 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 digitization pool (\$3,550,000) and additional staff embedded in key units (\$1,950,000 and 14 FTEs) to support key priorities and digital efforts.

The additional resources and staff will also support website modernization and digital transformation efforts. The funds requested will help support an Institution-wide digital strategy for the audiences we seek to serve and will make our content more accessible, relevant, and impactful. It is essential to have the support staff who can better leverage data and technology to serve the public with our digital resources. Our physical museums and research centers attract tens of thousands of visitors every year, yet a strengthened virtual strategy provides an opportunity to reach even more parts of the country.

Specifically, the additional funds will enable the Institution to advance its goal of ensuring that every household and classroom can access the Smithsonian’s digital content. To make this possible, we envision a unified virtual initiative that will allow audiences to experience our world-renowned scholarship, research, and collections in ways that are not only relevant and meaningful but are also in line with the expectations of the public in the 21st century. This will allow us to provide equitable access to content organized around themes such as democracy, race, innovation, identity, and climate change. By building a foundation of digital capabilities centered on the customer experience, the Smithsonian will develop Web enhancements to meet the needs of the public and provide the greatest educational impact in line with the Institution’s mission “for the increase and diffusion of knowledge.”

The systems supported by this request are the infrastructure that enables the Smithsonian’s collections and other content to be made available to our digital

audiences. The funding is therefore essential to achieve the Institution's transformation goals and strategic priorities.

- **Digital Support Pool**

Specifically, to expand digitization and open access, and increase the type and volume of content we manage and make available to the world, the Smithsonian is requesting that a Digital Support Pool (**+\$3,050,000**) be established in the Institution-wide line item, details of which can be found in the Institution-wide Programs section of this budget submission. The funding requested will enable development of a digital platform and software, support the ramp-up of mass digitization, informatics, and expansion of the 3D digitization infrastructure, and provide the necessary staffing of key program managers. This request will also support the central digital transformation function, digital platforms which enable the sharing of our collections, the Open Access Initiative, the digitization program, and the Transcription Center that has blossomed into a highly publicized program with thousands of digital volunteers worldwide. In addition, the funding will support data science by expanding the information management infrastructure.

- **Digital Unit Support**

The Institution also requests additional staff embedded in key units (**+\$1,950,000 and +14 FTEs**) to support our digitization efforts. This will allow several units to participate in digital content production and more effectively transform their workflows to reach expanded and underserved audiences. The following units 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); the National Museum of African Art (2 FTEs) and the Head Transformation office (2 FTEs). Additional justification for this request is provided in the respective unit budget submissions.

Education Support — FY 2023 Increase: (+\$1,750,000 and +2 FTEs)

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

These 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 pandemic-related school closures in 2020, 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, and design, as well as science, technology, engineering, and mathematics (STEM). The Smithsonian open access platform lets people download, create, and reuse nearly three million 2D and 3D

digital items from the national collections. In addition, *Sidedoor*, our Webby-nominated podcast, tells special behind-the-scenes stories of interest to learners of all ages.

With a keen focus on K–12 education, the Smithsonian will continue developing online materials and educational content to bring the depth and breadth of the Institution to classrooms across America. The Institution 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.

One of the main ways the Smithsonian achieves a profound impact is by reaching students, teachers, and scholars with educational resources in the learning and discovery spaces in our museums and research centers. 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, the Institution cannot rely on digital learning alone. Many young people, especially those who have been underserved, lack access to a computer or reliable internet service. That is why the Smithsonian is 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.

By building on our history and respected reputation, the Institution plans to apply innovative thinking to be a national leader, not only in lifelong learning, but also in pre-K–12 education. 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, the Institution is 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 millions of digitized resources and support teaching and learning. Smithsonian educators and experts use this platform to co-create content with pre-K–12 teachers nationwide. Free tools like the Learning Lab help extend the reach of the Smithsonian to

communities 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 across the country.

- **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 a reality for learners who have often been left behind. 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 COVID-19 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 better serve the students and teachers wherever they engage in distance learning.

- **Education Unit Support**

The Institution also requests **\$250,000 and 2 FTEs** to support the Education Initiatives Pool that will be strategically placed in the office of the Under Secretary for Education. These resources will be essential to administer programs and serve schools and educators nationwide. Additional justification for this request is provided in the Administration budget submission.

UNDERSTAND AND IMPACT 21st CENTURY AUDIENCES

<u>Category</u>	FY 2023 Programs Increase (\$000s)	FY 2023 FTEs Increase
UNDERSTAND AND IMPACT 21st CENTURY AUDIENCES		
• Visitor Engagement	+635	+5
• Exhibit Support	+300	+2
Total Increase	+\$935	+7

Visitor Engagement — FY 2023 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 our many visitors.

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

The Institution accomplishes these goals by increasing access to Smithsonian facilities and enhancing the experiences 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 having a disability (a percentage that is likely to rise as the U.S. population ages), it is increasingly important for the Smithsonian to 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 aids, to help the Smithsonian better serve a broader population of Americans with disabilities, the Institution requests additional resources to handle the 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 support the following units: the Freer and Sackler 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 on this request is provided in the respective unit budget submissions.

Exhibit Support — FY 2023 Increase: (+\$300,000, +2 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 them.

The requested budget increase will 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 go to the Smithsonian Traveling Exhibition Service (+2 FTEs). Additional information on this request is provided in the Outreach section in this budget submission.

PRESERVE OUR NATURAL AND CULTURAL HERITAGE

<u>Category</u>	FY 2023 Programs Increase (\$000s)	FY 2023 FTEs Increase
PRESERVE OUR NATURAL AND CULTURAL HERITAGE		
▪ Animal Welfare	+600	+1
▪ Facilities Operations and Support	+4,000	+10
▪ Security	+500	+0
Total Increase	+\$4,600	+11

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.

Animal Welfare — FY 2023 Increase: (+\$600,000, +1 FTE)

The National Zoological Park (NZIP) is requesting resources (+\$600,000 and +1 FTE) to support specialized animal care exhibits. Living collections require specialized support that includes items for daily animal care, such as physical therapy blocks for the NZIP’s aging herd of Asian elephants, and for veterinary management, such as a training cage with a blood sleeve for giant pandas.

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 living collections while protecting the public and staff.

Additional information to support this request is provided in the National Zoo’s unit section of this budget submission.

Facilities Operations and Support — FY 2023 Increase: (+\$4,000,000, +10 FTEs)

The Institution requests additional funding to address high-priority operating and life-safety needs because 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 physical footprint and begin to address increasing workforce requirements.

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

Security — FY 2023 Increase: (+\$500,000)

The events of the past few years have demonstrated both the challenges and the importance of providing adequate security for our museums, staff, and visitors on the National Mall. Our security guards are the front line of defense, and it is imperative that we provide the adequate resources to keep our museum doors open to the public. In addition, 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 combination of more ground to cover and the demand for greater protection has steadily degraded the security base budget relative to the Institution's needs.

The Institution requests an increase of **\$500,000** for more contract security officers, as well as to fund the increased contract security rates. To evaluate the effectiveness of existing security resources versus the current requirements, the Smithsonian conducted a security staffing analysis for each of its major facilities. The facility analyses confirmed that the Smithsonian needs to add contract staff to provide a higher level of security around building perimeters and in interior public spaces such as galleries. These requested resources will allow the Smithsonian to provide a safer and more secure environment for visitors, staff, and collections.

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

ENABLE COST-EFFECTIVE AND RESPONSIVE ADMINISTRATION

COST-EFFECTIVE/RESPONSIVE ADMINISTRATION	FY 2023 Programs Increase (\$000s)	FY 2023 FTEs Increase
• Information Technology (IT) Security	+3,600	+3
• Operations Support		
○ Human Resources Support	+1,500	+6
○ Diversity Support	+500	+3
○ Smithsonian Civil Program	+500	+2
Total Increase	+\$6,100	+14

Information Technology Security — FY 2023 Increase (+\$3,600,000, +3 FTEs)

This funding request (+\$3,600,000 and +3 FTEs) supports additional resources to enhance security monitoring and response by implementing additional security logging requirements to defend the Smithsonian against ransomware and other cyber threats. The funding will also support initiatives on supply chain risk management, threat intelligence, data loss prevention, and zero trust architecture while continuing to enhance security assessment, risk management, and compliance processes.

The requested increase will enable the Institution to detect and respond to increasingly sophisticated threats by expanding monitoring and investigation of potentially suspicious activities and enhance our ability to identify and address risks to the Smithsonian's supply chain. The funding will also help to prevent the inappropriate disclosure or distribution of personal and other sensitive information and integrate security components for better visibility into enterprise risk.

These resources are vital to effectively defend the Institution against sophisticated threats, manage risk, and adapt IT defenses to the evolving business needs of an increasingly widespread work environment.

Operations Support — FY 2023 Increase: (+\$2,500,000, +11 FTEs)

- **Human Resources Support (+\$1,500,000, +6 FTEs)** — This request supports Human Resources (HR) staff required to facilitate internal and external strategic change; adequately address hiring timeliness goals; provide quality, timely advice and services to Smithsonian units; minimize risks; and improve the response time for answering requests for guidance or information. Additionally, these funds will position the Smithsonian to reduce the time employees require for on-the-job training and/or retraining because the behavior-based hiring assessments (which are informed by competency data) will enable the Institution to better recruit, attract, assess, and hire individuals with the skills needed to do their work more effectively. The funds would also provide contractor support to develop a competency framework and accompanying competency models which are the key to supporting the Smithsonian's overall workforce planning strategy. Resources are also needed to adequately

address safety, security, and telework issues resulting from the COVID-19 pandemic. This budget request provides for centralized training in the areas of supervision, compliance with the Fair Labor Standards Act (FLSA), human resources, and Institution-wide leadership, and will also support training course development and delivery for employees.

- **Diversity Support (+\$500,000, +3 FTEs)**

Diversity and inclusion are emphasized values in the Smithsonian Strategic Plan. These funds will support our new chief diversity officer with the resources required to implement our Equity and Diversity Action Plans in accordance with Executive Orders 13985 and 14035. We are working to make our museums, labs, offices, and boardrooms reflect the nation and to build collections that tell today's stories to future generations. In addition, the Smithsonian is creating programming on DEAI topics that will be available to the public, both in-person and virtually. And the National Museum of the American Latino and the Smithsonian American Women's History Museum will have an even greater reach on DEAI topics.

These additional resources are also needed to address increased demands in support of supplier diversity, including quarterly reporting to the Secretary on equal employment opportunity (EEO) training, EEO complaints, reasonable accommodations, workforce diversity, diversity and inclusion initiatives, advisory board representation, and supplier diversity. The requested funds and staff will also help the Institution better implement its policies, which highlight our commitment to achieving these goals and provide the framework to ensure the resources will be allocated effectively.

- **Smithsonian Civil Program (+\$500,000, +2 FTEs)**

One of the Institution's top priorities is to ensure a harassment-free and safer workplace within the Smithsonian. This will be accomplished by improving our processes, increasing employee resources, and driving transformative change to ensure the Institution is a model place to work and visit. To that end, we are requesting additional funds to implement significant enhancements to the Smithsonian's anti-harassment initiatives.

The Smithsonian Civil Program is a resource for all employees and affiliated staff. It provides a safe way for individuals to report incidents of harassment, workplace violence, or retaliatory behaviors impacting the workplace. This covers incidents involving any member of the Smithsonian community, including any affiliated staff or operational stakeholders as well as employees. The funds requested would allow this program to achieve its full potential in support of the Institution's diverse and professional workforce.

NO-YEAR FUNDING — The following table provides the FY 2023 Salaries and Expenses requests for No-Year Funding.

No-Year Funding Request
(Dollars in Thousands)

Salaries and Expenses	FY 2023 Request (\$000s)
No-Year Funds	
National Museum of the American Latino	10,392
Smithsonian American Women’s History Museum	9,568
National Museum of Natural History	
Exhibition Reinstallation	954
Repatriation Program	1,507
Major Scientific Instrumentation	4,118
Collections Acquisition	435
Total, No-Year Funds	\$26,974

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

Salaries and Expenses	FY 2023 Request (\$Ms)
Salaries and Benefits	548
Travel and Transportation	5
Rent, Utilities, Communications, and Other	104
Other Services	200
Supplies and Materials	22
Equipment	27
Land and Structures	4
Total, Object-Class Funds	\$910

FEDERAL RESOURCE SUMMARY BY PERFORMANCE OBJECTIVE AND PROGRAM CATEGORY

The Smithsonian has developed its FY 2023 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 Institution's FY 2022 enacted budget and FY 2023 request, and shows the proposed changes by strategic goal, performance objective, and program category.

Federal Resources by Performance Objective and Program Category						
Salaries and Expenses (\$'s in thousands)						
Performance Objective and Program Category	FY 2022		FY 2023		Change	
	FTEs	\$000s	FTEs	\$000s	FTEs	\$000s
Enhanced Interdisciplinary Research	533	101,852	553	113,072	20	11,220
Engage in impactful scientific research &	409	76,981	429	87,558	20	10,577
Engage in vital arts and humanities research	124	24,871	124	25,514	0	643
Expand Digital Technologies	253	42,422	272	51,661	19	9,239
<i>Digitization and Web Support</i>	106	19,769	123	26,444	17	6,675
<i>Education</i>	147	22,653	149	25,217	2	2,564
Understand & Impact 21st Century Audiences	545	100,730	556	105,258	11	4,528
<i>Public Programs</i>	132	31,743	141	33,824	9	2,081
<i>Exhibitions</i>	413	68,987	415	71,434	2	2,447
Preserve Our Natural and Cultural Heritage	2,183	460,595	2,197	479,669	14	19,074
<i>Collections</i>	442	80,421	446	83,503	4	3,082
<i>Facilities Operations</i>	620	169,107	630	178,792	10	9,685
<i>Maintenance</i>	463	116,917	463	119,296	0	2,379
<i>Security</i>	658	94,150	658	98,078	0	3,928
Enable Responsive Administration	566	146,616	590	159,840	24	13,224
<i>Management Operations</i>	469	96,007	490	103,107	21	7,100
<i>Information Technology</i>	97	50,609	100	56,733	3	6,124
New Museums: 25 FTEs and \$4M included in FY22 and 20 FTEs and \$4M additional in FY23						
Total	4,080	852,215	4,168	909,500	88	57,285

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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 2021 ENACTED	0	3,119	0	0	0	0	0	0
FY 2022 ENACTED	0	3,119	0	0	0	0	0	0
FY 2023 REQUEST	20	7,639	0	0	0	0	0	0

BACKGROUND AND CONTEXT

The Smithsonian's enhanced research initiatives provide an overarching framework for the Institution's scientific programs and operations. Funding these efforts will enable the Smithsonian to integrate the work of many disciplines within our 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 will influence how the Smithsonian directs its resources and focuses its energies. The Institution has developed and implemented initiatives to advance cross-disciplinary, integrated scholarly efforts which use a competitive internal process to distribute externally raised funds for advancing research, revitalizing education, and harnessing the power of 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 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 table below summarizes the FY 2023 Enhanced Interdisciplinary Research budget

Programs	FY 2022 Enacted \$000s	FY 2023 Request \$000s	Change \$000s
Universe	184	184	0
Biodiversity Research	1,543	6,063	4,520
World Cultures	792	792	0
American Experience	600	600	0
Total	3,119	7,639	4,520

EXPLANATION OF CHANGE

The FY 2023 budget request includes an increase of **\$4,520,000**, which provides \$20,000 for necessary pay and other related salary costs for existing staff funded under this line item, as well as a programmatic increase of \$4,500,000 for biodiversity research.

The Institution requests the \$4,500,000 increase to help make research in important societal issues more focused, relevant, and rigorous for “the increase and diffusion of knowledge,” which is our core mission. The budget also supports the Smithsonian’s efforts to modernize and manage our research infrastructure and applies to scientific collections and 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. Specifically, these resources will enhance the science for conserving biodiversity in ways that support culture, livelihoods, and social equity.

While other research institutions work in fields which may resemble those of the Smithsonian, the Institution’s scientific initiatives complement the operations of our federal agency and university partners. The federal appropriation we receive enables us to approach research from a long-term perspective. We establish observatories that collect data 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 well-positioned to communicate these research results to the public.

The Institution’s 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 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 the Smithsonian’s long-term research studies and the Institution recognizes the expertise these scientists bring to those programs in return. 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 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 2023 Program Increase (\$000s)	FY 2023 FTEs Increase
Biodiversity Research		
• Global Earth Observatories	+2,500	+13
• Climate Change Monitoring	+1,000	+2
• Climate Data Management and Analysis	+1,000	+5
Total Increases	+\$4,500	+20

Biodiversity Research — FY 2023 Increase: (+\$4,500,000, +20 FTEs)

The Smithsonian has a special role nationally and globally in not only conducting biodiversity research, but also training the next generation of scientists and providing infrastructure and information which enable research by others. Everything the Institution 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 for the American people.

For example, much of the Smithsonian’s research as part of the U.S. Global Change Research Program (USGCRP) is directly relevant to *biosecurity*, such as 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 research products that help natural resources managers 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, 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 2023 Increase: (+\$2,500,000, +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 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 stress from 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 improve our understanding of ecosystems and give policy makers 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 that draws on the resources of 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), National Aeronautics and Space Administration (NASA), the National Oceanic and Atmospheric Administration (NOAA), the 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 science-based diplomacy.

In FY 2023, the Institution requests new funding (+\$1,250,000 and +5 FTEs) for the ForestGEOs. ForestGEOs provide 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. To do this, the Smithsonian coordinates 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 which control forest function, such as soil microbial activity, are not included in the current 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 how forests respond 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 study the global forest crisis. Together, these developments will provide an extraordinary opportunity to revolutionize how we understand one of the Earth's most biologically complex and important ecosystems.

In addition, the Institution requests new funding (+\$1,250,000 and +8 FTEs) for the MarineGEOs. MarineGEOs are 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 at Coibita in Panama, which will enable Smithsonian scientists at STRI 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 collaborations 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, this budget request funds executive directors, research scientists, and the necessary staff to build the networks and provide a stable core of personnel 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 2023 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 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 infrastructures that will improve science, monitoring, and cooperative research.

- **Climate Data Management and Analysis — FY 2023 Increase: (+\$1,000,000, +5 FTEs)**

The Smithsonian manages a vast array of unique and increasingly critical environmental data that are comparable to the Institution's world-renowned collections of objects. Global demand for Smithsonian environmental data has grown rapidly to help natural resource managers and policy makers quantify the pace and scale of climate change and develop strategies for ecosystem-based mitigation and adaptation. These detailed data resources allow scientists and the public to track and propose nature-based solutions to the extraordinary declines in biodiversity of key regions and the entire planet. When harmonized and synthesized, these data resources have the potential to provide crucial insights into the function, health, and sustainability of ecosystems through time, their resilience to human impacts, and the tipping points beyond which ecosystems permanently change. The Smithsonian has the obligation to share its data according to **FAIR** data standards that meet the emerging principles of [Findability](#), [Accessibility](#), [Interoperability](#), and [Reusability](#). In addition, the Institution must support improved data analytics to facilitate public and professional use of data for problem solving.

To meet this challenge, the Smithsonian requests new funding of **+\$1,000,000 and +5 FTEs** for essential resources to curate, analyze, and synthesize large volumes of data in diverse formats, such as image and acoustic data, instrument data streams, including real-time data from laboratory and field instruments, biodiversity and genomic data, and environmental DNA. These funds will enable Smithsonian science to achieve its full potential and support projects with our federal agency and private-sector research partners.

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 2021 ENACTED	131	20,945	97	7,874	34	11,947	2	581
FY 2022 ENACTED	131	21,552	97	37,609	43	71,459	3	826
FY 2023 REQUEST	134	22,788	97	12,273	43	12,615	3	2,747

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 beyond its walls. The Museum commemorates the past, looks at current and future developments in aerospace, and is committed to educating and inspiring 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) in Washington, DC; the Steven F. Udvar-Hazy Center (UHC) in Chantilly, Virginia; and the Paul E. Garber Facility in Suitland, Maryland (a non-public facility). Construction of the first module of the Dulles Collections Center, adjacent to the Udvar-Hazy Center, was completed in January of 2019 and the Center is providing state-of-the-art storage for NASM collections.

NASM provides millions of on-site guests from around the world with access to its peerless collection of aerospace artifacts and stories. Due to continued closure periods of both of its public facilities (the NMB and UHC) during the COVID-19 pandemic, the Museum continued to engage the public online through enhanced digital resources reaching more than 10 million virtual guests via its website, broadcast/webcast educational programming, and social media. Despite the COVID-19-related closures, the two locations were open in calendar year 2021, NASM had 350,000 visitors at the NMB and 480,000 at the UHC.

In FY 2023, NASM is continuing to collect and preserve the nation's key aviation and space artifacts and archival material, as well as those from other countries, and to perform original research and reference support in aviation and space history and planetary science. Their core activities support a broad array of exhibitions, programs, publications, and education and outreach projects. Throughout the second year of shutdowns related to the COVID-19 pandemic, NASM upgraded its programming focus to digital/online content providing

educational resources and engaging, entertaining, and inspiring content for students, teachers and caregivers to use while studying and working 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 roster of volunteers and docents. The NMB is being completely renovated but continues to host visitors safely while also transforming all exhibits and public spaces of America's favorite Museum to make NASM more than a destination to visit. Museum exhibits immerse visitors in the stories of people of all backgrounds who have broken barriers, defied what was thought possible, and changed the world to inspire a new generation to accomplish the amazing. Beyond the walls, digital offerings will allow anyone, anywhere to take a path that engages them with the Museum's collections and stories, provides resources to students, teachers and researchers, and integrates those elements with the in-person experience to amplify its impact.

The Museum's main focus in FY 2023 will be the ongoing revitalization of the NMB and the transformation of all the NMB exhibits. Despite the ongoing COVID-19 pandemic which closed our buildings to the public and sent most of the NASM workforce home to telework for part of the year, construction at the NMB continued through FYs 2021 and 2022, although at a slower rate. Planning for artifact movement as part of the revitalization and transformation effort resulted in a detailed plan to relocate and conserve/preserve more than 4,000 artifacts. This has involved steadily moving artifacts to the Mary Baker Engen Restoration Hangar and Emil Buehler Conservation Lab at the UHC for treatment prior to installation of the new exhibitions on the west end of the NMB. The west end gallery spaces have been prepared, so that large artifacts can be installed first, then lighting, exhibit walls, cases, and a variety of media such as large projection screens, and technology for immersive experiences, and computer interactives. Simultaneously, artifacts are being removed from the other half of the building to prepare for the transformation of those exhibitions which are having their designs finalized and initial components built off-site. Artifacts are being temporarily stored in the Dulles Collections Center Storage Module or on the public floor of the UHC.

The FY 2023 budget request includes an increase of \$1,236,000 that provides \$828,000 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 digital support and visitor engagement.

MEANS AND STRATEGY

Public Engagement — Learning at NASM sparks curiosity and empowers learners to imagine the possibilities of our future. Accordingly, we continue our efforts to reach diverse audiences in meaningful ways through exhibitions, educational programming, research reference support, publications, and electronic outreach. In FY 2023, the Museum will use our transformation to redefine and strengthen NASM's role as a learning facilitator and convener by exploring new initiatives to place the audience at the center of the experience. Senior leadership

has developed a learning engagement cycle that embraces both digital and on-site learning, ultimately increasing the Museum's ability to engage a national audience. To help track this work, specifically in the digital learning space, NASM staff created a digital engagement roadmap. This roadmap is rooted in the learning engagement cycle and accompanying digital engagement key performance indicators. The roadmap is broken into annual phases, with progress checkpoints during each year. This strategy, and accompanying implementation tools, will position the Museum, to be a key stakeholder in building a nation of innovators and explorers via immersive experiences inspired by real-world issues, and rooted in national learning standards, that help foster critical thinking skills. Developing these skills will ensure a strong and diverse workforce that not only further advances America's legacy as home to the world's greatest innovators, but also ensures the face of the workforce reflects that of our population.

As both a national and a community Museum, in FY 2023 NASM will continue to add on-site and online programs and products to our arc of engagement for learners from pre-kindergarten through to adulthood. Museum staff 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, including our professional learning community (PLC) dedicated to middle school educators, the Teacher Innovation Institute and Bezos Empowering Educators program NASM will expand camp offerings and develop a series of challenges for middle and high school youth that leverage the resources across Smithsonian and are rooted in, and have the potential to solve, real-world problems.

In addition, the Museum will build upon the success of virtual and on-site student-focused programs and resources to inspire the next generation of innovators and explorers. One component of this work will be the rollout of new discovery stations funded by and created in collaboration with the U.S. Patent and Trademark Office. Also, the recently developed digital components of *Soar Together @ Air and Space Family Days*, are inviting families nation-wide to see themselves in NASM and make the collections and program content relevant to the generations who did not experience many early aviation and space milestones in their lifetimes.

In FYs 2022 and 2023, Museum staff and volunteers will continue to support a variety of programs. NASM Education provides daily experiences for students and families—such as hands-on science activities, demonstrations, virtual planetarium shows, live virtual chats with experts and resources for learners with autism and sensory perception disorders. The Museum also facilitates large, multi-faceted, day-long events that can reach tens of thousands of diverse visitors in one day. In FY 2022, NASM welcomed its fourth cohort of educators into its free Teacher Innovator Institute. The FY 2022 summer institute focused on how to integrate STEAM concepts throughout the school day and was led by both Museum educators and members of the Institute's professional learning community. In addition, the FY 2022 program included peer-to-peer learning and support of a mentoring component for new teachers.

NASM also continues to enhance the nature of its programming to embrace digital engagement nationwide, while also supporting on-site events which range from evening lectures to innovative collaborations with external partners. In FY 2022, NASM partnered with Deloitte Consulting LLP to cohost its second virtual Hackathon for high school students attending schools in Northern Virginia. Students were challenged to design a digital interaction/tool/experience that would begin to improve diversity in the aviation and aerospace fields. Teams of students had two weeks to develop their solutions. Throughout the development process, the teams had regular meetings with coaches and experts. Their final products were judged by a panel that included an aerospace engineer and professionals from leading aerospace corporations. NASM intends to implement other such partnerships with external organizations in the coming years.

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 means. These electronic resources may 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). Since then, more than 327,972 digital assets were attached to SOVA in FY2021, resulting in a total of 1,162,940 digital assets currently available to the public.

In FY 2023, NASM will continue to make high-resolution images and information about our collections available to the public online. As part of the Smithsonian's new Open Access Initiative, the Museum will continually expand the number of collections and digital assets freely available to the public for any use.

There are now almost 6,500 images marked for open access. NASM open access items were viewed more than five million times and downloaded more than half a million times in FY 2021. NASM staff will continue to conduct audience research and evaluate the impact of their online collections content with virtual visitors, making iterative enhancements to improve the user experience. The Museum will also continue to share behind-the-scenes views of its transformation and panoramas inside famous aircraft and spacecraft, as well as pursue partnerships and digital storytelling efforts to engage a broader and more diverse audience.

Exhibitions — In FY 2023, 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 guiding the fabrication of new exhibitions at the NMB. These exhibits will offer a fresh interpretation of many stories that the artifacts represent. During 2023, NASM will finish installing eight new exhibits, including: *The Wright Brothers*; *America by Air*;

Early Flight; Thomas W. Haas We All Fly; A Nation of Speed; Exploring the Planets; Destination Moon; and One World Connected. Additionally, the Museum will feature a rotating exhibit in the *Allan and Shelley Holt Innovations Gallery* with the first exhibit being about *climate change*. NASM is also finishing up the designs and starting fabrication for 10 new exhibitions, including the space exhibitions, *At Home in Space; Discovering Our Universe; Living in the Space Age; and the Future in Space*, as well as the interactive science gallery exhibit *Textron How Things Fly*, and the military aviation exhibits for *World War I, World War II, and Modern Military Aviation*. The *Barron Hilton Pioneers of Flight Gallery* will feature the famous *Spirit of St. Louis* airplane that Charles Lindbergh piloted in the first solo flight across the Atlantic Ocean.

Collections — NASM is enhancing 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. NASM has also refined tools and processes to coordinate loan transactions in support of the Museum's transformation, which will make the loan program more effective in the future. Other accomplishments in this area in FY 2021 saw the addition of a major aircraft acquisition, a Blue Angels F-18C Hornet, to the NASM collections.

Artifact logistics is one of the biggest challenges throughout the revitalization of the NMB and transformation of NASM exhibits. 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 present in the NMB, approximately 1,300 are not coming back into the building. Some will go into long-term storage in the new Dulles Collections Center Storage Module while others will be exhibited at UHC or loaned to other museums.

Most of the artifacts will require some type of preservation or conservation and the collections staff has estimated how long the treatment times will be for each artifact. The 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 for extensive cleaning and conservation before its return to the NMB.

In addition, NASM will continue the relocation of artifacts from the outdated, inadequate storage facilities at the Garber facility to UHC. In FY 2021 the Museum staff relocated 112 medium and 2,276 small artifacts from the Paul E. Garber facility to the UHC.

Facilities — The Smithsonian is using the Dulles Collections Center adjacent to the UHC as a swing space for storing artifacts from the NMB as the Museum undergoes renovations. After completion of the NMB revitalization, this storage module will support the continued move of artifacts from the Garber facility but is only the first of five such buildings required to provide enough space to store

all the artifacts remaining at the Garber facility. Accordingly, NASM will begin designing a second storage module project in FY2023.

In the meantime, FY 2022 will see continued progress on the NMB revitalization effort, beginning with the deinstallation of artifacts and the assumption of renovation activities in east half of the NMB. In mid-FY2022, staff currently with workspaces in the east half of the NMB will relocate into renovated spaces in the west half of the building.

Scientific Research — To achieve the strategic goal of Enhanced Interdisciplinary Research, NASM's Center for Earth and Planetary Studies (CEPS) conducts original research related to planetary exploration, with an emphasis on the evolution of solid surfaces throughout the solar system. The 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), and the Europa Clipper, and Dragonfly missions. NASM scientists analyze the data from these and other missions to solar system bodies and convey this exciting information to the public. Original research and publications in scientific literature concentrate on the National Research Council and NASA priorities to determine the origin of solar system bodies and habitable planets, with an emphasis on the past climate of Mars and icy moons with subsurface water in the outer solar system. CEPS scientists were recognized for their work related to the NASA Mars InSight Mission, with John Grant and Sharon Purdy receiving a Group Achievement Award for excellence in developing the process to identify and select locations to place instruments on the surface of Mars as part of the Instrument Site Selection Working Group. Mariah Baker received a certificate of achievement as part of the Solar Array Cleaning Team.

Historical Research — NASM continues to lead in the field of recording 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. Based on their research and expertise, 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 remain available to the public.

Curators across NASM continue to produce an average of more than 50 publications each year, many award-winning. For example, the book *Hypersonic and High-Temperature Gas Dynamics*, by curator John D. Anderson, won the 2021 American Institute of Aeronautics and Astronautics Summerfield Book Award. Other significant publications by NASM scholars in FY 2021 included *Operation Moonglow: A Political History of Project Apollo*, by Teasel Muir-Harmony, and the Arabic translation of *Spaceflight: A Concise History (Rihalat Alfadaa: Tarikh Mujaz)*, by Michael Neufeld. Curators also contributed to edited volumes, including

Cathleen Lewis and Michael Neufeld in *Militarizing Outer Space: Astroculture, Dystopia and the Cold War*; Jeremy Kinney in *Aviation in the Literature and Culture of Interwar Britain*; and Teasel Muir-Harmony in *Antarctic Resolution*. NASM historical research also appeared in important journals, including curator James David's article in *Quest: The History of Spaceflight Quarterly* and American Women's History Initiative curator Emily Margolis's work in *The European Journal of American Culture*.

Digital, Social Media, and Media Outreach—The Museum continues to expand its use of digital and social media outreach to share educational, collections and research information with the public and encourage their engagement with online assets, as well as to visit NASM and participate in its programs and events. Across all platforms, the number of Museum followers increased by more than 14 percent in FY2021, with average engagement per post increasing by more than 30 percent. Website visits topped 11 million. In FY2022, the Museum will use more analytic data to deliver targeted content to students, teachers and other key audiences to ensure they have access to NASM's educational resources and provide timely information on visitation and programs.

The Museum also engages consistently with local, national and international media to ensure potential visitors are aware of the collections, educational offerings, research findings and NASM events. During FY 2020, those efforts generated more than 15,000 print and online stories with a potential audience of more than 30 billion people.

Management — NASM will advance the strategic goal of Enabling Cost-Effective and Responsive Administration by following the strategic plan to ensure the Museum is positioned to make the most out of opportunities resulting from revitalizing and transforming the NMB. NASM also continues to pursue the goals of the Diversity, Equity, Accessibility, and Inclusion (DEAI) strategic implementation plan to ensure that the Museum reflects the population of the United States and the world. To assist with these efforts, NASM has chartered an Employee Resource Group (ERG) to give a voice to employees and enlist them as partners in our DEAI efforts. The ERG has supported several actions identified in the DEAI implementation plan and helped host regular “Learn and Connect” brown bag events that are open to all staff. Recruitment and hiring practices have also been reviewed and improvements made to ensure that hiring panels are diverse and interviews include DEAI-related questions. NASM continues working to widen candidate searches to include under-served populations.

Recognizing that the nature of work and the notion of worksite have been altered due to the COVID-19 pandemic, NASM is making plans to institute permanent changes in how the Museum conducts business. The plans include enabling senior leadership to manage the return of more staff on-site while instituting enhanced telework as a future staffing model.

EXPLANATION OF CHANGE

The FY 2023 budget request includes an increase of \$1,236,000. The request includes an increase of \$828,000 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 digital support and visitor engagement.

Digital Support (+\$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.

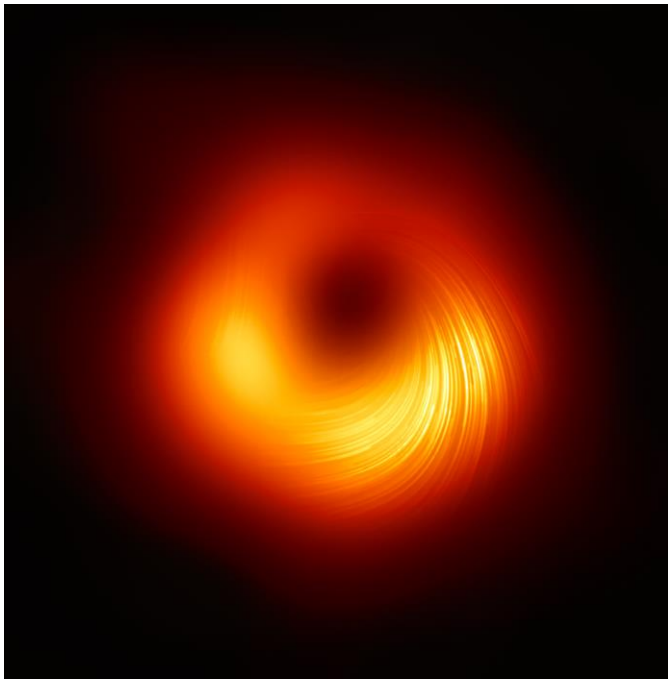
NONAPPROPRIATED RESOURCES — General trust funds support research, education, exhibitions, and fundraising, including salaries and benefits. Donor/sponsor-designated funds support costs related to specific programs and projects. A \$250 million campaign to support the transformation of the NMB and the reimagination of the 23 exhibits and presentation spaces is underway, with \$240 million already secured. The Museum received the largest gift since the Smithsonian's founding when Jeff Bezos donated \$200 million, approximately \$70 million of which will fund part of the transformation efforts (included in the \$240 million shown above). The remainder of the Bezos gift, \$130 million, will fund education programs and the building of the Bezos Learning Center. Private support is also used to fund educational initiatives and public programs, as well as to apply for Government grants and contracts which support research and other scientific activities. The extended closures of the NMB and the UHC due to the COVID-19 pandemic have significantly reduced NASM's revenue and will impair programming and operations at the Museum for years to come.

SMITHSONIAN ASTROPHYSICAL OBSERVATORY

	APPLICATION OF OPERATING RESOURCES									
	FEDERAL APPROPRIATIONS		GENERAL TRUST		DONOR/SPONSOR DESIGNATED		GOV'T GRANTS		INTERAGENCY AGREEMENT	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2021 ENACTED	88	25,226	93	21,003	8	5,796	237	80,573	1	223
FY 2022 ENACTED	88	25,733	91	22,211	8	5,375	237	80,573	1	230
FY 2023 REQUEST	88	26,412	91	22,211	8	5,375	237	80,573	1	230

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.



SAO has an extraordinary record 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 it a recognized global leader in astrophysics. 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). This iconic picture is probably the most viewed scientific image in history. The EHT team was led by SAO astronomer Dr. 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 project, 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." SAO contributes to the Grand Challenge of "Unlocking the Mysteries of the Universe" by advancing "knowledge at the forefront of understanding the universe."

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. 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. SAO also conducts research with a broad range of powerful instruments aboard rockets, balloons, and spacecraft (most notably, the Chandra X-ray Observatory, 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 decades, 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 conduct 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 the large-scale structure of the universe. Today, SAO continues to use advanced technologies to make new discoveries which will tell 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 scientists, 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 among its outstanding scholars 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, SAO scientists participated broadly in the National Academies of Science Decadal Survey of Astronomy and Astrophysics as members of science definition teams and topical panels. In addition, SAO offers key advice and reviews to NASA for the recently launched James Webb Space Telescope that reached its parking orbit at Lagrange point 2, almost a million miles from Earth, in late January of 2022. Continued federal support makes this leadership possible.

The FY 2023 budget request includes an increase of \$679,000 for necessary pay and other related salary costs.

MEANS AND STRATEGY

To achieve the goal of Enhanced Interdisciplinary Research, SAO scientists will make optimal use of various astronomical facilities, 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. 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 basic 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 centers 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 worldwide 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 project 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 which can produce a “black-hole cinema” to help us better understand such phenomena.

The Decadal Survey of Astronomy and Astrophysics (2021) has endorsed SAO’s two largest strategic priorities: the development of an extremely large, ground-based telescope and the maturation of technologies for new NASA Great Observatories, for which x-ray instrumentation is a leading contender. SAO scientists and engineers are leading the development of new techniques and instrumentation for these priorities. SAO scientists and engineers also 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 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, SAO led the science and technology definition team for NASA’s next generation x-ray mission.

Furthermore, 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 our own star closer than any previous scientific instrument. The Parker Solar Probe was launched from Cape Canaveral on August 12, 2018, and “touched the sun” for the first time in 2021.

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 nation’s learners of all ages. 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 to the

maximum extent practicable. These proven 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 2021 ENACTED	0	4,118	0	0	0	0	0	0
FY 2022 ENACTED	0	4,118	0	0	0	0	0	0
FY 2023 REQUEST	0	4,118	0	0	0	0	0	0

BACKGROUND AND CONTEXT

The Smithsonian Astrophysical Observatory’s (SAO) work directly supports the Smithsonian Strategic Plan’s goal to “Drive large, visionary, interdisciplinary research and scholarly projects.” SAO contributes to advancing knowledge and is at the forefront of understanding the universe.

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 Smithsonian astronomers to make fundamental discoveries about the universe. 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 2023 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 shining 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. SAO scientists participated in the National Academies of Science Decadal Survey of Astronomy and Astrophysics as members of science definition teams and topical panels. SAO also offers key advice and reviews to the National Aeronautics and Space Administration (NASA) for the recently launched James Webb Space Telescope.

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 SMA, the Greenland Telescope, and its optical telescopes with powerful new instruments. This leadership, in turn, depends on developing specialized instruments and facilities which do not yet exist. A team of talented scientists and engineers must develop these tools with support from multi-year MSI funding. Continued federal support makes this leadership possible.

Greenland Telescope (\$500,000)

The Greenland Telescope, currently located in Thule, Greenland at the United States Air Force Base, 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 are greatly enhanced by the SAO contribution, and 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 (in Hawaii), the international ALMA telescope array (in Chile), and other telescopes, to make unprecedented observations of the event horizon of the supermassive black hole at the heart of the giant galaxy M87. This will complement the southern hemisphere observations made of the supermassive black hole 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 at SAO and around the world. The telescope will continue to be a key resource for new observations of the galaxy M87.

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.

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

The SMA is a pathfinder telescope operating between radio and infrared wavelengths and has a major role 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. SAO scientists and engineers are dramatically improving the sensitivity of the SMA and enabling new wideband capabilities, which, for example, can obtain molecular inventories of star-forming regions to shed light on the origin of complex organic molecules.

Continued improvement to the SMA's sensitivity, imaging, and studies of transient phenomena depend on upgrading the telescope instrumentation that receives and processes the incoming signals using innovative technologies. The upgrades highly leverage the infrastructure investment in the antennas and the site.

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

With continued MSI funding, SAO is building and testing new wideband receiver sets in its labs in Cambridge, Massachusetts. Once all eight SMA antennas have been equipped with the new receiver sets, the sensitivity of the SMA will be increased by more than a factor of 20 since the SMA was first commissioned nearly two decades ago. Its instantaneous frequency coverage will be wider than that of any other radio telescope.

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 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 recently launched 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 can detect signs of biological activity (life) in exoplanet atmospheres.

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 sensitive 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 made possible 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 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 constructed.

In FY 2023, MSI funds will be used to continue designing 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 G-CLEF 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 2021 ENACTED	274	51,551	13	2,717	55	11,961	6	1,712	9	966
FY 2022 ENACTED	277	53,435	19	3,650	50	12,650	9	2,100	8	970
FY 2023 REQUEST	277	55,239	21	4,450	52	13,144	8	2,500	8	1,000

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 science researchers, the Museum and the knowledge it generates serve a wide range of constituencies 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 global climate change, biodiversity loss, cultural conflict, environmental justice, invasive species, and natural hazards.

NMNH science has worldwide impact and is often cited by the greater scientific community. Our researchers 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 our world'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 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 147 million specimens and objects, and our collections expertise are at the core of the Museum’s mission as well as fundamental to science. The scope and breadth of the NMNH collections provide a vast research infrastructure that supports the 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 in their own right, as they document billions of years of planetary, geological, organismal, and cultural changes. As part of a larger Smithsonian initiative, the NMNH focuses on ethical uses of collections, particularly those related to humans, in light of current societal considerations and concerns about equity and respect for diverse cultures and traditions.

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 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 U.S. ports of entry each year. Scientists at the Department of Agriculture and the NMNH consult the collections and rapidly provide identifications to border control agencies so that American agricultural and economic interests are kept secure from damage by potentially invasive species. The NMNH collections also serve repository functions for agencies such as 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 prior to the COVID-19 pandemic, the NMNH 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 2023 budget request includes an increase of \$1,804,000 for necessary pay and other related salary costs for existing staff funded under this line item.

MEANS AND STRATEGY

During the next four 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 collective 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 convener of national and international conversations, reaching Americans in their own communities through a more visible 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 on our planet.
- The Ocean Science Center will consolidate the Museum's vast marine portfolio and create an array of new tools, techniques, and collections to measure marine biodiversity more accurately and rapidly.
- Our World will be an immersive Museum experience that uses big data and stunning visualizations to drive home the reality, impact, and urgency of the climate and biodiversity crises we face 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.

On this last point, the NMNH has a long history of training future scientists. In FY 2023, 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, the NMNH 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 2023 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. Significantly, 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. That is why 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 to better understand the relationships between living things, ecosystem modeling, and the documentation and preservation of human cultural heritages. In 2022, the Museum's scientific staff authored more than 720 scholarly publications. On an annual basis, they typically contribute to the discovery and description of hundreds of species new to science.

In FY 2023, 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, improving public access to the Museum's resources 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 the special exhibits calendar, but the NMNH has since welcomed visitors back with a full offering of exhibitions and collections on display.

The Museum's timely exhibition *Outbreak: Epidemics in a Connected World* (on view into late 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. When the NMNH reopened, visitors found the *Outbreak* exhibit had been updated with current information on the COVID-19 pandemic and vaccination efforts. 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 2021, the *Outbreak DIY* exhibit has been displayed in more than 250 locations, in 40 countries, and 28 states, including Washington, DC and Puerto Rico, and is now available in 10 different languages.

Unsettled Nature: Artists Respond to the Age of Humans will stay on display into the spring of 2022. This exhibition features 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, *Unsettled Nature* is an exhibition of innovative and thought-provoking art in a variety of media that sparks conversations about the current Anthropocene era and the issues raised by human activity on the planet. The exhibit is supported by the Windland Smith Rice Fund.

Also in 2022, the Museum's exhibition *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.

Following delays resulting from the COVID-19 pandemic, work is now focused on three exhibitions scheduled to open in 2023. The Smithsonian Tropical Research Institute (STRI) is developing an exhibition and public programs to celebrate the centennial of the Barro Colorado research center in Panama, one of the world's most significant areas for research in biodiversity. In the spring, 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. And in the summer of 2023, the Museum will launch the long-awaited exhibition *Cellphone: Unseen Connections*, a youth-oriented investigation into the often-surprising connections between the natural world and the fastest-growing and most widespread technology in human history.

In FY 2023, 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 visitors from under-represented communities.

The NMNH will achieve the strategic goal of Understanding and Impacting 21st Century Audiences in FY 2023 by studying 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 science programs and experiences within and across organizations as well as learners in and out of classrooms.

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 2023, the NMNH will launch a Web-based application for visitors' phones that will give audiences greater control over their own learning experiences as they explore the collections within the Museum.

In FY 2023, the NMNH will once again make the Museum's science experts and collections available from behind the scenes and provide the public with opportunities to engage with scientists, their research, collections, and research-grade scientific equipment. Programs such as "The Expert Is In" series, both online

and on site, will continue 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 Museum 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 providing experiences to inspire stewardship, conservation, and protection of natural and cultural diversity. In addition, Museum staff are 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.

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		INTERAGENCY	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2021 ENACTED	199	32,221	34	9,288	42	10,595	6	1,133	2	20
FY 2022 ENACTED	203	33,655	38	10,489	40	10,425	6	1,100	1	99
FY 2023 REQUEST	204	35,388	38	11,723	40	10,283	6	580	1	117

BACKGROUND AND CONTEXT

In FY 2023, the Smithsonian’s National Zoological Park and Conservation Biology Institute (NZP/SCBI) will continue to implement its strategic plan (2020–2025), with the focus for FY 2023 as follows:

- **Enhance Animal Care, Safety and Sustainability**

The life, safety, and health of the animals in our care is core to the Zoo’s mission of “saving species” and “sharing knowledge.” Federal funding is vital to fully and safely meet the costs for animal care, including new federal requirements and revolving Association of Zoos and Aquariums (AZA) accreditation standards, the gold standards in zoological care. In short, federal funding is essential to meet the fundamental, minimal needs of caring for the animals in our collection — resources that cannot be secured through philanthropy, grants, or partnerships. Costs of animal care, drugs and medicines, animal food, as well as the cost to maintain habitats or replace and repair equipment, generally increase faster than the annual rate of inflation.

The health, well-being, and safety of both the animals and staff of NZP/SCBI are its highest priority. As the science of zoology and aquatic studies grows, so too do accepted standards or best practices for medical care, husbandry, animal welfare, and safety for Zoo animals. Zoological facilities must continually improve in all areas to keep up with rising standards and expectations from regulatory agencies as well as the visiting public. For example, AZA standards are updated annually and recent revisions have included additional requirements for safety monitoring in aquatic life-support equipment, more stringent management of animal emergency procedures, and safer elephant husbandry standards.

In addition, new veterinary medical procedures, diagnostics, and testing require more equipment and expertise and breeding and research protocols designed to save endangered species from extinction require a cutting-edge, sophisticated

management approach to ensure the safety of both animals and staff. When every birth of an endangered animal may impact the survival of a species, new and labor-intensive approaches are increasingly needed to provide the life-saving veterinary care, medication, and hand-rearing that literally mean the difference between life and death.

As our understanding of animals' social and behavioral needs increases, so too do the needs for the size and complexity of their living spaces. Maintaining appropriate animal habitats requires extensive investments in their environments to allow for more species-appropriate behaviors and social interactions. These requirements can be as complex as timed, elephant-proof hay feeders that provide randomized food access to enhance foraging and exercise in Asian elephants to specialized light bulbs that allow the Zoo's amphibians access to the appropriate spectrum of light they would have in their natural habitat.

Finally, the protocols and processes which enhance the safety of both the animals and the people who care for them are rapidly evolving and involve specialized equipment and additional staff to ensure best practices (for example, two-person rules for staff working with large, dangerous carnivores and lock-out/tag-out systems to ensure humans and dangerous animals never unintentionally share the same space).

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

The 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 360 species are exhibited at the Zoo's Rock Creek Park campus, including giant pandas, Panamanian golden frogs, Sumatran tigers, and Asian elephants. One of the NZP/SCBI's key contributions to ensuring the survival of endangered species is the work that occurs at the NZP/SCBI's 3,200-acre site in Front Royal, Virginia. There, Zoo scientists study and breed more than 20 different species, including some that were once extinct in the wild, like black-footed ferrets. 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.

NZP/SCBI scientists and animal care experts collaborate with colleagues in more than 30 countries, working to identify solutions to threats facing endangered animal populations. Additionally, the Zoo's staff set high standards within the zoo community for medical care, nutrition, husbandry, reproduction, and safety for Zoo animals that are adopted by zoos worldwide. The NZP/SCBI's recent accomplishments range from enhancing the sustainability of the North American elephant population and improving safety for keepers of dangerous carnivores to understanding the specifics of cheetah reproduction and successfully reintroducing the scimitar-horned oryx to the wild in Chad.

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. For example, NZP/SCBI researchers are engaged in science to help preserve the northern great plains of North America and are involved in bison restoration and the reintroduction of the swift fox into the wild.

- **Strengthen Core Foundations of People, Places, and Fiscal Resources for Mission Success**

The Zoo experienced multiple closures and decreased visitation throughout FYs 2021 and 2022 due to the COVID-19 pandemic. In addition to causing a sustained period of reduced revenue, the pandemic also resulted in increased costs in essential animal care supplies (such as food and medicine), a need for additional keeper supplies (in the form of personal protective equipment), and more supplies to ensure public safety (by installing barriers and capacity monitors for buildings).

The FY 2023 budget request includes an increase of \$1,733,000, which will provide \$1,133,000 for necessary pay and other related salary costs for existing staff funded under this line item, as well as a programmatic increase of \$600,000 and 1 FTEs for animal care and management.

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 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 animal care, husbandry, veterinary medicine, and nutrition for Zoo animals are continually increasing. In addition, the safety standards for the animals, the staff who care for them, and the visiting public increase as well. Examples of AZA standards which have been recently updated include additional requirements for monitoring of equipment safety, animal emergency procedures, and elephant care standards.

In addition to the effect of higher standards and best practices, new procedures to prevent transmission of zoonotic diseases (such as COVID-19) have increased the costs of caring for the animals (because of the need for medicine, testing, and personal protective equipment) as well as the requirements for operating safely, which involve crowd management, capacity limitations, barriers, and signage.

EXPLANATION OF CHANGE

The FY 2023 budget request includes an increase of \$1,733,000, which will provide \$1,133,000 for necessary pay and other related salary costs for existing staff funded under this line item, as well as a programmatic increase of \$600,000 and 1 FTEs for animal care and management.

Collections Support (+\$600,000, +1 FTEs)

The NZP is requesting a funding increase (+\$600,000 and +1 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 in-Park earned revenue (e.g., from parking, food, and retail operations), support salaries and benefits of the Zoo director and general operational requirements not fully covered by federal funds (e.g., education, professional training, animal acquisitions, finance and administration, information technology, communications, exhibits, and animal care). Donor/sponsor-designated funds support the costs related to specific programs and projects to help save critically endangered species (such as antelope, 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.

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 2021 ENACTED	34	4,616	6	704	15	2,127	22	2,730	30	2,736
FY 2022 ENACTED	34	4,759	7	1,600	14	2,000	25	3,000	25	3,000
FY 2023 REQUEST	34	4,934	7	1,000	14	1,000	25	3,000	25	2,700

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 complementary array of hands-on and virtual programs also 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 shores of the Chesapeake Bay, the nation's largest estuary, as a model system for long-term research and one-of-a-kind experiments. SERC researchers incorporate other sites, including Smithsonian field stations, to investigate connections among aquatic, terrestrial, and atmospheric components of complex ecosystems through comparative studies on regional, continental, and global scales. In addition, SERC is a partner in key Smithsonian research initiatives, including Life on a Sustainable Planet, ForestGEO, and MarineGEO (Global Earth Observatories). SERC also leads collaborations with other federal research networks, such as the National Ecological Observatory Network (NEON) funded by the National Science Foundation (NSF), and the National Ballast Information Clearinghouse (NBIC) funded by the U.S. Coast Guard.

SERC is expanding programs for public engagement. Public outreach programs connect thousands of people to a wide range 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 as 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 and teachers with training that builds their confidence to lead students in STEM. In

addition, SERC's highly successful citizen-science program engages more than 500 volunteers in research across a spectrum of 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 envisions the Smithsonian Institute for the Environment to convene interdisciplinary teams in solving difficult environmental problems and advancing visionary research.

In addition, SERC continues to update and implement its facilities master plan. In FY 2022, the Center is adding short-term housing to its Green Village for visiting scholars and consolidating its facilities maintenance structures for improved safety and efficiency. SERC is a Smithsonian leader in sustainability through energy conservation and shifts to renewable solar energy, with the goal of achieving net-zero carbon emissions by 2024. Improved water reuse and recycling systems also eliminate waste at the site.

The FY 2023 budget request includes an increase of \$175,000 for necessary pay and other related salary costs for existing staff funded under this line item.

MEANS AND STRATEGY

In addition to federal appropriations, SERC achieves its research mission through competitive success at applying for extramural grants and contracts. With these public and private resources, 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 ecological data sets going back more than 50 years, and host large-scale experiments, instrument arrays, and remote sensing. SERC leverages its local infrastructure and global research platform to measure the effects of land use, pollution, fisheries, invasive species, habitat restoration, and climate change on biodiversity and complex ecosystem interactions. To observe and interpret changes in near-shore marine ecosystems and terrestrial environments, SERC headquarters the MarineGEO program, leads long-term studies of ForestGEO's temperate forest plots, and serves as a base for the NSF-funded NEON forest tower and ground-based sampling array. SERC also supports the efforts of other agencies and collaborators (such as the U.S. Department of Agriculture, U.S. Geological Survey, National Oceanic and Atmospheric Administration, U.S. Fish and Wildlife Service, U.S. Coast Guard, and many universities and state agencies).

SERC's research, education, and outreach activities support the Smithsonian's Strategic Plan by informing environmental resource management and conservation and engaging the public in hands-on science. SERC uses its Chesapeake base to test and inform new national and international approaches to habitat restoration of forests, streams, wetlands, and shorelines. The Center uses the Smithsonian's Earth Optimism program as a powerful communications tool to engage the public and policy makers in the application of its research results. SERC plans 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 our nation. 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. As part of its interactive core mission, SERC is open to the public six days a week for visitors to explore the Center's many trails through forests, fields, and more than 15 miles of shoreline along the Chesapeake Bay. Furthermore, SERC's comprehensive facilities master plan will support operationally sustainable growth to significantly improve public access and engagement and highlight conservation lessons by decreasing energy and water consumption to reduce operating costs across the campus.

Finally, SERC management controls ensure proper accounting for its research activities, including indirect cost recovery in its sponsored research program. The Center also maintains excellent records of safety for all employees and visitors, as well as for managing its properties and protecting 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 under the National Invasive Species Act of 1996. In addition, indirect cost recovery derived from these extramural research and education awards provides core administrative support. Other resources include donor/sponsor-designated funds which 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 2021 ENACTED	191	15,266	27	1,201	31	4,089	6	794
FY 2022 ENACTED	191	15,643	21	1,225	33	3,528	4	993
FY 2023 REQUEST	191	16,176	25	1,305	34	3,839	7	1,191

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 investment 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. As such, 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 come to conduct research. STRI serves as the official custodian for the Barro Colorado Nature Monument (BCNM), 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 since it first served as the original base of operations for the 1910 expedition. STRI also owns and administers Coibita Island, which was bequeathed to the Institution to preserve and use for research, and is part of Panama's Coiba National Park, a UNESCO World Heritage Site.

The rise of the Isthmus of Panama, about three million years ago, 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 ideal spot to study 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 groundbreaking events that shaped the modern world and its tropical diversity.

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 (such as publication citations), quality (in terms of scientific honors), and productivity (including 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 staff scientists share their research platform with scientists from the United States and international organizations. This collaborative effort has produced more than 15,207 scientific publications to date, and currently results in an average of one new scientific publication every day.

FY 2021 was another challenging year for the Institute and the measures needed to contain the COVID-19 pandemic required the continued closure of STRI facilities for much of that time. Despite the closures, STRI's scientific achievements include the following:

- The Institute hosted 233 scientific visitors, down from the 1,172 scientific visitors in FY 2019 and the 633 in FY 2020, due to the COVID-19 closures. Scientific visitors came from 22 different countries;
- In FY 2021, STRI processed a total of 126 academic appointments, of which 74 appointments (58 percent) were women and 52 (41 percent) were men. Of these, 84 (66 percent) were from Latin America. They received 62 internships, 35 predoctoral Fellowships, and 29 postdoctoral Fellowships. (There were 241 academic appointments in FY 2019 and 146 in FY 2020.) The Institute hosted one virtual field course in FY 2021 compared to nine in FY 2020, and 16 in FY 2019; and
- STRI's 2021 scientific contributions included 412 publications by STRI-affiliated scientists: one book, nine book sections, 17 online data sets, 383 journal articles, and one report. (There is also one blog post in the results.)

Taken together, this brings the total number of STRI publications in the Smithsonian Research Online bibliography up to 15,230.

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 direction is closely aligned with that Strategic Plan, including its core focus on driving large, visionary, interdisciplinary research and scholarly projects (SI goal 5); strong support for catalyzing new conversations and addressing complex challenges (goal 2); engaging 21st century audiences (goal 4); and preserving natural and cultural heritage (goal 6).

More broadly, STRI has invested for the long term in several core research areas which combine fundamental science to focus on the most complex ecosystems on the planet, with critical applied science supporting decisions around climate and global environmental change. Two such exemplary programs include:

- *30x30 on Land: Tropical Forests and Climate Change*. STRI leads two connected

partnerships, each working to answer fundamental questions about global forests, the world's largest terrestrial carbon sinks: **Agua Salud** is a landscape-scale experiment focused on the science of rebuilding tropical forests from degraded lands, providing state-of-the-art data on the carbon capture capacity of degraded lands, watershed-level impacts of reforestation on flood control and water-holding capacity, and economic incentives to engage landowners. **ForestGEO**, with more than 80 partners in 27 countries, is the world's largest research program focused on the future of mature forests undergoing climate change. Together, these two programs address the two most critical research questions linking forests and climate: "*How can we build forests back to store carbon, protect water, conserve biodiversity, and support people?*" And "*How will the forests' capacity to provide these services change as climates continue to change?*" These partnerships connect federal agencies (such as the National Science Foundation [NSF], United States' Geological Survey [USGS], and the Department of Energy) as well as units within the Smithsonian.

- *30x30 at Sea: Tropical Reefs, Marine Protection, and Climate Change*: STRI's marine programs focus on 1) establishing ongoing and future impacts of climate change on near-shore tropical habitats (from reefs to mangroves to sea-grasses); 2) unlocking the potential of the most resilient reef communities in the world to support tropical reef restoration and conservation; and 3) linking the establishment of tropical Marine Protected Areas to the biology of large, migratory, marine animals. This work led directly to the establishment of the Eastern Tropical Pacific Marine Corridor by Panama, Costa Rica, Colombia, and Ecuador in 2021. STRI's strategic location, with facilities near both the Caribbean Sea and the Eastern Tropical Pacific Ocean, creates unmatched opportunities for this comparative work.

This FY 2023 budget request includes an increase of \$533,000 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 scientific 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. STRI provides that information like no other part of the U.S. mission. In addition, the Institute shares knowledge, experience, and expertise with the next generation of tropical scientists. 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. Furthermore, the Institute also supports education, working 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 readily 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. In addition, the Institute 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. Moreover, 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 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.

NONAPPROPRIATED RESOURCES — General trust funds support salaries and programmatic expenses for a small percentage of STRI employees involved in research, public outreach, and fund raising. Donor and sponsor-designated funds support discretionary research needs and a variety of specific programs, projects, and positions, including donor-designated support for 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 to support the Institute's Agua Salud program that studies carbon sequestration and tropical reforestation, as well as a 10-year staff position in terrestrial microbiology. Funding from the Rohr Foundation, board members, and an emeritus scientist has enabled STRI to fund six new postdoctoral Fellows.

While revenue from the private sector has remained steady through the pandemic, STRI has experienced a significant loss of earned revenue due to temporary closure of all facilities and the cancellation of most courses due to the shutdowns brought about by the COVID-19 pandemic. This gap in earned revenue has required STRI to make painful budget cuts and 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 2021 ENACTED	45	6,461	4	791	57	9,486	0	124
FY 2022 ENACTED	45	6,689	4	2,042	62	14,223	0	244
FY 2023 REQUEST	46	7,058	4	2,103	64	14,650	1	650

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 dream of Charles Lang Freer 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 to complement the Freer, adding another 1,000 works of Asian art and more than 40,000 square feet of public space to the existing building.

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 forward 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 Asian 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 2023 budget request includes an increase of \$369,000. The increase includes \$229,000 for necessary pay and other related salary costs for existing staff funded under this line item, and a programmatic increase of 1 FTEs and \$140,000 to enhance Visitor Engagement support.

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 2023, the Galleries will:

- celebrate the centennial of the Freer Gallery through a series of exhibitions, public programs, and events, the centerpiece of which will be our gala week in May of 2023;
- 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 selected Smithsonian museums, universities, and other non-profit partners to broaden our expertise and impact in fostering an understanding of Asian arts, cultures, and societies;
- strengthen relationships with Asian and Asian American communities, including organizations that represent them, by enhancing our outreach and programming through formal partnerships and informal collaborations;
- launch a paid internship program for both undergraduate and advanced standing (postgraduate) students, a first for the Museum; and
- advance a robust fundraising strategy to support the Galleries’ priority programs.

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 action plans and tracks progress on key performance indicators. These metrics allow the Galleries to take advantage of emerging opportunities and adjust to revenue fluctuations while also providing the focus needed to ensure that the four goals of the strategic 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 2023, the Galleries will pay special attention to programming, visitor services, communications, research, and advancement. The Museum will also increase its commitment to visitor accessibility by:

- holding the centennial year celebration in 2023;
- building upon audience research, including the results of the study supported by a grant from the Smithsonian's Asian American Pacific Islander Center, to help the Galleries' leadership better understand how the Museum is viewed by Asian American communities;
- capitalizing 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 that was developed with an Institution-wide team of digital experts;
- planning 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 the Galleries' impact as a leading educational resource for visitors, both in person and online;
- continuing to respond to ongoing public health situations through the introduction of a hybrid work environment for Museum staff;
- transforming the Galleries' current laboratory into an active site of participation in and collaboration on conservation and scientific research. By expanding its digital reach, the Museum will engage current and new audiences more deeply in conservation work, sharing knowledge, and stimulating new ideas; and
- continuing to implement digital solutions which infuse interactive features and functionality into core activities and better serve the needs of internal and external users.

The FY 2023 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 Asian art.

As the Galleries continue to build a museum culture that is creative, collaborative, transparent, and resourceful, staff will assess and enhance their own development, the efficacy of their organizational structure, and oversight of internal controls by:

- maintaining fiscal discipline in support of the Museum's strategic plan and taking advantage of opportunities for investments in infrastructure and new partnerships;

- recruiting new talent in the areas of curation, research, visitor services, and administration. In FY 2023, the Galleries' staff will work with 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
- dedicating funds for leadership and supervisory training to equip managers and supervisors with the information, skills, and tools needed to make effective decisions and better serve the visiting public.

EXPLANATION OF CHANGE

The FY 2023 budget request includes an increase of \$369,000. The increase includes \$229,000 for necessary pay and other related salary costs for existing staff funded under this line item, and a programmatic increase of 1 FTEs and \$140,000 to enhance Visitor Engagement support.

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

The budget request includes an increase of \$140,000 and 1 FTE for a visitor count management system to provide the analytics we need to deepen our understanding of our visitors' journey through our galleries; and improved visitor wayfinding including signage and maps printed in multiple languages. The recent COVID environment has made this need ever more pressing as volunteers have heretofore formed the foundation of our pool.

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 2021 ENACTED	17	3,565	10	1,359	5	928	2	173
FY 2022 ENACTED	17	3,637	11	1,460	5	940	5	1,420
FY 2023 REQUEST	17	3,938	12	1,681	7	2,200	4	1,725

BACKGROUND AND CONTEXT

The Center for Folklife and Cultural Heritage (CFCH) is a Smithsonian research and education unit 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 strengthen the public’s appreciation for our shared humanity. For more than five decades, the CFCH has accomplished this mission through scholarly research, public presentations — most dramatically through the Smithsonian Folklife Festival — and widely distributed publications, as well as through Smithsonian Folkways Recordings, documentation, and 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 the United 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 10 Grammy Awards, 30 additional Grammy nominations, 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 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 2023 budget request includes an increase of \$301,000. This includes \$101,000 for necessary pay and other related salary costs for existing staff funded under this line item and an increase of \$200,000 fixed cost toward the Folklife Festival security and other necessary costs, as justified in the Fixed Costs section of this budget submission.

MEANS AND STRATEGY

The CFCH accomplishes its mission through high-quality scholarship, educational productions, and project implementation involving 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 funds represent an investment that annually leverages about three times its value in nonappropriated funds and helps the CFCH reach 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 offered virtual crafts and cooking demonstrations, panel discussions, and musical performances. In 2022, the Festival plans to return to the National Mall for its two-week run, overlapping Independence Day celebrations with two major programs: the first will explore how cultural traditions are addressing environmental conservation and sustainable practices while enhancing innovation, civic engagement, and economic development. The second program will feature the folklife of the United Arab Emirates. There will also be special concerts and presentations on Afghan music and artistry featuring recent immigrant and refugee artists. In 2023, the Festival will present several programs, including one on the culture of the Ozarks, another on living religion in the United States, and a third on immigration and migration. The CFCH will build on the Smithsonian's overall digital strategy to expand its reach, and apply lessons learned from digitally adapting to the pandemic, by offering more Festival programmatic content online in an increasingly accessible way, extending its impact well beyond the two-week physical production on the National Mall.

In addition, the CFCH is training young students in the art of fabrication. The goal is to contribute to their employability, pursuit of higher education, and civic participation. In 2019, the Festival launched a Tech-Teach Fabrication Skills Internship program designed for Washington, DC-area high school students interested in drafting, carpentry, welding, metal work, safety precautions, and other elements of technical production. Students work closely with industry professionals, experienced Smithsonian staff, and each other in a collaborative learning environment at the Folklife Fabrication Shop in Lanham, Maryland. As part of their work, the last group of students contributed to the installation of structures for the 2021 White House Holiday Celebration.

Smithsonian Folkways Recordings — the Center’s most broadly distributed signature product — extended its impact with the continued success of several recently produced music boxed sets. The most elaborate was *The Smithsonian Anthology of Hip Hop and Rap*, a major collaboration of Smithsonian Folkways with the National Museum of African American History and Culture (NMAAHC) and the hip-hop community. With its nine CDs containing 129 tracks and a well-illustrated, 300-page book, it generated enormous attention and is on its way to become a signature publication, setting the standard for the field, much like prior Smithsonian anthologies of jazz and folk music. Additional boxed sets included *Jazz Fest: The New Orleans Jazz & Heritage Festival*, *The Social Power of Music*, and the Grammy-winning *Smithsonian Folkways Collection* tribute to Pete Seeger. Other releases reflected the diversity of the collection, with recordings from artists such as Lucinda Williams and Nobuko Miyamoto’s *120,000 Stories* — music illustrating the experience of Japanese Americans and Asian Americans more broadly. *Industrial Strength Bluegrass* from southwestern Ohio — a collaboration with Miami University and its Appalachian Studies Center — won “record of the year” from the International Bluegrass Music Association. Collaborations with the Smithsonian Latino Center have produced the *Tradiciones/Traditions* series, including a new recording by the Latino urban contemporary group Quetzal. In addition, *Songs of Our Native Daughters*, the influential offering in the *African American Legacy* series produced with the NMAAHC, formed the basis of a new television documentary for the Smithsonian Channel. Folkways will expand on this recent track record with some 15 new releases in the coming year.

Folkways will also continue to extend its reach to millions more listeners, distributing 65,000 tracks of audio recordings to teachers, students, scholars, and the public. 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 major program, the Smithsonian Cultural Sustainability Initiative, will invigorate the Center’s commitment to community engagement, cultural documentation, and support of cultural vitality. The community-based work of the initiative will feed the Center’s public programming through *Folklife Magazine* stories and future Festival programming while producing replicable tools and models for

sustaining language and cultural practices. In addition, the Language Vitality Initiative partners with indigenous and minority language communities in the United States and around the world to support language skills transfer, technology adaptations, relationship building, and advocacy for bilingualism. The African American Craft Initiative seeks to expand the visibility of African American artisans and establish equitable access to resources. The CFCH is also working with the U.S. Department of State and other agencies to address the urgent need to sustain cultural heritage while improving livelihoods in Bhutan, Kazakhstan, Armenia, Bosnia and Herzegovina, and Tunisia.

By building on their research and community-responsive collaborations, curators and research staff will continue to publish books, articles, and digital features, and make professional presentations at gatherings of specialists. They also will continue to serve in an advisory capacity for other Smithsonian units and external agencies and in leadership roles for academic and professional societies. CFCH curators will continue developing the traveling exhibition *World on the Move: 250,000 Years of Human Migration*, produced in collaboration with the American Anthropological Association, and preparing for the opening of the Smithsonian exhibition *Music HerStory: Women and Music of Social Change*.

The Ralph Rinzler Folklife Archives and Collections contain the written and audiovisual documentation of more than 50 years of Festival research and planning, the recordings of Folkways and 18 other labels, and a rapidly expanding digital footprint. In FYs 2018–2022, its major accomplishments have included the complete renovation of the Center’s archives repository with expanded off-site storage, the re-housing and enhanced tracking of collections, the increased digitization of audiovisual media, and the processing of materials from the Arhoolie Records collection as well as several new record labels. The Center will make these vast collections accessible to source communities and the public while ensuring their continued availability as a “working archive” for CFCH staff who use them for ongoing productions.

Finally, the CFCH continues to play a strong role in realizing the Smithsonian’s Strategic Plan. It is a key collaborator with many museums and units for “One Smithsonian” initiatives such as the annual Mother Tongue Film Festival. In keeping with its decades of community-based consultation and collaboration, the Center enshrined its commitments to culturally respectful collections management in its Shared Stewardship of Collections Policy (adopted in 2019) and is actively contributing to the Secretary’s call for an Institution-wide policy on Shared Stewardship and Ethical Returns in FYs 2021–2023. The CFCH led the Smithsonian Year of Music in 2019 and is working with conservation scientists and educators on the 2022 Festival program. The Center also works with the National Museum of American History on the American Women’s History Initiative and one of its staff is collaborating with Smithsonian Libraries and Archives to curate an exhibition on the history of women in music. 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 for approximately one-quarter of the CFCH's personnel, and revenues from Folkways Recordings pay about one-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 2021 ENACTED	36	5,190	19	2,567	33	4,878	1	120
FY 2022 ENACTED	37	5,417	23	3,150	26	5,350	1	150
FY 2023 REQUEST	38	5,687	25	3,450	26	5,600	1	150

BACKGROUND AND CONTEXT

Cooper Hewitt, Smithsonian Design Museum (CHSDM), in New York City, is one of two Smithsonian museums located outside Washington, DC. Unique among its peers at the Institution, 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 and changed the way the Museum inspires, educates, and empowers people through design.

As an influential design authority in the United States, CHSDM’s programs and exhibitions demonstrate how design shapes culture and history — in the past, present, and future. To achieve the Institution’s strategic goal of Understanding and 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 2023. 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 worldwide.

The Museum also devotes considerable 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 2023 budget request includes an increase of \$270,000. The increase includes \$170,000 for necessary pay and other related salary costs for existing staff funded under this line item and a programmatic increase of 1 FTE and \$100,000 for collections and digital support.

MEANS AND STRATEGY

In FY 2023, 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 such as *Design & Healing: Creative Responses to Epidemics*, which will focus on the innovative design work that has been done in response to epidemics in the past and the present; *Designing Peace*, which will explore how design can address some of our most vexing issues in society; and exhibitions featuring the work of designers Hector Guimard and Dorothy Liebes.

By 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 will continue 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 to support 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 of all the programming is to deliver content relevant to the individual 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. Visitors will be encouraged to view design with the broad goals of developing practical, creative problem-solving and critical thinking skills 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. CHSDM is committed to making its programs and content virtually accessible. Furthermore, the Museum 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 leveraging its world-renowned design collection to offer nationally recognized professional development workshops in design thinking for K–12 educators across the country.

To advance the Smithsonian’s strategic goal of Enabling Cost-Effective and Responsive Administration, CHSDM will enhance its reputation, and that of the Institution, 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 2023 budget request includes an increase of \$270,000. This includes \$170,000 for necessary pay and other related salary costs for existing staff and an increase (1 FTE and \$100,000) for digital support.

Digital Support (+\$100,000, +1 FTE)

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 65 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 2021 ENACTED	31	5,007	6	1,835	18	5,572	0	45
FY 2022 ENACTED	33	5,339	7	1,850	24	10,000	0	25
FY 2023 REQUEST	34	5,699	7	1,850	24	8,000	0	25

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 the Museum has increased its efforts to prioritize greater diversity in its collection. For instance, nearly one-fifth of recent acquisitions in the last five years were created by Black artists. The collections care and conservation of the Museum's extensive holdings receive a substantial portion of the Hirshhorn's resources and enables staff 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 audiences. The closure of physical spaces required by the COVID-19 pandemic provided an opportunity to highlight the time-based media and video works within the Hirshhorn's collection. Staff curated novel, digital-native exhibitions available to visitors through the Museum's website and social media channels, while also looking forward to the building'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 a wide range of educational and public programs that serve

diverse audiences and encourage viewers to learn about various fields of contemporary culture. The Hirshhorn leverages the lessons learned from *ARTLAB+*, the award-winning digital media studio that connects teenagers from local, underserved communities with artist mentors, to better serve diverse audiences with 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 2023 budget request includes an increase of \$360,000, which will provide \$220,000 for necessary pay and other related salary costs for existing staff, and a programmatic increase of 1 FTE and \$140,000 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 2023 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 2023 will feature exhibitions and major events highlighting the best of emerging, international contemporary art. This will include:

- *Put it This Way* (opening in July of 2022 and continuing throughout FY 2023), an exhibition devoted to the work of women artists in the collection of the National Museum of Modern Art. Encompassing a wide range of media, subject matter, sensibilities, and approaches, the exhibition will engage with the complexities and contradictions of the idea of "women artists," deepening and broadening that overly simplistic categorization. Titled after a 1963 painting by American Pop artist Rosalyn Drexler, the exhibition will bring together more than 50 years of work drawn exclusively from the Museum's holdings, highlighting new acquisitions alongside masterworks.
- John Akomfrah's acclaimed six-channel video work, *Purple* (beginning in October of 2022). This film captures ecological features around the world — from the Arctic to the South Pacific — which are at risk of or are disappearing due to changing climates. Wrapped in the gentle arc of the Museum's curved walls, the installation will allow visitors to experience remote landscapes within a panoramic exploration of vulnerable environments. Set against current conversations regarding gender, power, and

recognition in our society, the exhibition celebrates the depth, breadth, radicality, and rigor of art made by women while calling attention to the ways that gender itself can be understood in relation to the making and presentation of art — both irrelevant and irrevocable.

- *Avant-Garde Chinese Photography, 1993–2004* (opening in the fall of 2022), which will include a sweeping selection of contemporary Chinese photography. The exhibition includes works by more than 20 photographers, which they created between 1993 and 2004, a vibrant period that put Beijing on the map as a nexus of experimental art. Evocative of the rapidly changing society from which they emerged, these photographs are ambitious in scale and impact, and they resonate with possibility in the face of an unscripted future.

In support of the strategic goal to Expand Digital Technologies, the Museum’s website will 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. In addition, 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), a revolutionary, in-gallery art guide that uses image recognition to scan art and instantly provide access to exclusive artist videos and inside information, staff have increased interaction between visitors and the digital resources of the Museum. *Hi!* content is updated regularly in coordination with rotating exhibitions. In FY 2023, the Museum 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 in the recently released *Collections Catalogue*. 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 Smithsonian’s strategic 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 range 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 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. The Hirshhorn will also launch pilot programs to reach 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 (such as 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 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's senior leadership 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 staff will leverage the Museum's federal appropriations to the maximum extent possible.

EXPLANATION OF CHANGE

The FY 2023 budget request includes an increase of \$360,000, which will provide \$220,000 for necessary pay and other related salary costs for existing staff, and a programmatic increase of 1 FTE and \$140,000 for efforts to strengthen the Museum's collections management systems, online presence, and digital engagement.

Digital Support (+\$140,000, +1 FTE)

This budget request includes an increase of \$140,000 and 1 FTE for the hire of an information technology (IT) specialist/webmaster. The addition of a webmaster will support the Hirshhorn's ability to feature time-based media artworks in the physical Museum galleries, as well as efforts to build the virtual Museum. This will enhance the Hirshhorn's

capabilities so staff can participate in digital content production and more effectively transform their workflows to reach bigger audiences.

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 2021 ENACTED	32	5,140	2	656	1	320	0	0
FY 2022 ENACTED	32	5,257	6	2,117	8	2,666	0	0
FY 2023 REQUEST	34	5,769	6	2,244	8	2,826	0	0

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, educational 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.

In FY 2023, 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, academic, 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 almost 36 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 2023. 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 launched 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 on camera. FY 2023 will 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. The exhibition addresses difficult and defining issues of history, race, representation, and the future, and will feature the artist's first video and a selection of full costumes created in collaboration with designers in Senegal and Angola.

The Museum will continue 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 helping the public learn more 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 workflow and efficiencies. This staged, multi-year renovation project has been designed to permit ongoing access to current facilities.

The NMAfA is also working with the Freer and Sackler Galleries of Asian Art to create new, fire-rated storage spaces and modify existing fire-rated spaces to meet current life-safety codes. In addition, the Museum has completed three phases of its main storage master plan and is using resources from the Smithsonian's Collection's Care and Preservation Fund (CCPF) to finish more phases of this work.

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. Also, to further enhance the in-person experience, the NMAfA has begun upgrading all exhibition fixtures and lamps with light-emitting diodes (LEDs) throughout the Museum. LEDs have been installed in two first-level galleries to date, which makes their lighting more energy efficient and reduces utility costs.

The NMAfA is also continuing to process its award of a \$1.5 million five-year implementation grant from the Lilly Endowment, Inc. to support the Museum's 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-funded programming will be designed to enhance diversity, inclusion, access, and equity in programs 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 2023 budget request includes an increase of \$512,000 that provides \$182,000 for necessary pay and other related salary costs for existing staff funded under this line item, as well as a programmatic increase of 2 FTEs and \$330,000 for digitization and Web support.

MEANS AND STRATEGY

The NMAfA contributes to the Institution's 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, languages, 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 diverse audiences.

The website redesign continues in support of the FY 2022 and 2023 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 other social media platforms 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 2022, the NMAfA is conducting a comprehensive audience research study to better inform long-term strategies for audience engagement and development. In FY 2023, NMAfA will continue to broaden visibility, prepare future programming that attracts more visitors, and seek visitor feedback on exhibitions and programs, using visitor comments, docent interactions, and surveys of its public programs.

Collaborative projects initiated by the NMAfA include working with Smithsonian units on best practices in program development, internships, and audience assessment. The Museum will also participate in a 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 (DEAI) 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.

Specifically, 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 NMAfA will continue to forge strong relationships with the media, corporations, foundations, community interest groups, and congressional representatives.

EXPLANATION OF CHANGE

The FY 2023 budget request includes an increase of \$512,000 that provides \$182,000 for necessary pay and other related salary costs for existing staff funded under this line item, as well as 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. These projects are expected to increase the number of touring exhibitions developed by the Museum and promote NMAfA scholarship, thereby advancing the Smithsonian's strategic goals of Expanding Digital Technologies and Understanding 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 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, welcomes new voices, and raises the visibility of art from the African continent 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 2021 ENACTED	20	2,698	3	654	1	114	0	683
FY 2022 ENACTED	21	2,873	3	612	0	25	0	75
FY 2023 REQUEST	21	2,949	3	612	0	50	0	100

BACKGROUND AND CONTEXT

Since its founding in 1967, the Anacostia Community Museum (ACM) has been a catalyst to help 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 novel solutions to the problems of urban living.

The FY 2023 budget request includes an increase of \$76,000 for necessary pay and other related salary costs for existing staff.

MEANS AND STRATEGY

In the past two years, the Museum has faced challenges related to the COVID-19 pandemic and the building’s subsequent closure for more than 18 months. However, instead of retreating, the Museum moved programs and exhibits into the community. In 2021, the ACM was the only Smithsonian Museum to open two new outdoor exhibits while our buildings remained closed. These exhibits ushered in a new (and safe) way for the ACM to continue to serve the community and share the stories of those who continue to fight for positive social change.

The ACM is in the second year of a five-year initiative, Transforming America, that looks at five issues through the lens of racial equity. In 2021, we focused on food with the exhibit *Food for the People: Eating and Activism in Greater Washington*. This exhibit looked at people and organizations working to create more equitable food access for residents throughout the region. To provide more direct service for people experiencing food insecurity, the Museum hosted the Feed the Fridge program. This program placed a fridge on the Museum grounds and filled it five days a week with prepared meals for anyone in need. During 2021, the fridge fed more than 8,000 residents of Wards 7 and 8.

In 2023, the ACM will continue to focus on creating engaging and interactive experiences for audiences, whether they are online or in person. The Museum will enhance its online presence with a defined social media strategy and assign education staff to create more on-site and off-site public programs.

Enhanced Interdisciplinary Research

Also 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 the 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 show 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 2022. To continue focusing on the Museum's audience, the ACM will reach out to diverse communities, learn their needs, and co-create content with its audience. In addition to in-person program opportunities, the ACM plans to continue its online programs and make better use of its collection by digitizing more of its content.

Pop-up Programming and Exhibitions

With the success of *Men of Change — Taking it the Streets* in 2021, the ACM will continue to develop exhibits and showcase 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

Washington, DC Public School Engagement — The ACM is expanding its partnerships and work with Washington, DC public schools and other educational institutions to engage middle- and 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.

Preserving Our Natural and Cultural Heritage

Collections

The ACM is committed to improving the stewardship of 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.

NONAPPROPRIATED RESOURCES — The ACM's financial strength is closely tied to its strategic revitalization. Recently, for the first time in more than a decade, the ACM hit its fundraising target. In FY 2023, advancement staff will leverage the Museum's success in 2022 to inspire current donors and attract new ones by developing a comprehensive fundraising plan. The ACM also sees the activation and communication campaign as a key component for fund raising because enhanced and widespread awareness of the Museum's many programs 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 2021 ENACTED	17	1,987	1	309	18	2,166	0	0
FY 2022 ENACTED	17	2,023	2	508	17	2,543	0	0
FY 2023 REQUEST	17	2,097	3	757	17	2,622	0	0

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 2023, AAA will make hundreds of linear feet of material freely available online and easily searchable.

In addition, AAA will continue 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 in 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 2023 budget request includes an increase of \$74,000 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 strategic 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 November of 2022, and is working with the National Portrait Gallery to co-curate the exhibition *Felix Gonzalez-Torres: Angel of History*, 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 2023, with lessons learned from the Smithsonian's experience with the COVID-19 pandemic, AAA will refine its means of conducting remote oral history interviews. Using portable kits funded by the Alice L. Walton Foundation, interviews will be conducted remotely and focus on under-represented artists. The Archives will reach new audiences through its monthly podcast, *Articulated: Dispatches from the Archives of American Art*, that draws on the breadth and depth of AAA's oral history collection while incorporating multiple points of view from external partners. AAA will continue to host 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 2023, 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 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.

Also in FY 2023, the Archives will work 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.

AAA's audiovisual archivist 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).

Furthermore, the Archives 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, shared decisions about the best way to allocate resources. AAA will continue to take a leadership role in working with the larger Smithsonian archival community to initiate and implement Institution-wide collections assessment strategies and systems.

In FY 2023, AAA will support researchers by providing access to its collections and microfilm in its Washington, DC and New York City research centers, as well as other U.S. research centers. Archives' staff will offer remote reference services through the Web-based "Ask Us" form, and continue to digitize legacy microfilm, on demand, with the goal of phasing out the interlibrary loan of microfilm reels and increasing the Archives' revenue stream.

In addition, AAA will establish a new two-year residency position in FY 2023 for an entry-level archivist to assist with 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 2023, 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 seven 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 2023, 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, the Alice L. Walton Foundation, and other donors supports AAA's ambitious digitization program. The Archives will continue to raise money from the private sector 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 2021 ENACTED	145	33,751	8	1,719	51	18,664	0	0
FY 2022 ENACTED	148	34,853	15	4,192	52	29,248	0	0
FY 2023 REQUEST	148	35,767	16	4,401	55	30,710	0	0

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 National Mall, opened to the public, providing a meeting place for all people to learn about the history and culture of African Americans and their contributions to every aspect of American life. The 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 which focus on a wide arc of history and look 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 19th, 20th, and 21st centuries. 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, digital technology, and Sweet Home Cafe have all been award-winning entities, creating even more excitement, and the shops continue to enjoy large crowds despite the COVID-19 pandemic having forced the Museum to temporarily close to the public. FY 2023 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 information technology (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 2023 budget request includes an increase of \$914,000 for necessary pay and other related salary costs for existing staff funded under this line item.

MEANS AND STRATEGY

In FY 2023, as the NMAAHC continues to adjust to the challenges of COVID-19, the Museum's top priorities are to make long-term enhancements to its scholarly research, educational outreach, and digital programs. This includes growing 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 programming for the public, educators, and students.

In FY 2023, the Museum's Office of Digital Strategy and Engagement will expand the NMAAHC's global reach, engagement, and impact. The Museum will research, design, and develop digital experiences, using emerging technologies that enhance interactive educational programs, promote engagement with visitors, and help make the collections, exhibitions, programs, and educational resources more accessible to a global audience.

In addition, the NMAAHC will continue to expand its interactive, Web, and mobile offerings to provide innovative and engaging digital experiences that deepen the connection between visitors and the Museum's collection through bold storytelling and timely and relevant themes for diverse audiences. In 2021, the NMAAHC released *The Searchable Museum*, a multi-year initiative with a goal of making all the NMAAHC's content accessible through an intuitive, responsive, and accessible online platform. The NMAAHC will continue to build on the success of *The Searchable Museum* and its first exhibition, *Slavery and Freedom*, by releasing new exhibitions and related content that bring hundreds more digitized objects from the collections online, thereby engaging new audiences. Upcoming versions of *The Searchable Museum* will feature content from the NMAAHC's other permanent exhibitions, starting with *Making A Way Out of No Way*, which will trace the development of Black cultural and community institutions from the early 1800s to the late 20th century. New "digital-only" experiences that build on *The Searchable Museum* initiative will also be developed in FY 2023 to further realize the Smithsonian strategic goals of Understanding and Impacting 21st Century Audiences, catalyzing new conversations that address complex challenges and provide opportunities to work as "One Smithsonian," amplifying the power of the stories we tell, and increasing our reach and impact to the public.

In FY 2023, curators and Museum specialists will continue to acquire artifacts, fine art, archival materials, photographs, film, and other media assets for the NMAAHC's permanent collection. Curatorial research will contextualize objects from a historical and contemporary perspective, with the aim of addressing complex issues and catalyzing new conversations about the African American experience through interpretive exhibitions, digital projects, publications, symposia, and public programs.

Projects currently in development include three publications, *Musical Crossroads: The Material Culture of Black Music*; *Movements, Motions, Moments: Photographs of Religion and Spirituality from the National Museum of African American History and Culture*; and *Afrofuturism: A History of Black Futures*, the latter of which will be published in conjunction with a new exhibition scheduled to open in FY 2023 and that is tentatively entitled *Afrofuturism*. The Center for the Study of Global Slavery (CSGS) continues to work on the Slave Wrecks Project by supporting research, preservation, and community engagement efforts on the slave ship *Clotilda* in Alabama as well as with partners in Mozambique, Senegal, and St. Croix in Africa and the West Indies. The CSGS is also developing a traveling exhibition tentatively entitled *In Slavery's Wake*. In addition, the NMAAHC continues its partnership with the Getty Research Institute to co-administer and process the Johnson Publications Photo Archive of more than four million prints and negatives from *Ebony* and *Jet* magazines. The portals that will provide online access to the collection should be available to the public by early 2024.

The NMAAHC's Oral History Initiative continues to capture, preserve, and make accessible the oral histories of people with extraordinary stories as well as those individuals whose achievements and contributions have had a national and global impact. The Museum's Oral History Initiative is an integral part of the Smithsonian Institution's 175th anniversary celebration, which includes oral histories of staff in long, short, and 24-hour formats. These interviews will become part of the nation's 2026 celebration of 250 years of American independence.

Digital Humanities, an interpretive method and type of project that is based on the intersection of scholarship, digital tools, and technology, will be incorporated into other projects as well, providing new and innovative ways to engage visitors with the Museum's collections and interpretive content. The NMAAHC will develop searchable digital records for collection objects, exhibition materials, and their digital surrogates. In FY 2023, NMAAHC staff will continue to focus on recent acquisitions and undigitized objects to improve the features and functions of the Museum's collection information and cloud-hosted digital storage and delivery systems, as well as online user interfaces. These improved systems will be used in connection with the Museum's digital-first strategy to drive visionary, interdisciplinary research and scholarly projects. The Robert Frederick Smith Center for the Digitization and Curation of African American History will continue to deliver public programming, digitization of community-based collections, Fellowship programs, and visitor engagement through the *Explore Your Family History Center* and the *Community Curation Program* — an online platform that invites members of the public to share personal stories through digitized images, video, and audio, along with digital media resources from the Museum's community and institutional partners. The NMAAHC will also continue offering online audiences curated and community-generated selections of digital collections in the Museum's cloud-computing environment.

The NMAAHC will continue to make all digitized collection records and images for unrestricted materials freely available via the Digital Public Library of America and will 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 help transcribe historical documents.

In addition, the NMAAHC continues to offer compelling, first-class exhibitions and engage and inspire diverse audiences. In 2021, the Museum opened a temporary exhibition entitled *Reckoning: Protest. Defiance. Resilience*. This exhibit revealed how African American artists stand at the vanguard of movements to promote and describe social change and document the struggle that Black Americans have faced in their pursuit to enjoy the fundamental rights and freedoms promised in the Constitution. Also in 2021, the NMAAHC opened the temporary exhibition *Reconstruction: Remaking America without Slavery*. This exhibition explores how African Americans, in seeking to define themselves as free and equal citizens after the end of the Civil War, 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. The exhibition also included public programming, educational initiatives, and a compendium book.

In 2022, the NMAAHC will present a short reprise of the exhibition *Represent: Hip Hop Photography*, which will highlight images from the Museum's photography collection paired with other pictures and objects that explore hip hop's relationship to important historical figures, social movements, and creative moments. This will be followed in FY 2023 by an exhibition that examines African American religious life through the framework of contemporary culture that the magazines *Ebony* and *Jet* helped to document and shape.

The spring of 2023 will see the opening of the next large-scale temporary exhibition, *Afro-Futurism: A History of Black Futures from the Past, Present, and Beyond*. This exhibition will present a 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 which have given voice to expressions of such a freer society. Also in FY 2023, the Museum will continue its intensive and comprehensive rotation program to replace loans and at-risk objects within the inaugural exhibitions. Typically, the NMAAHC replaces between 200–300 objects per year on a twice-yearly cycle.

The realities of the COVID-19 pandemic have necessitated transferring all public programs to a virtual environment. This 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, authors, and filmmakers. In FY 2023, the Museum plans to present programs digitally and will resume doing so in-person when it is safe for the public and staff. In the future, the NMAAHC will continue to make resources available by streaming programs — such as those about Juneteenth — and creating virtual tour experiences to enable audiences across the globe to participate. The Museum’s educators will also continue initiatives for all audiences by expanding digitally-based resources which use the NMAAHC collections and exhibitions, offering educator and caregiver development opportunities, and providing resources for the classroom and home. In addition, the Museum will continue implementing revised and tested visitor operations and digital experiences to enhance in-person and online visitor experiences.

The NMAAHC will further the goal of disseminating information to the public by educating people about African American history and culture through media, marketing, and social media channels. Media campaigns, audience cultivation and outreach, marketing, communications, and social media are all avenues that the Museum will continue developing to build and maintain its positive brand.

Meanwhile, to achieve the strategic goal of Preserving Our Natural and Cultural Heritage, the NMAAHC Office of Curatorial Affairs will continue to identify, acquire, process, and lend collections while developing and refining the permanent collections. The Museum has collected more than 40,000 objects and continues to manage offers of new collections and facilitate a robust review process. In FY 2023, the NMAAHC will continue to safely handle, display, and store these collections while supporting a wide array of Museum programming.

The NMAAHC will achieve the goal of improving the stewardship of the national collections by continuing to improve the Museum’s infrastructure and offices, work spaces, and collections and other storage spaces. The NMAAHC continues to make significant progress to enhance its collections-storage spaces with compact furniture and reorganization activities, and regularly coordinates with the National Collections Program and Collections Care Initiative. The Museum also continues to develop and execute collections plans and internal standards to house, preserve, and organize collections in storage, promote a safe work environment, and facilitate access.

The NMAAHC Office of Strategic Partnerships (OSP) will further the strategic goal of Understanding and Impacting 21st Century Audiences by delivering far-reaching and transformative support for African American and African Diaspora history and culture organizations regionally, nationally, and internationally. The OSP connects with, and builds awareness about, the work of its collaborating institutions and provides access to training and resources in support of leaders and best practices. In FY 2023, the NMAAHC will continue its Historically Black Colleges and Universities (HBCU) History and Culture Access Consortium, a five-year initiative to address issues facing HBCUs and their affiliated museums and archives. This initiative will strengthen the long-term institutional stability 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. Additionally, the NMAAHC will execute a series of virtual and in-person training sessions for museum professionals to strengthen field-wide practice in ethical interpretation, environmentally-centered community engagement, and successful global partnerships.

To meet the goal of improving the Smithsonian's information technology systems and infrastructure, the NMAAHC will continue building its cloud-based computing environment to create a more cost-effective, flexible, scalable, and secure infrastructure that supports technical innovations. The Museum will also seek to develop digital-first and digital-only initiatives, using low- or no-cost open-source technologies, 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. The Museum's safety and facilities program will continue to incorporate post-COVID-19 pandemic health and safety protocols, emergency operations procedures, staff communications, disaster management, and related consolidation plans.

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 2021 ENACTED	160	26,581	20	2,946	51	5,831	0	190
FY 2022 ENACTED	160	27,331	19	2,111	50	15,585	0	850
FY 2023 REQUEST	163	28,742	19	2,228	50	12,354	0	1,500

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 across time and place. Increasingly, we understand that knowledge of the past is not a luxury. It is essential for the civic health of our country and for our democracy to survive.

The Museum is honored to steward the nation’s premier 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 the 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 and their ongoing education. Collectively, the staff create a series of forums, both virtual and in the Museum, where millions of people engage with one another and with inspiring and challenging stories from U.S. history. 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. Due to the COVID-19 pandemic, while only approximately 570,000 people were able to visit the Museum in the seven months it was open to the public in 2021, more than 10 million people interacted with the Museum that year through online channels (e.g., via websites, social media platforms, the YouTube channel,

and e-news). The NMAH has shared its work in *Rapid Response Collecting* related to the COVID-19 pandemic, *Black Lives Matter*, and other protests, as well as the January 6th Capitol attack, through proactive news media outreach and educational offerings. The Museum's exhibitions, collecting, research and digital work are also covered extensively through media campaigns, which in FY 2021 reached a potential audience of 5.75 billion with coverage across all national networks, wire services, U.S. and international newspapers and their digital outlets, as well as radio, podcasts, and blogs.

The FY 2023 budget request includes an increase of \$1,411,000. The increase includes \$1,051,000 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 10-year strategic plan (for 2020–2030), which will guide the NMAH through to the 250th anniversary of the United States in 2026 and beyond. The plan is organized around the Museum's vision to become the country's most accessible, inclusive, relevant, and sustainable public history institution. To fulfill that role by 2030, the NMAH 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 have been crafted and approved to advance the Museum's overarching strategic plan.

The NMAH's vision is a timely reflection of its status as the Smithsonian's flagship history museum, given the congressionally authorized creation of the Smithsonian American Women's History Museum and the National Museum of the American Latino, whose goals are inextricably tied to the current mission and work of the NMAH. The Museum has already established the groundwork for these two new Museums through its 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 serve audiences in the best possible manner. The fiscal impact of these new Museums on the NMAH will be reflected in future budget considerations.

This groundwork is evidenced by the Museum's recent and upcoming slate of public projects that advance the NMAH's commitment to women's history in innovative ways. *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 1790s to the present. It will remain open until January of 2023 and then travel across the country. The exhibition mines the Museum's rich collections and covers key topics such as education, wellness, work, fashion, and girls' involvement in American political and social movements. 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. In addition, the AWHI funded the podcast *Collected*, the first season of which launches in 2022 and focuses on Black feminism.

The NMAH's connection with the National Museum of the American Latino is highlighted by *¡Pleibol! In the Barrios and the Big Leagues/En los barrios y las grandes ligas*, an exhibition that opened in 2021. It takes audiences on a bilingual journey into the heart of the nation's pastime, vividly conveying 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 robust educational programs designed for multi-generational audiences. The *Molina Gallery* will be the first physical space at the Smithsonian primarily dedicated to showcasing the contributions of the Latino community in shaping America's culture.

For both *Girlhood* and *¡Pleibol!*, the Museum has mounted digital advertising campaigns to reach audiences as outlined in a strategic plan, including Spanish-language outreach to bring audiences to the NMAH website and other online digital content.

In 2021, the Museum issued a tactical plan for achieving the strategic plan's vision by promoting collaboration, efficiency, and communication to help the NMAH understand and pursue its goals. 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 tactical plan factors in the impacts of the COVID-19 pandemic, which 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. The NMAH drew from the lessons learned out of this experience to use technologies and work in different ways to reshape how the Museum can interact with audiences in the future. For example, the NMAH developed a *Live Remote Assistant* program that allows volunteers to assist visitors via a videoconference link. The Museum's visitor experience team also helped develop an Institution-wide customer service training module for frontline staff and volunteers. This training ensures consistent understanding and enforcement of the institution's safety policies, such as the face-covering requirement, and provides strategies for de-escalating difficult conversations with visitors about COVID-19 public health protocols.

The NMAH contributes to the Smithsonian's goal of Enhanced Interdisciplinary Research by 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 (CRH); creating the Center for the Public Understanding of American Religion; and completing "Undocumented," a multi-year collecting initiative to chronicle the efforts of undocumented people to shape political change. Other related projects involve initiating a cross-disciplinary effort to document the events surrounding the 2020 election and the January 6th insurrection, and completing "¡Eschuchame!," a collection of oral histories documenting the history of Spanish-language television broadcasting. Collaborative, community-based curatorial efforts

by leaders of the CRH led to the Museum collecting a sign that community members in Mississippi had erected to mark the 1955 murder of Emmett Till but that was quickly attacked and riddled with 317 bullet holes. This moving emblem of contemporary racial violence in the fight over historical memory was exhibited for two months in the NMAH's *Flag Hall*, the symbolic center of the Museum.

In addition, the NMAH is investing in its digital future as part of the Smithsonian's goal to Expand Digital Technologies. The Museum is redesigning, migrating, and refreshing its public Web platform for the first time in seven years, based on the identified needs of the NMAH's audiences and staff. The Museum is also developing a plan to define new digital-outreach 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, better and more descriptive cataloguing, and increased availability of images in the public domain, which allows people to download them in high-resolution, for free. The Museum is also partnering with the Journal Storage platform known as JSTOR to develop an experimental project that will link NMAH collections to scholarly publications.

In FYs 2020–2022, the COVID-19 pandemic limited staff access to the NMAH, which consequently affected its collections stewardship functions and required the Museum to 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 identifying objects now in the public domain.

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 completed a forward-looking collections plan that enables sustained stewardship and advances a more inclusive and accessible national collection. This plan creates a shared language and common sense of purpose that will guide decisions about the NMAH's collections' acquisition, stewardship, and utilization. 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; and the collections inventory and decontamination projects at the Garber Facility. Most importantly, the Museum is exploring preventive measures to enhance the resiliency of the main building and protect it from catastrophic flooding. Through these far-reaching, long-term initiatives, the NMAH will promote and enhance the value of its collections, complete intensive inventory, digitization, and description projects; increase online access; advance cross-institutional collaborations; deploy innovative uses of technology; and work toward the transformation of its physical infrastructure — all with the goal of preserving the historical memories of the nation for the future.

The Museum’s new interpretive plan supports the Smithsonian’s strategic goal of Understanding and Impacting 21st Century Audiences, providing direction and focus to create rich and engaging visitor experiences within the NMAH, in classrooms, and on digital channels. The plan recognizes the potential power of the breadth of our audiences — from visitors, readers, program attendees, students, and teachers to online users, co-creators, community partners, conveners, and artists. Through active engagement with a living past, audiences will recognize themselves as change-makers and see new connections with their fellow citizens. This sense of empowerment and interconnection is fundamental to the Museum’s mission in pursuit of its goal to help the visiting public realize “a just and compassionate future.” In FYs 2022–2023, the NMAH will craft a multi-year strategy to identify and engage audiences as part of the Museum’s public outreach efforts.

In response to the ongoing COVID-19 pandemic, the NMAH continued to prioritize the creation of new digital learning content for adult and student audiences. The Museum adapted teacher and student resources to be available live, offered workshops and programs teachers and students could participate in live or watch later, created Learning Lab collections for audiences to explore online, and printed *Look !Talk! Play!* cards and materials for them to create offline. Throughout the 2021–2022 school year, the NMAH continued to add thousands of free K–12 interactive resources to its library and make them available via *History Explorer*, the Museum’s acclaimed website for teachers. Despite teachers’ restricted availability and high workload during the pandemic, NMAH educators trained more than 1,000 teachers in 2021 and collaborated with other Smithsonian units to design and deliver a digital summer teacher institute that served hundreds of teachers nationwide.

In FY 2022, the Museum will conduct its tenth National Youth Summit (NYS), with a special focus on the intersection of history and civics that asks, “How do the stories we tell about the past shape our democracy of the future?” 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 2021 NYS focused on gender equity and drew nearly 5,000 young people to participate from 34 states and at 12 different Smithsonian Affiliate museums across the nation.

In FY 2023, the NMAH will open several new exhibitions which bring history to bear on contemporary needs and concerns. *Entertainment Nation* explores how film, television, music, and sports have served as forums for key national conversations about what kind of people we are and who we want to be. *(Re)Framing Conversations: Photographs by Richard Avedon, 1946-1965* illustrates how Avedon’s iconic portraits speak to the complexities of his time and raise enduring questions for today. *Do No Harm* explores a paradox at the heart of modern medicine — its amazing inventiveness in saving lives and its sobering ability to tolerate, even exacerbate, social inequities in our collective health and well-being. *Gamechangers* uses the Museum’s incredible sports collections to dramatize how athletes, inventors, and technology have impacted how we play our games. *Gullah Basket Weavers* highlights the NMAH’s important collection of such crafts and

explores the evolution of our understanding of African American objects and their makers during the last 50 years.

Finally, 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. Staff will focus on achieving accountability and efficiencies in the Museum’s administrative, personnel, hiring, and governance practices which prioritize diversity, equity, and inclusion among volunteers, interns, Fellows, employees, 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. The Council shares resources through a monthly bulletin to offer independent, self-guided enrichment for staff; hosts a discussion series on topics relating to workplace inclusion; and is planning an “Ask Me Anything” series where members can anonymously answer questions about their representation of a marginalized community (to foster understanding in a safe space). The Council will also address issues of unconscious bias and racial equity and develop a long-term training plan tailored to the unique needs of the Museum and its staff.

EXPLANATION OF CHANGE

The FY 2023 budget request includes an increase of \$1,411,000. The increase includes \$1,051,000 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.

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 20-year exhibition *Entertainment Nation*, and a temporary rotating exhibition space, both of which will be installed on the third floor of the building's West Wing and are set to open in FY 2023. 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 2021 ENACTED	190	34,891	5	952	24	9,157	0	96
FY 2022 ENACTED	190	35,680	3	1,121	28	10,453	0	92
FY 2023 REQUEST	190	36,762	3	1,150	30	9,827	0	92

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: the NMAI-DC on the National Mall, NMAI-NY in lower Manhattan, and the Cultural Resources Center in Suitland, Maryland. However, despite having multiple sites, 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 NMAI 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 2023 budget request includes an increase of 1,082,000 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 Understanding and Impacting 21st Century Audiences, the NMAI is directing its resources to: 1) activities that will increase 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 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 2023 include:

- *Shelley Niro — 500-Year Itch*, a retrospective exhibition of the Mohawk artist, photographer, and filmmaker. The exhibition is being organized with the Art Gallery of Hamilton, Ontario, and the National Gallery of Art in Ottawa. Niro is a highly celebrated artist whose wry creations address issues of history, family, and matriarchal feminism. The exhibition is planned for NMAI's New York facility where it will accompany the recently opened, longer-term exhibition *Native New York*, which also addresses Mohawk and Haudenosaunee history and culture. The exhibition will open on May 25, 2023, and close in January of 2024.
- *Robert Houle — Red Is Beautiful*, a career retrospective exhibition for Saulteaux artist Robert Houle, organized by the Art Gallery of Ontario in Toronto. Houle is a pioneering modernist painter whose large canvases deploy color and gesture to synthesize the traditions of Native heritage items with the most advanced ideas about modern painting. His work often combines images, colors, text, or other media to create works about Native sovereignty and spirituality. The exhibition in Washington, DC is part of an international tour and will be on display from May of 2023 through May of 2024.

Both exhibitions, in New York City and Washington, DC, will be accompanied by illustrated catalogues and a full schedule of educational programming. The Canadian consulate will support both projects by sponsoring artist travel and promotion.

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 also continue working with Native educators and cultural experts on the Museum's national education initiative, "Native Knowledge 360," to create model curriculum materials. The NMAI will offer an array of virtual and on-site teacher professional development resources across the country to support educators in the use of these materials to augment their students' understanding of Native American history and culture. To promote learning across generations, the

imagination Activity Centers in Washington, DC and New York City will provide bilingual (English/Spanish) interactive learning spaces to introduce aspects of indigenous knowledge or Native science through tangible examples of their remarkable accomplishments and contributions to the world. The NMAI is also developing related online educational resources to help make the on-site centers more accessible for audiences unable to visit the Museum in person.

NMAI staff will continue to provide on-site and online educational programs for groups, schools, and the general public, leading presentations in galleries and deploying volunteers in all public spaces and program areas to ensure maximum use of all the Museum's available educational resources 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 activity and exhibit planning and programming.

In addition, the NMAI will continue dedicating resources to expand 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. Museum staff will also disseminate their research to Native American communities and public audiences through the Web, exhibitions, printed materials, programs, and publications, and will continue to seek collaborative opportunities with other organizations, museums, institutions of higher learning, and Native American communities.

Through judicious acquisition, documentation, digitization, inventory, preservation, research, security, storage renewal and enhancements, as well as through loans to museums across the United States, the NMAI's staff will continue to advance the strategic goal to Preserve Our Natural and Cultural Heritage in dialogue with Native communities and cultural experts. The Museum's scholars will also continue to engage the public by increasing digital access to collections for Native communities and hosting virtual workshops. This includes enhancing the collections by acquiring works which 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.

Furthermore, as another part of the goal to Preserve our Natural and Cultural Heritage, the NMAI also maintains the National Native American Veterans'

Memorial, which was legislatively authorized and opened on the Museum grounds in FY 2021.

Finally, 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 achieving 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 dedication, educational programs, advertising, and production of fundraising proposals, 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 2021 ENACTED	5	1,307	5	775	4	1,130	0	0
FY 2022 ENACTED	17	8,324	7	1,200	6	3,771	0	0
FY 2023 REQUEST	28	10,392	6	1,890	4	4,162	0	0

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.

In 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 (LIP) 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, NMAL received funding for 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, information technology, and capital fund raising; implement a site-selection evaluation process; and develop the capacity for administrative and financial management.

To reflect the new Museum’s status, in FY 2022 management of the LIP and \$5,000,000 was transferred from the Smithsonian’s Institution Wide Programs line item for LIP to the NMAL line item.

In FY 2023, the estimate includes a requested increase of 11 FTEs and \$2,000,000 to continue recruiting and selecting personnel, especially in research,

collections, education, and communication through digital platforms, while the Museum planning is under way. The estimate also includes an increase of \$68,000 for necessary pay for existing staff funded under this line item.

In accordance with 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 by featuring Latino contributions, and provide a national resource for the collection, study, research, publication, and establishment of exhibitions and programs about Latino life, art, history, and culture that encompasses:

- Latino contributions to the early history of what is now 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 deployments 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 Museum 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 of potential building sites.

The NMAL 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.

In FY 2022, the Museum entered the early stages of development by: (1) forming the NMAL Board of Trustees and meeting on a regular basis; (2) selecting a founding director to begin work in early May of 2022; (3) starting site selection for the Museum (to be completed by December of 2022); (4) forming a Scholarly Advisory Committee to begin meeting in March of 2022; (5) merging the Smithsonian Latino Center with the NMAL and adding new staff to the existing roster of personnel; and (6) opening the *Molina Family Latino Gallery* in mid-2022 at the National Museum of American History (NMAH), so it can serve as the provisional NMAL until the new Museum opens its doors.

In FY 2023, the NMAL will continue the work of the LIP and further the strategic goals of Enhancing Interdisciplinary Research and Understanding and Impacting 21st Century Audiences. The LIP provides funding for Smithsonian-wide 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 \$41.5 million in funding to more than 600 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. Their areas of expertise include archaeology, archival services, Latino art and design, and traveling exhibition support. 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, many of which also collaborate with the Smithsonian. The LMSP recently expanded to include an undergraduate internship supported by The Andrew Mellon Foundation and re-establish predoctoral and postdoctoral opportunities for graduate students and scholars. The undergraduate internship focuses on areas of museum work that are often under-represented by Latino professionals. Those areas include museum conservation, digital humanities, museum education, and exhibition design.

The Smithsonian is also developing the first exhibition and public program space in the 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 late spring of 2022. The *Molina Family Latino Gallery* will present stories of discovery, identity, migration, innovation, entrepreneurship, and success to millions of diverse, intergenerational visitors.

EXPLANATION OF CHANGE

The FY 2023 budget request includes an increase of \$2,068,000 which provides an increase of \$68,000 for necessary pay for existing staff funded under this line item and a programmatic increase of \$2,000,000 and 11 FTEs. The program increases are as follows:

- **(+\$2,000,000, + 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 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 diverse Museum constituencies, including different ethnic groups, schools, families, and cultural and historical foundations. This initial planning work is vital 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 services; and obtain 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 increase each year to support the NMAL opening to the public.

This increase will also 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. The staff for this office will be a mix of federal and trust positions and contractors. P.L. 116–260 specifically 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 the 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 2021 ENACTED	57	6,983	4	1,040	17	2,632	0	0
FY 2022 ENACTED	57	7,176	4	3,147	17	3,681	0	0
FY 2023 REQUEST	59	7,808	4	1,567	17	3,405	0	0

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 Gallery 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. As a result, the NPG aspires to be widely known as the place that sparks thought and conversation, one that translates factual American biography into a discussion of contemporary issues, and as an institution that includes diverse audiences as active participants to help define American identity through portraiture and biography.

The Portrait Gallery 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 Portrait Gallery’s exhibitions in FYs 2022 and 2023 will continue to support the Smithsonian’s *American Women’s History Initiative* (AWHI) by examining the contributions of women in shaping America. Highlights of special exhibitions opening in FY 2022 include:

- *Hung Liu: Portraits of Promised Lands* — This first large-scale retrospective of internationally acclaimed, Chinese-born, American artist Hung Liu features more than 50 artworks made by the artist from her time in Maoist China in the 1960s, through her immigration to California in the 1980s, to the height of her career with recent works. Liu sadly passed away only weeks before this exhibition opened. 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.

- *Watergate: Portraiture and Intrigue* — On the 50th anniversary of the Watergate break-in, this exhibition from the NPG's collection brings visitors face-to-face with the scandal's cast of characters. Many of the works featured are drawn from the *Time* collection of the original artwork created for the famed magazine.
- *The Outwin 2022: American Portraiture Today* — This exhibition is the result of the Gallery's sixth Outwin Boochever Portrait Competition. The triennial competition, which is open to all forms of media, including performance art, resulted in 42 finalists. The competition focuses on broadening the definition of portraiture while highlighting the genre's relevance in contemporary art and culture.
- *Family Ties: Daguerreotype Portraits* — Drawing upon the Portrait Gallery's collection, this exhibition reflects the range of familial relationships documented by the camera during the Daguerreian era. While they include nuclear family groups, they also speak to other meaningful family bonds — those shared by a young brother and sister; an aunt and a beloved niece; a young man and his father-in-law; a caring uncle and his nieces and nephews; as well as long-married couples posing for portraits to leave for their children.
- *I Dream A World: Selections from Brian Lanker's Portraits of Black Women Who Changed America (Part 1)* — Since the publication of these images more than 30 years ago, African American women have gained greater visibility on the national stage and in the global arena. Many of the remarkable women featured in this two-part exhibition, drawn from Lanker's extensive photographic project of 75 portraits, will be familiar to audiences. They include writers, entertainers, athletes, activists, and politicians. The personal challenges and powerful journeys undertaken by these remarkable women should prove inspirational to all visitors.
- *One Life: Maya Lin* — As part of the *One Life* series, this exhibition will be the first visual biography of architect, sculptor, and environmentalist Maya Lin to be presented in an art museum. Known primarily for her initially controversial and ultimately epoch-making Vietnam Veterans' Memorial, Lin has consistently and provocatively explored how we experience and relate to the landscape. Depicting Lin's upbringing, education, and the challenges and triumphs of her impactful career, this exhibition will demonstrate the formative influences which led to her significant contributions to art and architecture and inspire visitors through the stories of her challenges and accomplishments.

In addition to permanent collection rotations and the conclusion of existing traveling exhibitions, the Gallery will continue to travel *The Obama Portraits Tour* to the Brooklyn Museum in New York; the Los Angeles County Museum of Art in California; the High Museum of Art in Atlanta, Georgia; the Museum of Fine Arts in Houston, Texas; and the deYoung Museum in San Francisco, California. In addition, in FY 2022 the Portrait Gallery will continue its plans to reinstall *The American Origins* permanent exhibition that is now titled *Out of Many*.

The combined audience engagement department, consisting of communications, new media, and education staff, have furthered broadening access to collections by defining overarching goals, strategies that support each goal, 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 visitorship and engagement. Due to the lingering effects of the COVID-19 pandemic, the Gallery will create a hybrid model of online offerings and in-person programming. The audience engagement team will accomplish these goals through targeted outreach, the Web, and social media campaigns. As the NPG shifts to online engagement, the Gallery will serve a new, international audience, continue to build off of diverse representation by leveraging social media platforms to attract more followers and convert them to visitors, and also expand engagement with international media.

In FYs 2022 and 2023, the NPG will continue to collaborate with its innovative learning groups, The Teen Council and the Teacher Advisory Board, and use their perspectives and knowledge to extend the educational value of the Gallery'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 after-hours events, curator tours, and exhibition-specific programs, will continue to anchor the NPG's educational offerings both in person and online. The NPG docent corps remains a vibrant and diverse group, well-versed in the collection and trained in inquiry techniques to engage audiences, with one-quarter of the docents fluent in Spanish and English and able to conduct virtual tours. *Explore!*, the NPG education space for 18-month to 8-year-olds (and designed to help young people explore portraiture as art and history), will continue to draw more families to the Gallery.

The NPG's primary publication projects in FY 2022 are *The Outwin 2022: American Portraiture Today* (in April of 2022), which accompanied the Gallery's triennial exhibition; *Kinship* (in October of 2022, with Hirmer Publishers), and *1898: U.S. Imperial Visions and Revisions* (in April of 2023). These publications contribute new research to the field of portraiture and complement their respective exhibitions.

In FY 2022, *Hung Liu: Portraits of Promised Lands* (published in June of 2021, with Yale University Press) was named a finalist for the Alfred J. Barr, Jr. Award (from the College Art Association), perhaps the most prestigious award in

art museum publishing. *Votes for Women: Portraits of Persistence* (published in 2019, with Princeton University Press) was awarded the Smithsonian Secretary's Research Prize.

In addition, the publications office has adjusted during the pandemic by pivoting to assist various departments, especially curatorial and audience engagement, to provide valuable digital resources. In FY 2022, the NPG worked to produce even more online content (e.g., *One Life: Maya Lin*, in the fall). At the same time, the department continued to edit and manage hundreds of bilingual object labels and education materials.

The NPG also continues to strengthen collections and will feature prioritized acquisitions of portraits of under-represented Americans. The Gallery will accomplish this by acquiring customized cold-storage equipment to safely house its large and oversized color prints while continuing to address cataloguing backlogs, enhancing access to its collections by establishing a digitization process for its acquisitions, and digitizing as many collection objects as possible under the pandemic restrictions. Digitization efforts will focus primarily on works on paper and will load the resulting images and files into the Smithsonian's Digital Asset Management System (DAMS), complete with object condition reports. Other work includes conservation of paintings and sculpture of notable American women, and other paintings requiring treatment, as well as treatments for the delicate frames of numerous painted portraits.

The FY 2023 budget request includes an increase of \$632,000 that includes \$297,000 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 digital support and 1 FTE and \$135,000 for visitor engagement support.

MEANS AND STRATEGY

In FY 2023, 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.

The Portrait Gallery plans to pursue the strategic goal of Understanding and Impacting 21st Century Audiences in FY 2023 with an ambitious and active on-site and traveling exhibition schedule, featuring the following:

- *Portraiture Now: Kinship* — Seven contemporary artists explore intergenerational relationships, whether among blood relatives or friends, to examine the shifting notions of family. The works evoke the mutable aspect of the kinships they depict, attending to both internal and external forces that affect those relationships. Njideka Akunyili Crosby and Ruth Buentello portray the effects of migration and transnational lives, while LaToya Ruby Frazier's

photographs of Flint, Michigan depict the impact of industrial neglect on a single family. Jessica Todd Harper probes the subtle tensions underlying daily interactions between family members. Jess T. Dugan's work explores her relationship with her wife, Vanessa, as they live as a queer couple embarking on parenthood. In paintings he describes as a "form of prayer," Sedrick Huckaby addresses the memorialization of family members and loved ones who died by gun violence.

- *I Dream A World: Selections from Brian Lanker's Portraits of Black Women Who Changed America (Part 2)*
- *Recent Acquisitions/Gala installation* — Displaying recently acquired and commissioned works, this exhibition includes portraits of the newest recipients of the Portrait Gallery's *Portrait of a Nation* award: José Andrés, Clive Davis, Marian Wright Edelman, Anthony Fauci, and Serena and Venus Williams.
- *1898: U.S. Imperial Visions and Revisions* — This groundbreaking exhibition is the first to address the Spanish-American War — with its invasions of Puerto Rico, the Philippines, and Guam — as well as the Philippine-American War, and the joint resolution to annex Hawaii (as explained through a comparative study of portraiture and visual culture). The exhibition will address new cultural perspectives which have not been considered in previous histories of U.S. expansion.
- *One Life: Frederick Douglass* — As part of the *One Life* series, this exhibition will feature the pre-eminent African American of the 19th century and one of the nation's greatest writers, speakers, and intellectuals. Born enslaved, Douglass devoted his life to abolitionism and "all rights for all," a slogan of his newspaper, the longest running Black newspaper in the 19th century. He was the most photographed American of his time and became an icon through his mastery of the arts of writing, speaking, and portraiture.

In addition to these on-site temporary exhibitions, the NPG will close the national tour of the Barack and Michelle Obama portraits at the Museum of Fine Arts in Boston, culminating with a homecoming celebration when the works return to Washington, DC. The national tour of *The Outwin 2022* will launch in April of 2023 to four locations and the groundbreaking *1898* exhibition will travel to two museum partners in 2024.

The NPG's major publication projects in FY 2023 will include completion of *Kinship* and *1898: U.S. Imperial Visions and Revisions*, both of which will take the form of exhibition catalogues. The Gallery will also begin work on the *Brilliant Exiles* and *Felix Gonzalez-Torres* catalogues in FY 2023. With each publication, the NPG will broaden access to the collections through high-quality, printed works that reach diverse audiences both 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 and the reinstallation of the permanent collection gallery of art works from 1600–1900. This effort includes works from the collection never previously on view. It includes more portraits of women and other historically under-represented groups. 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 add to its burgeoning collection of time-based media art works as well as increase the number of commissions it authorizes. Furthermore, the Gallery 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 work with central Smithsonian offices on finance and management process improvements.

As the national museum of American biography, it is vital that the NPG remain open, welcoming, and relevant to all Americans, with accessibility programs to make the Gallery's educational initiatives available to all visitors both in person and only. Accordingly, a dedicated program specialist will engage the accessibility community about the diversity of portraiture, cultures, and art.

EXPLANATION OF CHANGE

The FY 2023 budget request includes an increase of \$632,000 that includes \$297,000 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.

- **Digital 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 critical positions and help defray costs of special events for exhibition openings, loan exhibition development, outreach, fund raising, management, and research. The NPG must support exhibitions, publications, public lectures, gallery programs, symposia, and some collection acquisitions with donor/sponsor-designated funds. Private donations are thus critical to the NPG's planning, programming, and ability to deliver on its public mission. It is through a public-private partnership that the 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 2021 ENACTED	6	1,854	2	421	2	2,868	19	3,332
FY 2022 ENACTED	8	2,105	2	444	3	2,572	23	3,525
FY 2023 REQUEST	8	2,160	2	455	3	2,640	24	3,200

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 (for years 2022–2025) is designed to advance the core strategic directions of the Museum for the next three years. Many of the strategic objectives will require management to coordinate different departments and to enlist Institution-wide cooperation. Specifically, the Museum’s management staff have created the necessary processes to ensure the teamwork required for achieving shared objectives. NPM senior leadership gave special attention to the plan for digital outreach and engagement, because this area will become increasingly important to the Museum 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 strengthen the NPM as a global leader in education and the knowledge and dissemination of postal and philatelic history. Using the Web to highlight our collection’s depth and value will provide better access for the public and scholars as well as encourage donations to support the Museum’s important work. In addition, the NPM will change how it greets and orients visitors, supports and staffs exhibitions, and creates the new programs that will attract and serve diverse audiences.

The NPM will also 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 staff professional communications) and the outward-looking efforts needed to develop and attract new audiences.

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

The FY 2023 budget request includes an increase of \$55,000 for necessary pay and other related salary costs for existing staff funded under this line item.

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 leader 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 the NPM's 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 enhanced by dozens of objects loaned by other Smithsonian museums, law-enforcement agencies, and private collectors. The bilingual, three-year exhibition will be presented in English and Spanish through a collaboration with the Smithsonian Latino Center and will have broad appeal to the public.

Also in FY 2022, the NPM's Department of Education and Visitor Services (DEVS) will continue to expand pre-K–12 educational programs and create and expand exhibit-related learning opportunities for both on-site and virtual learners. The Byrne Education Center will continue to support the Museum's enhanced learning opportunities for visiting groups. By focusing on social and emotional learning practices, hands-on activities, and civic connections to the Museum's collections, the NPM is uniquely positioned to help learners make personal connections to our content. Throughout FY 2023, the Byrne Education Center will once again be used by the Museum and the greater Smithsonian community for meetings and programs.

Due to the ongoing COVID-19 pandemic, the NPM is increasing its virtual educational programming and resources. With programs targeting early learners, students, teachers, and adults, the Museum has cast a wide net and is expanding its number of digital followers around the world. In FY 2023, the NPG will also focus on initiatives to improve the visitor experience. Since reopening to the public in 2021, all floor staff have undergone extensive training to promote inclusivity and accessibility, and all our on-site visitors are invited to explore the galleries, using printed maps available in 11 languages. Nearly all virtual programs include live closed captioning or sign language interpreters, visual descriptions of speakers and images, and land recognitions honoring the history and culture of the region's Native American communities. FY 2023 will also include the continued planning and design of a family-style bathroom and lactation space, as well as planning for the renovation of the first-floor galleries.

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. The Museum's collections team leads efforts to preserve and provide access to collection objects on site and online. Since the pandemic began, the department has steadily increased and enhanced the number of object records available online through various initiatives, including a bi-annual publication of new accessions to the Museum's website, participating in the Institution-wide open-access initiative, and reviewing never-before-published object records for posting to the website.

In FY 2023, the NPM collections staff will build on their accomplishments by continuing to participate in Institution-wide digitization efforts, carrying out exhibition rotations, identifying and consolidating material in storage, processing deaccessions, and maintaining normal business operations. 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 who can see NPM objects via the Museum's website.

Also in FY 2023, the collections department will support 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 NPM 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. The department anticipates that FY 2022 will mark the first year that the Museum adds material created or "born digitally" to the collection. A major initiative to improve accessibility to off-site collections will also remain a Museum priority.

In addition, the collections department will continue to catalogue, image, and conserve the loan of 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 2023, 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 its collections stewardship plan. The 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 intellectual and physical control of its collections and ensure that it has appropriate staff and resources to manage them.

NONAPPROPRIATED RESOURCES — The USPS 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 and public programs, and special events.

SMITHSONIAN AMERICAN ART MUSEUM

	APPLICATION OF OPERATING RESOURCES									
	FEDERAL APPROPRIATIONS		GENERAL TRUST		DONOR/SPONSOR DESIGNATED		GOV'T GRANTS & CONTRACTS		INTERAGENCY	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2021 ENACTED	90	10,938	13	2,184	37	9,181	1	136	3	200
FY 2022 ENACTED	90	11,263	13	2,249	37	9,456	1	140	3	206
FY 2023 REQUEST	91	11,861	13	2,249	37	9,456	1	140	3	206

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 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 drives collections development and 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 800 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. In addition, SAAM 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.

In FY 2023, SAAM will Expand Digital Technologies by offering 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 achieve its strategic goal to 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. SAAM's Renwick Gallery has additional space for exhibitions, public programs, and rotating displays of its permanent collection of American crafts. Multiple traveling exhibitions 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 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 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 across the nation and on U.S. military bases worldwide.

Public programs enhance 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 2021 alone, 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 Museum's 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.

The Museum takes a multi-pronged approach to ensuring that Cost-Effective and Responsive Administration supports its mission. 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 anywhere, on any device. Managers carefully plan, promote, protect, and conserve the Museum's resources.

The FY 2023 budget request includes an increase of \$598,000 that includes \$448,000 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 digital support 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 2023. 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 journal, *American Art*, will publish three issues of new scholarship. SAAM also 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 appreciate their 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 also participates in collaborative digital initiatives with other organizations, using 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 on many platforms — including Facebook, Twitter, Instagram, and our blog, *Eye Level* — which engages the public in conversations about art-related topics. The Museum adds dozens of educational videos and live streams to its non-profit YouTube channel each year and makes these assets fully accessible regardless of the type of device used. Custom-built interactive exhibition components, apps, and videos are used whenever appropriate to provide a richer learning experience for visitors.

SAAM is planning six exhibitions in FY 2023, including: *Subversive, Skilled, Sublime: Fiber Art by Women*; *Steel and Sky: Views of New York City*; *We are Made of Stories: Self-Taught Artists in the Robson Family Collection*; and *Musical Thinking: New Video Art and Sonic Strategies*. In addition, the Renwick Gallery will host an exhibition around its upcoming 50th anniversary, *This Present Moment: Crafting a Better World*, taking over the whole building to showcase 50 years of crafts at the Renwick. This will be followed by the *Renwick 2023 Invitational*, showcasing six emerging Native American artists.

As part of its goal 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. To supplement this ongoing effort, SAAM is renovating its galleries with new installations to showcase additional works of art for our diverse audiences.

National outreach includes the touring exhibitions *African American Art, Kara Walker*, and *William H. Johnson: Fighters for Freedom; Sargent, Whistler, and Venetian Glass: American Artists and the Magic of Murano*; and *Printing the Revolution! The Rise and Impact of Chicano Graphics*. Interactive exhibition components keep pace with proliferating information streams. In addition, whenever possible, SAAM loans objects from the national collection to other museums.

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 Washington, DC public schools expand the Museum's reach to more diverse audiences. In addition, the Museum created two weeklong "Smithsonian Summer Sessions," virtual, interdisciplinary experiences to model strategies for learning through art, history, and culture, which were attended by 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). SAAM also turned the "Summer Sessions" content into an 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 Museum is using new tools and instrumentation to preserve its collection and has leased cool-storage space to ensure that photographic material is preserved in ideal conditions. Artworks will be acquired to fill gaps in the collection. 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.

SAAM's information technology and administrative procedures closely monitor resources and processes, resulting in Cost-Effective and Responsive Administration. Use of the Museum's intranet site keeps staff current on the ever-changing procedural and regulatory environment. Finally, SAAM conducts continual reviews of work processes and conditions to develop safer techniques and materials for both staff and the environment, as well as the national collections.

EXPLANATION OF CHANGE

The FY 2023 budget request includes an increase of \$598,000 that includes \$448,000 for necessary pay and other related salary costs for existing staff, and a programmatic increase of 1 FTE and \$150,000 for digital and Web support.

Digital Support — Lifecycle Coordinator (+\$150,000, +1 FTE)

This budget request includes an increase of \$150,000 and 1 FTE to hire a digital support lifecycle coordinator who will help handle 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. Improved digitization of Museum collections will mean better public access to and online availability of SAAM's collection for scholars, students, researchers, and audiences around the world. The position will support 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. Accordingly, this hire is essential for SAAM to achieve its own mission, sustain core functions, and meet the digital expectations of audiences in 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 2021 ENACTED	0	500	0	0	0	0	0	0
FY 2022 ENACTED	13	7,500	3	805	0	2,593	0	0
FY 2023 REQUEST	22	9,568	3	703	0	3,191	0	0

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 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* (AWHI) of \$1,000,000 were realigned to the new SAWHM line item by \$500,000 and to the Administration line item by \$500,000 for required staff to support the new Museum.

In FY 2022, SAWHM received funding for 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. To reflect the new Museum’s status, in FY 2022 \$5,000,000 was transferred from the Smithsonian’s Institution Wide Programs line item for AWHI to the SAWHM line item.

In FY 2023, the estimate includes a requested increase of 9 FTEs and \$2,000,000 to continue recruiting and selecting personnel, especially in research, collections, education, and communication through digital platforms, while the

Museum planning is under way. The estimate also includes an increase of \$68,000 for necessary pay for existing staff funded under this line item.

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

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; the ability to reach audiences nationwide through digital resources; and the creation of exhibitions and programs to recognize diverse perspectives on women’s history and their many contributions to the life of our country.

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 and content available at the Museum once it is built, and to communities and public audiences through the Web, printed materials, and collaborative activities with other groups and organizations until then. As work is done on the physical building, the Museum is prioritizing the creation of virtual content and digital experiences to reach audiences across the country as part of our strategic goal of Expanding Digital Technology.

To achieve the strategic goal of Understanding and Impacting 21st Century Audiences, the SAWHM will focus on 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 publishing initial materials about the new Museum. This work will be guided by a report created in 2022 that examined best practices across the Smithsonian and identified ways the SAWHM could better attract diverse audiences and support staff.

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 site-selection process is currently under way, which involves gaining insight through stakeholder focus groups and a national survey, in-depth analysis of potential sites, and consultation with federal agencies and commissions. Additional studies will also be needed to assess and plan for future collections and collecting activities.

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

personnel actions and vacancy announcements to hire new staff; organizing a capital campaign office; and developing a fundraising strategy and implementation plan to identify philanthropic prospects and major gift sources. The Museum has already received several major donations, including its first grant from a foundation and its first corporate gift.

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 FY 2021, with the blend of federal and nonfederal funds, AWHI hired a director as well as two data scientists to provide a more sophisticated analysis of our collections data on women's history. Since its inception, AWHI has awarded over \$10 million to 25 Smithsonian units in support of over 100 projects.

In October of FY 2020, the AWHI launched the exhibit *Girlhood: It's Complicated* at the National Museum of American History. The initiative continues to fund the development of the traveling exhibit, which will tour the nation from 2023 through 2025. In FY 2022, the second edition of our book, *Smithsonian American Women*, will be published. This will allow us to share treasures from the Smithsonian's collections with thousands more people across America. In FY 2021, AWHI funds supported the *Hung Liu: Portraits of Promised Lands* exhibition at the National Portrait Gallery. The initiative continued its partnership with the Golden Triangle Business with the ongoing display of *Marker* by the artist Rania Hassan. AWHI also provided support for the acquisition of several significant new collections items. In FY2021, the commissioned acquisition of *I Go To Prepare A Place For You* by artist Bisa Butler went on exhibit at the National Museum of African American History and Culture.

AWHI continued to tell the stories of diverse American women through social media. In FY 2021, we jointly won the Gold GLAMi for marketing and promotion for our summer 2020 collaboration between the Smithsonian, the National Archives, and the Library of Congress, #19SuffrageStories, which 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. The initiative also continued our #BecauseOfHerStory series of animated videos inspired by Smithsonian collections, inviting social media audiences to explore stories from the 1930s to 1980s and spark

connections between the past and present. AWHI-funded curators worked across the Institution to make these projects happen.

In FY 2022, the AWHI will continue to share women's history to a variety of audiences. Our educational output includes a 12-page at-home activity guide for Women's History Month for *USA Today* in March 2022, featuring objects and women represented throughout the Smithsonian's collections. AWHI is also developing virtual events for early learners for Women's History Month. The Initiative team will be working locally with the District of Columbia Public Libraries to host a series of programs that pair art and prose by diverse American women authors. In addition, we will host an episode of the Smithsonian's podcast, *Sidedoor*, and lead a public program centered on American Girl dolls and how they empowered girls to both make change and spark interest in American History. For classroom use, we are developing a set of teaching posters with art and artifacts about LGBTQ+ American women. As we move into FY 2023, these efforts will ground our outreach to teachers, students, and families.

Launched in 2019, the Because of Her Story (BOHS) Cohort Internship Program is a paid, eight-week summer internship. BOHS interns amplify women's stories to tell a more complete American history, reach a diverse audience, and empower and inspire people from all walks of life. Due to the COVID-19 pandemic, the 2021 BOHS program virtually hosted 16 interns from across the country at various Smithsonian units. The 2022 program will also be held virtually, featuring 13 internship projects ranging from "Black Feminist Public History: Roots, Branches, and Remedies" at NMAH to "In Fleming's Footsteps: Recognizing and Documenting Gendered Care Work in Astronomy" at SAO.

In FY 2022, the Smithsonian continues to promote research and education via online partnerships and expand on our digital work. The Institution continues to work on establishing a baseline to guide the representation of American women and girls in the Smithsonian's public digital collections. In addition, the AWHI funded digital projects that will provide gender-inclusive descriptions of collections metadata, which will increase the discoverability of women and girls in Smithsonian collections online. The initiative also hired a contract coordinator to further this work on collections metadata. In FY 2021, we added 137,755 words and 60 new articles about American women to Wikipedia. Smithsonian images of American women on Wikipedia were viewed over 9 million times. This work puts trusted Smithsonian resources directly in the hands of the public. Furthermore, AWHI is in the process of revamping our website to become the future online home of the Smithsonian American Women's History Museum.

Per H.R. 1923 and the "Circulating Collectible Coin Redesign Act of 2020" (public law 116-330), the AWHI has consulted on the U.S. Mint's American Women Quarters program since January 2021, providing subject matter expertise and advising on the selection of honorees for the 2022 and 2023 series. In FY 2022, the AWHI is excited to continue working with the U.S. Mint and the National Women's History Museum in Alexandria, VA, to select honorees for the 2024 and 2025 circulating quarters.

In FY 2023, the AWHI program will continue developing its private/federal partnership to make the most cost-effective use of these combined resources.

EXPLANATION OF CHANGE

The FY 2023 budget request includes an increase of \$2,068,000 which provides an increase of \$68,000 for necessary pay for existing staff funded under this line item and a programmatic increase of \$2,000,000 and 9 FTEs. The program increases are as follows:

- **(+\$2,000,000, + 9 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 a broad range of constituencies that include 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 will offer 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.

This increase will also 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 2021 ENACTED	51	9,717	30	5,055	19	4,399	5	1,051
FY 2022 ENACTED	51	9,924	30	5,638	22	6,924	4	1,181
FY 2023 REQUEST	53	10,525	30	6,032	24	5,342	5	1,097

BACKGROUND AND CONTEXT

All 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 the sharing of educational resources via publications, lectures and presentations, training programs, and websites. Smithsonian outreach programs work closely with the Institution's museums and cultural and research centers, as well as with more than 200 Affiliates 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 (EOAP); the Office of Educational Technology (OET); the Office of Academic Appointments and Internships (OAAI, formerly 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 2023 budget request includes an increase of \$601,000, which provides \$301,000 for necessary pay and other related salary costs for existing staff funded under this line item, as well as \$300,000 and 2 FTEs in exhibit support for SITES | Affiliations.

MEANS AND STRATEGY

The **Smithsonian Institution Traveling Exhibition Service and Smithsonian Affiliations (SITES | Affiliations) (43 FTEs and \$5,969,000)** became a single unit in 2018. Its unified mission is to 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. SITES | Affiliations expands the reach and impact of the Smithsonian and the Institution's network of collaborators, widely sharing knowledge, resources, and expertise. It facilitates strong connections and relationships across the network so that staff, partners, and collaborators can all learn from each other and extend outreach to the public.

In addition, 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. This work underscores the importance of using local stories to better understand national narratives, provides local perspectives on national and global issues, and stimulates lifelong learning. These activities and programs enable people to see the relevance of the Smithsonian in their daily lives.

SITES | Affiliations also promotes innovation and best practices for museums and museum professionals. As a unit, 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, these efforts combine to increase our collective reach and foster conversations on relevant questions of interest to individual communities.

With its broad appeal, 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, staff 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. And 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. Other 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, SITES | Affiliations will help diversify future museum workers and supporters through robust internship programs for college students at Affiliates nationwide.

Taken together, 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 objects. 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. Through these exhibitions and programs, and in collaboration with museums and cultural organizations across the country, the Institution provides an accessible and consistent presence beyond the National Mall and other Smithsonian facilities.

Educational Outcomes and Academic Programs (EOAP) (5 FTEs and \$678,000) — This outreach function exists 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 which help create and disseminate content to outreach that broadens access to and engages audiences with the Smithsonian's educational offerings. This level of expertise in research also supports education and outreach initiatives across the Institution and closely links the outreach measures with outcomes reported to that Under Secretary so the programs can be fine-tuned for maximum impact.

Office of Educational Technology (OET) (8 FTEs and \$1,009,000) — The Smithsonian is creating new digital services and platforms for scholars, educators, and students to better access and use the national collections, research, and educational resources. One such platform, the Smithsonian Learning Lab (developed by the OET) is a free, Web-accessible toolkit for educators and students that enables everyone to find and customize millions of Smithsonian digitized resources for educational use and share them with others. Based on research and evaluation with pre-K–12 audiences and museum educators, the Lab provides valuable new services aligned to the needs and realities of its global audiences. The OET also develops standards-aligned resources for classrooms and provides professional development to museum educators and

classroom teachers to help them get the most out of digital museum resources for learning. Within the Institution, the OET uses digital tools to lead the development of strategies to connect Smithsonian resources with classrooms across the country. It offers services and technical support to other units on the use of technology, content strategy, and data-driven decision making to achieve unit objectives. These range from collaborations to create and disseminate content to technical modifications to the Learning Lab in response to unit requests. Other activities include conducting market research to develop new outreach programs and communications to broaden access to and engage audiences with the Smithsonian's educational offerings. The OET's resources in user-centered research and applications also support education and access initiatives across the Institution. The OET plays a strategic role to identify and develop content sharing partnerships and support them with external education technology and classroom support organizations.

Office of Academic Appointments and Internships (OAAI) (6 FTEs and \$2,021,000) — Housed under the Office of the Under Secretary for Education, OAAI 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 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 scholarly appointments.

In particular, the Institution offers Fellowships to provide opportunities for graduate and pre-doctoral students, and postdoctoral and senior investigators to conduct independent research, with Smithsonian professional research staff providing advice and guidance. These appointments allow for more effective use of staff, collections, and facilities.

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. Accordingly, the Smithsonian has increased Fellowship stipends to provide awards comparable to other prestigious programs so the Institution can maintain a competitive edge. Smithsonian has kept funding for stipends flat, increasing the value of each award, but decreasing the number of Fellowships awarded. The Smithsonian is also working to raise private funding for the Fellowships and Scholarly Studies Program. The Fellowships help today's young scientists become the next generation's top researchers. In addition, the Smithsonian continues to support current staff with the resources needed to develop new research initiatives, collaborate with other scholars, and determine the feasibility of proposed projects.

Smithsonian Institution Scholarly Press (SISP) (4 FTEs and \$848,000) — Through the open-access Smithsonian Contributions Series program, continually published since 1875, and open-access monographs, SISP advances science at the

Smithsonian by disseminating and publishing research results of the Institution's staff and their collaborators. Federal funds help produce 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 documents 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, conference proceedings, and scholarly books closely related to Smithsonian programming and to the national collections.

Finally, federal resources enable SISP 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 Understanding and Impacting 21st Century Audiences.

EXPLANATION OF CHANGE

The FY 2023 budget request includes an increase of \$601,000, which provides \$301,000 for necessary pay and other related salary costs for existing staff funded under this line item, as well as \$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 popular MoMS program continues to enrich the underserved people of rural America. The increased funding will support a 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 important issues affecting their lives.

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 2021 ENACTED	18	2,915	28	3,825	0	7	0	0
FY 2022 ENACTED	18	2,982	34	4,470	0	0	0	0
FY 2023 REQUEST	20	3,297	34	4,470	0	0	0	0

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 marketing, and oversees the Institution’s 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 Smithsonian to better execute its mission. Accordingly, the OCEA is responsible for helping the Institution reach and engage 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 provides 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 consistent 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. This 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 at the Smithsonian. The Office advances the Smithsonian's mission through its activities as the primary point of contact for visitors and volunteers. Office resources support the Strategic Plan by administering products and services which broaden visitor access to Smithsonian public programs and activities.

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. Office staff also serve as the principal coordinator of events for the Secretary and the senior leadership of the Institution.

The FY 2023 budget request includes an increase of \$315,000 that includes \$93,000 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 communicating with 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* series of programs.

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 coordinates 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 visitors use to plan and enjoy their visits, as well as support systems that enable Smithsonian staff to better aid on-site visitors. The OVS administers the Smithsonian Information Center at the Castle, the outdoor visitor information kiosks near 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 2023 budget request includes an increase of \$315,000 that includes \$93,000 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 dissemination of information, 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 2021 ENACTED	0	23,284	0	0	0	0	0	0
FY 2022 ENACTED	0	15,734	0	0	0	0	0	0
FY 2023 REQUEST	0	23,934	0	0	0	0	0	0

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 (IT) needs throughout the Institution. The Smithsonian 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. 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. In FY 2018, Congress approved a \$2,000,000 increase to Institution-wide programs in support of the new American Women’s History Initiative (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 pool. In FY 2022, Congress approved an increase of \$1,100,000 to the APAIP.

In FY 2021, Congress approved increases of \$1,000,000 each for the LIP and AWHI pools. In FY 2022, \$1,000,000 was transferred from the LIP to support the new National Museum of the American Latino (NMAL) line item of \$500,000 as well as an administrative line item for \$500,000. Also in FY 2022, \$1,000,000 was transferred from the AWHI pool to support the new Smithsonian American Women’s History Museum (SAWHM) line item of \$500,000 and the administrative line item of \$500,000. In addition, in FY 2022, the remainder of the AWHI pool funds (\$5,000,000) was transferred to the SAWHM line item and the LIP balance of \$5,000,000 to the NMAL line item.

In FY 2023, the Institution requests approval for the following funds:

- Research Program Initiatives: \$3,650,000
- Digital Support Pool: \$3,050,000
- Education Initiatives Pool: \$1,500,000
- TOTAL: \$8,200,000**

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. This pool aligns with major initiatives and strategic priorities, including: *Our Shared Future: Reckoning with Our Racial Past*; *Our Shared Future: Life on a Sustainable Planet*; and *Our Shared Future: My Hometown*. 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 IRM 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 IT 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 — 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, the national 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, which 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 global climate change, the spread of invasive species, and the loss of biological and cultural diversity and its impact on the world's 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 Institution'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 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

As background, 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 status, establish priorities, identify areas where improvements are needed, measure progress, and provide a practical framework for the allocation of limited 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; enable 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 many 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 areas to make them more physically accessible, anticipate future collections growth, and reduce the Institution's need to lease costly space for collections storage.

The implementation of the CSFP addresses near-term space requirements and 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 National Museum of American History (NMAH) East Wing public renewal project; (3) the construction of two new storage modules and a hangar next 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 accommodate intermediate and long-term collections space needs.

In support of this request, 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 for improving the management, care, and accessibility of the national collections. In FY 2023, the Smithsonian will continue to build on collections care 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 the collections space survey.

MEANS AND STRATEGY — ASIAN PACIFIC AMERICAN INITIATIVES POOL (\$1,700,000)

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 funds 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 which demonstrate cost-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 70 Smithsonian programs and projects and has increased the Asian Pacific American presence in the Institution's presentation of and research into the American Experience. In FY 2018, the APAIP supported its first curator dedicated to preserving and exhibiting Asian Pacific American history at the NMAH. With the additional funding provided in FY 2020 and FY 2022, 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. Pool administrators expect to also support a curator at the National Museum of American Indian to focus on Asian Pacific American studies in FY 2023.

MEANS AND STRATEGY — LATINO INITIATIVES POOL

The LIP will achieve the strategic goals of Enhancing Interdisciplinary Research and Understanding and Impacting 21st Century Audiences by funding 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.

In FY 2021, the Institution transferred \$500,000 from the LIP to the NMAL line item and \$500,000 to the administrative line item to provide administrative support for the new Museum.

In FY 2022, the entire \$5,000,000 was transferred from the LIP to the NMAL line item to provide additional flexibility in developing the new Museum. The LIP program will continue its private/federal partnership to make the most cost-effective use of these combined resources.

MEANS AND STRATEGY — AMERICAN WOMEN'S HISTORY INITIATIVES POOL

The AWHI pool, first funded by Congress in FY 2018, heightens the public's knowledge and appreciation of the transformational role women have played in constructing our national identity and culture. The Smithsonian Institution, through the 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 helped shaped this country. The Smithsonian is partnering with public and private entities to secure funding for the initiative's outreach and impact. In FY 2019, the Institution established a national advisory committee to shape the initiative and secure resources for representing AWHI constituencies and stakeholders. 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 FY 2021, the Institution transferred \$500,000 from the AWHI to the SAWHM line item and moved \$500,000 to the administrative line item to provide administrative support for the new Museum.

In FY 2022, the entire \$5,000,000 was transferred from the AWHI to the SAWHM line item to provide additional flexibility for launching the new Museum. 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 how our collections data inform women's history.

EXPLANATION OF CHANGE

In FY 2023, the Institution requests an increase of \$8,200,000 for the following pools.

RESEARCH PROGRAM INITIATIVES (\$3,650,000)

The Smithsonian requests additional funding to support the innovative and emerging research pool of money that is managed by the Under Secretary for Science and Research. This pool will continue to foster a research environment that spurs scientific innovation and provides the essential financial support needed to execute world-class science. Priority is given to high-risk, high-reward activities which build technical capabilities within the Smithsonian's established areas of research. This program helps recruit and retain the world's finest scientific talent, support postdoctoral researchers, and develop a diverse science, technology, engineering, and mathematics (STEM) workforce.

The funding criteria is flexible enough to respond to emerging research opportunities which 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 consider the impact of COVID-19 telework on researchers just starting their careers, 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 demonstrate how both 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 migration 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 conflicts, and understanding the factors responsible for extinction, including the impacts of climate change, will produce valuable data about the health of ecosystems and the effects of human activities on wildlife.
- 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? Smithsonian scientists need vital resources to answer these questions.
- Astronomy — Studies will be developed to help determine how we will find evidence of life on another planet and what physical-chemical processes lead to the great diversity among planets in our solar system and beyond.

DIGITAL SUPPORT POOL (+\$3,050,000)

A 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 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 Institution has the unique ability and basic obligation to increase public understanding of our universe, our history, and our shared future, and to work for the common good in accordance with our mission “for the increase and diffusion of knowledge.”

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, the Institution has created a new position reporting to the Secretary and Deputy Secretary to lead the transformation and provide critical leadership and guidance to Smithsonian units. This new direct report will assist units with re-imagining their work by creating content and programming to reach our diverse audiences digitally.

As part of these efforts to expand digitization and open access and increase the type and volume of content we make available to the world, the Smithsonian requests a Digital Support Pool be included in the Institution-wide line item.

This funding will provide digital platform and software development, support the ramp-up of mass digitization and informatics, and expand 3D digitization infrastructure with key developers and program managers. The requested funds will also support the central digital transformation function, digital platforms which support sharing collections, the open-access initiative, the digitization program, and the Transcription Center that draws thousands of digital volunteers worldwide. In addition, the funding will enable data science to expand the information management infrastructure and provide appropriate staffing to key units.

Furthermore, this funding will support the logistics and technology for Smithsonian researchers to do their work. An example is how the Data Science Lab uses artificial intelligence (AI) and machine learning (ML) to extract information from 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 for researchers, developing methods to increase the efficiency of new neural networks, and identifying and addressing unscientific bias in existing networks.

EDUCATION INITIATIVES POOL (+\$1,500,000)

In keeping with the Smithsonian’s Strategic Plan, the Institution requests funding to support educational outreach, including programs to address racial equity and sustainability issues. In response to the COVID-19 pandemic, the Smithsonian ramped up its commitment to expand public 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. A wide range of these resources can be found on [Smithsonian Cares](#), including many webcasts and online events.

Accordingly, the Smithsonian will include the 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 where educators and learners of all ages can access millions of digitized resources for teaching and learning. Smithsonian educators and experts use this platform to co-create content with pre-K–12 teachers 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 enable Smithsonian educators to work with the nation's pre-K–12 teachers and 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 help enhance existing 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 far beyond the walls of our museums and research 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 will be used to create new distance-learning resources and add content to existing platforms in support of the nation's distance-learning needs in school, after school, and at home. This investment in technology would dovetail with newly developed processes to help ensure that online learning environments are age-appropriate safe spaces for young learners and provide high educational value in return for the funds spent.

SMITHSONIAN EXHIBITS

	APPLICATION OF OPERATING RESOURCES									
	FEDERAL APPROPRIATIONS		GENERAL TRUST		DONOR/SPONSOR DESIGNATED		GOV'T GRANTS & CONTRACTS		INTERAGENCY AGREEMENTS	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2021 ENACTED	28	3,266	16	207	0	0	0	0	1	48
FY 2022 ENACTED	29	3,498	16	200	0	0	0	0	0	0
FY 2023 REQUEST	29	3,627	16	210	0	0	0	0	0	0

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 the Institution’s content and collections. The SIE is the exhibit resource available to all Smithsonian museums, research centers, and Affiliates. In partnership with colleagues throughout the Institution, the SIE consistently delivers the highest quality exhibit design, interpretive writing, editing, project management, graphic production, fabrication, installation, and 3D services to help support the Smithsonian’s mission.

The SIE achieves the strategic goal to Understand and Impact 21st Century Audiences by continuing to focus on 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 and produce the needed resources.

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.

In addition, the SIE 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 2023 budget request includes \$129,000 for necessary pay and other related salary costs for existing staff funded in this line item.

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 2023, 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;
- developing and implementing techniques for greater accessibility and inclusivity of exhibition elements across the Smithsonian Institution;
- promoting exhibition excellence, unit sharing of resources, and advancement of exhibitions as an interpretive medium throughout the Smithsonian Institution; and
- leveraging its expertise in working with electro-mechanical interactive components and tactile experiences to deepen audience engagement in all Smithsonian 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 Institution's leadership in the field of exhibition design and production.

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 2021 ENACTED	18	1,949	0	0	0	0	0	0
FY 2022 ENACTED	18	1,991	0	0	0	0	0	0
FY 2023 REQUEST	18	2,044	0	0	0	0	0	0

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. Additionally, the MSC and the National Gallery of Art are partners in constructing a new collections storage pod at the Center.

The collections at the MSC are used to support scientific and cultural research for essential Government functions in areas as diverse as climate change, environmental disasters, food and transportation safety, border security, criminal investigations, forensics, national defense, 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; film and genetic collections 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 multiple buildings, including a laboratory and oversized storage areas in addition to the main building. These facilities house laboratories for Smithsonian scientists and other federal agencies, such as the WRBU. The laboratories focus on molecular systematics, ancient DNA,

conservation, and other specialized research. The MSC supports contracted maintenance services and required calibration for special 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 increase includes \$53,000 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 be flexible and nimble while improving collections storage and services. The MSC will focus on pest management and storage of collection materials. Additionally, the MSC will focus on logistical support of shipping and collections functions. Shipping and logistics have become near-term challenges due to issues with the supply chain, changes in international requirements, and rapid growth in the shipping industry. The MSC will support other Smithsonian units in navigating these changes as well as new challenges to collections management.

In FY 2023, Smithsonian will continue construction of a new storage pod (POD-6) in partnership with the National Gallery of Art. 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 as the space becomes available.

MUSEUM CONSERVATION INSTITUTE

	APPLICATION OF OPERATING RESOURCES									
	FEDERAL APPROPRIATIONS		GENERAL TRUST		DONOR/SPONSOR DESIGNATED		GOV'T GRANTS & CONTRACTS		INTERAGENCY AGREEMENTS	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2021 ENACTED	22	3,459	0	15	3	525	0	0	0	3
FY 2022 ENACTED	22	3,562	0	19	3	714	0	6	0	17
FY 2023 REQUEST	22	3,770	0	21	2	446	0	6	0	0

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 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 agencies and organizations.

The FY 2023 budget request includes an increase of \$208,000 for necessary pay and other related salary costs for existing staff funded under this line item.

MEANS AND STRATEGY

The MCI will achieve the strategic goal of Enhanced Interdisciplinary Research, by collaborating with the Smithsonian's scientific researchers and research centers and providing increased technical and research assistance to Smithsonian arts and humanities researchers, collections, and museums. The MCI will initiate, facilitate, and support 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 basic research into the mechanisms of materials 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. In addition, the MCI will support the conservation and heritage science fields through publications, hosted symposia, presentations, invitation-only seminars, lectures, and its website. The Institute will use all these means to disseminate the results of its research programs.

In FY 2023, the MCI will continue to develop its biomolecular mass-spectrometry and proteomics capabilities as 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 to rapidly acquire 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. In short, 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 causes of their deterioration, as well as how to better preserve them.

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 develop 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 its webpages to engage 21st-century audiences and 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. In addition, 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.

Furthermore, to achieve the goal of education, the MCI will engage and inspire diverse audiences, with a focus 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 to attract students from a wider variety of backgrounds and encourage them 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 supports 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 recovery of regional cultural heritage. In some countries, the crisis caused by ISIS has endangered irreplaceable world cultural heritage and the local citizenry requires consistent support to recover from the destruction and ensure that these treasures are 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 and serve as a goodwill ambassador for the American people.

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 disseminate collections information to the larger museum community and the public. To this end, the MCI is chairing the 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 endangered 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 continue to support conservation and research for the Smithsonian's fragile and at-risk photographic collections and 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. By working closely with museum conservators, the MCI will identify special training needs and research projects, and 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).

The MCI will support an efficient management infrastructure to achieve the strategic goal of Enabling Cost-Effective and Responsive Administration. 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. To ensure an effective use of funds, 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 Institution'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 the remaining funds going 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 2021 ENACTED	106	15,106	11	1,706	6	1,047	0	0
FY 2022 ENACTED	107	15,956	9	1,321	12	2,302	0	0
FY 2023 REQUEST	108	16,935	8	1,330	12	2,417	0	0

BACKGROUND AND CONTEXT

The Smithsonian Libraries and Archives (SLA) began FY 2022 with the appointment of Tamar Evangelestia-Dougherty as inaugural director. FY 2023 will provide the opportunity for the SLA to continue successful operations and implement new initiatives. Under this new leadership, the SLA will develop a new organizational structure with redefined priorities to better help the Smithsonian meet existing and new challenges in better managing our resources.

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 support the Smithsonian community, 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 in Washington, DC; Landover, Maryland (at the Pennsy buildings); and Iron Mountain in Boyers, Pennsylvania. Additionally, research library collections are held in the SLA's network of libraries from the Republic of Panama to New York City.

The library research collections and the library and archives professionals who select, preserve, and interpret the collections for Smithsonian researchers and the public 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 communicate with other scholars. 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 around the world.

MEANS AND STRATEGY

The SLA's core activity for FY 2023 will be to continue to fully integrate the staff and services of the combined Smithsonian libraries and archives. Under the guidance of a new director of the SLA, the integration strategy will incorporate the following areas:

- **Finance and Administration.** The unified SLA will leverage and extend existing financial resources for maximum value to the Institution. Streamlining financial services and providing Smithsonian administrators with clear spending plans and allocated resources will clarify SLA finances. The SLA administration will develop and sustain a skilled and engaged workforce that can succeed and thrive in an ever-changing information management environment. It will nurture and foster the development of talented archivists, librarians, and staff as well as develop an organizational culture of innovation, service, and collaboration.
- **Digital Infrastructure.** In addition to envisioning a combined, sustainable digital infrastructure to support SLA collections and services, the SLA will support expanding modes of research, scholarly communication, and public engagement. Key areas will include linked data systems and services which will help connect Smithsonian museum collections with SLA collections, replace aging collections information systems and research data management programs, and enhance digital preservation. The SLA will also continue participating in the Smithsonian's Open Access Initiative.
- **Collections and Services.** Both library and archives collections have long been a core component of scholarly research and knowledge creation. The Smithsonian community is supported in the increase and diffusion of knowledge by librarians and archivists who select, interpret, and guide the staff on leveraging our extensive collections and information available throughout the world for the benefit of research and the public. The scholarly communications cycle remains firmly based in library and archival research collections even while those collections are increasingly moving to digital and online environments. However, 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 as well as fulfill legal

requirements. The SLA will build on and establish new processes and support structures to ensure we can select, acquire, preserve, and provide access to the full spectrum of research materials. With appropriate resources provided for collections and staff, the SLA will fully support the development of the new National Museum of the American Latino and Smithsonian American Women's History Museum.

- **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 program management, and the SLA will expand the diversity of the intern community and seek 100 percent funding of all internship opportunities.
- **Support a Culture of Excellence, Leadership, and Inclusion in SLA Operations.** The SLA will build upon the collaborative environment found at the Smithsonian to continue to introduce all staff to relevant data sets and digital tools and services. The SLA will foster enhanced communication between technology staff inside the SLA as well as across the Smithsonian. SLA personnel will also renew efforts to streamline and develop more effective communication about the array of services offered to different stakeholders and create an SLA Workforce Plan to support our core functions, as well as address the Institution's "new normal" working conditions and the Secretary's goals. This will be done by encouraging staff and supervisors to reach out and build community across the SLA, convening discussions to review SLA knowledge sharing, and determining where SLA information should be shared. The SLA will also provide central training and resources for all staff in essential work, including software and workplace knowledge that supports the "new normal" environment.
- **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 SLA collections and services and provide a gateway for the Smithsonian to reach a broader community. The SLA will build on existing tools (for example, Smithsonian Research Online and Smithsonian Profiles) as well as relationships with federal agencies and other libraries to address topics such as open science and public access to federally funded research and data.

EXPLANATION OF CHANGE

The FY 2023 budget request includes an increase of \$979,000. The increase includes \$579,000 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 1 FTE and \$100,000 for digital support.

Digital Support (+\$100,000, +1 FTE)

The budget funds 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.

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 strengthen fundraising efforts. The funds also support the work to manage and preserve the collections of the Institution and efforts to provide professional conservation expertise throughout the Smithsonian, to other institutions, and to the public. In FY 2023, the SLA will continue to raise funds through its own advancement efforts. The even deeper cataloguing of collections and compelling stories provided by the unified SLA will provide further advancement opportunities. The SLA continues to build upon its education program, with a special emphasis on creating content for K–12 learners, and includes education among its established priorities of 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 2021 ENACTED	107	55,845	15	3,403	0	13	0	0
FY 2022 ENACTED	107	59,388	15	3,296	0	0	0	0
FY 2023 REQUEST	110	65,895	14	3,249	0	0	0	0

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.

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, for 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 to serve 21st century audiences.

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 online 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 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 produced 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 3D digitization efforts while ensuring that 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 2023 budget request includes an increase of 3 FTEs and \$6,507,000. The increase includes \$895,000 for necessary pay and other related salary costs for existing staff funded under this line item; \$2,012,000 for increased communication costs, which are both justified in the Fixed Costs section of this budget submission. In addition, an increase of 3 FTEs and \$3,600,000 for the Smithsonian's IT Security program.

IT Security — FY 2023 Increase: (+\$3,600,000 and +3 FTEs)

The FY 2023 budget request includes a programmatic increase of 3 FTEs and \$3,600,000 for the Smithsonian's IT Security program. This funding request supports additional resources to enhance security monitoring and response to implement initiatives on additional security logging requirements to defend against ransomware and other threats. The funding also supports implementing initiatives on supply chain risk management, threat intelligence, data loss prevention, and zero trust architecture; and continue to enhance the Institution's security assessment, risk management, and compliance processes.

The requested increase will enable the Institution to: (1) improve our ability to detect and respond to increasingly sophisticated threats; (2) expand monitoring and investigation of potentially suspicious activities; (3) enhance our ability identify and address risks related to external systems and providers (such as the supply chain); (4) detect and prevent the inappropriate disclosure or distribution of personal and other sensitive information; (5) defend against major security attacks; (6) improve the assessment and management of system risk and compliance; (7) enhance the security training and awareness of Smithsonian personnel, contractors, volunteers, research Fellows, and other affiliated personnel; (8) integrate security components for better visibility into enterprise risk; (9) address Inspector General audit recommendations on IT security; and (10) improve compliance with payment card industry data security standards. The funding will also increase integration between security components for better visibility into enterprise risk.

These resources are vital to help the Smithsonian effectively detect malicious activity; monitor and protect sensitive Smithsonian data; defend the Institution against sophisticated threats, investigate suspicious activity; manage risk both internally and from the cyber-supply chain; and adapt the Smithsonian's defenses to the evolving business needs of an increasingly widespread work environment.

NONAPPROPRIATED RESOURCES — General trust funds support salaries and benefits costs of personnel and other related costs of the OCIO. Donor/sponsor-designated funds cover IT 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		INTERAGENCY AGREEMENT	
	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000	FTE	\$000
FY 2021 ENACTED	196	38,391	201	25,991	14	21,525	1	356	3	336
FY 2022 ENACTED	198	39,950	207	29,007	16	12,291	2	425	1	150
FY 2023 REQUEST	213	44,188	214	31,117	20	4,083	1	342	0	50

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.

MEANS AND STRATEGY

The Smithsonian will continue to use best practices in management to advance 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 accomplishing 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 are available to enable the Institution to achieve its goals.
- Establish and maintain 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 in 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 the efforts of 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, and advocate for the use of small, disadvantaged, woman- and veteran-owned businesses throughout Smithsonian contracting and procurement.

EXPLANATION OF CHANGE

The FY 2023 budget request includes an increase of \$4,238,000, which provides \$1,110,000 for necessary pay and other related salary costs for existing staff funded under this line item, as well as \$78,000 for the annual audit of the Smithsonian's financial statements, as justified in the Fixed Costs section of this budget submission. It also includes a programmatic increase of 15 FTEs and \$3,050,000 for Institution-wide operations support.

Human Resources Support (+\$1,300,000, +5 FTEs) — This request funds essential positions required to provide the necessary Institution-wide support to ensure efficient operations. Specifically, the funds will support our 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. The HR office 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 staff and contract specialists will enable the Institution to attract high-quality applicants, create a culture of diversity and excellence, and develop and retain a thriving workforce.

The funds would also provide consulting support to develop a competency framework and accompanying competency models, which are the keys to implementing the Smithsonian's overall workforce planning strategy.

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 of learners by sharing high-quality educational content that can be used as tools to understand and solve real-world problems. The Institution is dedicated to being a leader in K–12 education by 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 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 requested resources will play an essential role for administering these programs and serving schools and educators nationwide.

Diversity Support (+\$700,000, +4 FTEs) — Diversity and inclusion are emphasized values in the Smithsonian Strategic Plan. To that end, the Smithsonian is embedding diversity, equity, accessibility, and inclusion (DEAI) across our programs and services. The Institution is working to make its museums, labs, offices, and boardrooms reflect the nation at large. The National Museum of the American Latino and the Smithsonian American Women’s History Museum will be another step to provide greater reach on DEAI topics. These funds will support our new head diversity officer with the resources required to implement the Equity and Diversity Action Plans in accordance with Executive Orders 13985 and 14035.

The requested resources will also enable quarterly reporting to the Secretary support on progress made toward supplier diversity equal employment opportunity (EEO) training, EEO complaints, reasonable accommodations, workforce diversity, diversity and inclusion initiatives, and advisory board representation.

Digital Support (+\$300,000, +2 FTEs) — The requested resources and staff requested will support website modernization and digital transformation efforts. These resources will help support a Smithsonian-wide digital strategy designed for the audiences we seek to serve and will make our content more accessible, relevant, and impactful. It is essential to have the support staff needed to enhance the digital capabilities of the Institution so that we can better leverage data and technology to serve the public with our digital resources. Specifically, the funds will support our new transformation office and make it possible to reach more parts of the country with a strengthened virtual strategy.

Smithsonian Civil Program (+\$500,000, +2 FTEs) — One of the Institution’s top priorities is to ensure a harassment-free and safer workplace within the Smithsonian. The Institution is committed to improving processes, increasing employee resources, and driving transformative change to ensure the Smithsonian is a model place to work and visit. To that end, the budget provides funds to build on the Smithsonian’s anti-harassment initiatives and ensure the success of the program.

More specifically, the Smithsonian Civil Program is a resource for all employees and affiliated staff. The program provides a safe way for individuals to report incidents of harassment, workplace violence, or retaliatory behaviors impacting the workplace. This covers incidents involving any member of the Smithsonian community, including any affiliated staff or operational stakeholders, as well as employees who are all valued members of our increasingly diverse and professional workforce.

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 2021 ENACTED	23	4,184	0	0	0	0	0	0
FY 2022 ENACTED	23	4,295	0	0	0	0	0	0
FY 2023 REQUEST	23	4,426	0	0	0	0	0	0

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).

MEANS AND STRATEGY

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 Institution’s programs and operations and seeking input from Smithsonian stakeholders and Congress. The audit plan also includes mandatory audits, such as the annual financial statements that the OIG oversee. 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.

The FY 2023 budget request funds for necessary pay and other related salary costs for existing staff funded under this line item (\$131,000) and support costs for staff engaged in audits, investigations, and other activities necessary to accomplish the OIG's mission. The request includes \$60,000 for required training and \$16,250 to support the CIGIE.

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 2021 ENACTED	470	115,261	0	0	0	0	0	0
FY 2022 ENACTED	470	116,917	0	0	0	0	0	0
FY 2023 REQUEST	470	119,258	0	0	0	0	0	0

BACKGROUND AND CONTEXT

The Facilities Maintenance program is responsible for the maintenance and repair of about 14 million square feet of owned and leased buildings and structures, and 43,000 acres of land. 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 that support global efforts to save endangered 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 impair 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 essential 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 infrastructure 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 financial and personnel 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 has won the prestigious Award of Excellence from the APPA in recognition of the Institution's excellence in facilities management and its efforts to measure maintenance performance standards and staffing levels.

The FY 2023 budget request includes an increase of \$2,341,000 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 best practice that incorporates a cost-effective mix of predictive, proactive, preventive, and reactive maintenance operations. The Smithsonian's goal 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 identified deficiencies in a timely manner, the Institution can realize the anticipated useful lifespan 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, SF 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 2021 ENACTED	1,219	240,900	17	3,990	2	291	0	0
FY 2022 ENACTED	1,228	250,537	19	3,764	2	298	0	0
FY 2023 REQUEST	1,238	262,650	19	3,934	2	305	0	0

BACKGROUND AND CONTEXT

The mission of Smithsonian Facilities (SF) is to provide world-class services and infrastructure stewardship by building, operating, maintaining, and ensuring a safe, secure, and healthy environment for all visitors. The Smithsonian typically receives about 25 million visits a year.

The Facilities Operations, Security, and Support (OSS) program operates, secures, and supports the Institution'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 the OSS program 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. The program also supports facilities planning, architectural and engineering design, as well as postage, utilities, and central rent costs.

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.

In support of 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 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 best possible 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.

SF also continues its commitment to ensure that Smithsonian employees have a safe and healthy workplace by creating a culture that embraces zero injuries; provides professional services to promote 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 2023 budget request includes an increase of \$12,113,000. The increase includes \$5,173,000 for necessary pay and other related salary costs for existing staff funded under this line item, a programmatic increase of 10 FTEs and \$4,500,000 for security, operations, and support requirements, as well as a net increase of \$2,440,000 for utilities and other costs, which are justified in the Fixed Costs section of this budget submission.

- **Security (+\$500,000)** — The requested resources fund essential security needs. The events of the past few years have certainly demonstrated both the challenges and the importance of providing adequate security support for our museums, staff, and visitors on the National Mall. Our security guards are the front line of defense, and it is imperative that we provide the adequate resources to keep our museum doors open to the public. In addition, as the physical footprint of the Smithsonian has increased and as facilities are revitalized, the Institution's security and law-enforcement needs have also grown. This combination of more ground to cover and the demand for greater protection has resulted in a steady degradation in the security base budget relative to the Institution's needs.

Funding is requested for more contract security officers to fund the increased contract security rates as recommended in the Smithsonian's

recent security staffing analysis for each of its major facilities. These requested resources will allow the Smithsonian to provide a higher level of security around building perimeters and in interior public spaces such as galleries, thus creating a safer and more secure environment for visitors, staff, and collections.

Facilities Operations and Support (+\$4,000,000, +10 FTEs) — The Institution requests 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 for safety and security.

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

Consequently, the request supports the addition of building service workers, an interdisciplinary architect/engineer, a program analyst, a computer-aided dispatch operator, and safety professionals, as well as funds to help cover contract, supply, and material cost increases.

This request also includes funding for cleaning and custodial services at the AIB 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.

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FACILITIES CAPITAL

FY 2021 Enacted	\$214,530,000
FY 2022 Enacted	\$210,000,000
FY 2023 Request	\$265,000,000

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 provides modern facilities, often within our country’s national historic and culturally iconic buildings, to satisfy public programming needs, facilitate world-renowned research efforts, and house our priceless national collections.

Under the Facilities Capital Program, revitalization projects make major repairs or replace declining or failed infrastructure to address the problems of advanced deterioration. Once completed, these projects mitigate the failures in building systems that can create potentially hazardous conditions for visitors and staff, harm animals, damage collections, or 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 \$9.45 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 revitalizing its physical infrastructure.

EXPLANATION OF CHANGE

The Smithsonian requests \$265,000,000 and 53 FTEs for the Facilities Capital Program in FY 2023 to improve the FCI of many essential facilities and 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), the Historic Core that consists of the Smithsonian Institution Building (the “Castle”) and the Arts and Industries Building (SIB/AIB), as well as continuing construction of the Pod 6 Collections Storage Module developed under a special partnership between the Smithsonian and the National Gallery of Art. In addition, other projects will include the Hirshhorn Museum and Sculpture Garden (HMSG) revitalization of the Sculpture Garden and connecting tunnel, and continuing work at the National Zoological Park (NZP), the National Museum of Natural History (NMNH), the Suitland Collections Center, the Smithsonian Tropical Research Institute (STRI), and the Smithsonian Environmental Research Center (SERC) in Edgewater, Maryland. These funds will also be used to address safety and security hazards as well as collections housing risks throughout the Institution. Finally, this request includes the continued planning and design for the two new congressionally-mandated museums: the National Museum of the American Latino (NMAL) and the Smithsonian American Women’s History Museum (SAWHM).

The following chart summarizes the Institution’s request for the highest priority FY 2023 Facilities Capital projects.

SMITHSONIAN INSTITUTION
Federal Facilities Capital Program Summary
FYs 2021 – 2023

CATEGORY	Federal	Trust*	Federal	Trust*	Congress	Trust*
	Enacted	Estimate	Enacted	Estimate	Request	Estimate
\$Millions	FY 2021		FY 2022		FY 2023	
REVITALIZATION						
<i>Major Projects</i>						
Historic Core: SIB/AIB	14.8	25.0	9.0		55.0	50.0
National Air and Space Museum	55.0	60.0	56.0	50.0	23.0	
National Zoological Park	27.0	3.7	18.2		20.4	
National Museum of Natural History	6.0	0.1	14.3		15.3	
Smithsonian Tropical Research Institute	1.6	0.9	0.7		8.4	
Hirshhorn Museum and Sculpture Garden	13.3		8.7	10.8	8.7	11.1
Suitland Collections Space and Support Program	8.5	0.8	11.0		8.0	
National Museum of American History	7.9	0.3	9.6		7.3	
Smithsonian Environmental Research Center	1.9	2.7	6.7	2.5	5.9	1.0
Quadrangle	1.6		1.0		1.0	
Cooper Hewitt, Smithsonian Design Museum	3.0		3.0		3.5	
National Museum of the American Indian	7.5		4.5		2.0	
Smithsonian Astrophysical Observatory	3.4		4.1		1.8	
Freer Gallery of Art	2.5		2.0		0.0	
National Museum of African American History and Culture	0.0		0.0		1.0	
NASM Steven F. Udvar-Hazy Center	0.0		1.1		0.0	
Donald W. Reynolds Center	3.5	0.5	3.5	0.5	0.0	0.5
Fire-Alarm Panel Replacement and Transfer Switch	7.1		2.0		0.0	
Multiple Site Projects and General Capital Support	16.9	2.1	22.1		20.8	
PLANNING AND DESIGN	33.0		25.0		46.9	0.2
SUBTOTAL	214.5	96.1	202.40	63.8	229.0	62.8
CONSTRUCTION						
MSC Pod 6 Collections Storage Module			7.6		36.0	
SUBTOTAL	0.0	0.0	7.6	0.0	36.0	0.0
TOTAL PROGRAM	214.5	96.1	210.0	63.8	265.0	62.8

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, climate change resiliency, repair of historic features, and modernization of the buildings needed to support current programs, and sustain the viability of the Institution's physical plant. Projects listed on the Multiple Locations line item cover several facilities or have a total cost to the museum and/or research center of less than \$1.0 million. These projects usually involve capital repair or replacement of individual systems or components.

Facility	Project	\$000
Smithsonian Institution Building (SIB/AIB)	Revitalize Historic Core	55,000
National Air and Space Museum (NASM), National Mall Building (NMB)	Revitalize Building Envelope and Infrastructure	23,000
National Zoological Park (NZP)	<u>NZP-DC (Rock Creek):</u> Renovate Cheetah Conservation Station Upgrade Central Boiler Plant Revitalize Beaver, Otter, and Raven Barrier Walls Upgrade Seal and Sea Lion Shade Structures Modernize Vet Hospital Electronic Security Upgrade Site Utilities, <i>American Trail</i> <u>NZP-VA (Front Royal):</u> Renew the Veterinary Hospital Upgrade Post Area Utilities, Phase 3F Improve Animal Holding Facilities (Barns) Upgrade Living Collections Infrastructure Total	5,000 5,000 2,800 600 600 <u>500</u> 3,100 1,200 1,000 <u>600</u> 20,400
National Museum of Natural History (NMNH)	Upgrade Fire-Alarm Panels and Mass-Notification Systems Replace North Tower Air-Handling Units (AHUs) Upgrade Electronic Security, Fort Pierce, FL Total	11,300 3,500 <u>500</u> 15,300

Facility	Project	\$000
National Museum of American History (NMAH)	Replace Collection Storage AHUs, Floors 4 & 5	6,300
	Renovate East Wing, Floors 2–4	<u>1,000</u>
	Total	7,300
Hirshhorn Museum and Sculpture Garden (HMSG)	Revitalize Sculpture Garden and Tunnel	8,700
Smithsonian Tropical Research Institute (STRI)	Revitalize Naos Laboratory Buildings	4,500
	Replace and Improve Galeta Facilities	2,300
	Replace and Reinforce Tupper Library Roof	1,100
	Renovate Tupper Laboratory	<u>500</u>
	Total	8,400
Suitland Collections Center (multiple facilities)	Replace Lab and Storage Pod AHUs (MSC)	7,000
	Decontaminate Collections Objects in Building 16 (SHF)	<u>1,000</u>
	Total	8,000
Smithsonian Environmental Research Center (SERC)	Consolidate Maintenance Facilities	5,500
	Construct Water Turbidity Filter System	<u>400</u>
	Total	5,900
Cooper Hewitt, Smithsonian Design Museum (CHSDM)	Repair Miller-Fox Façades and Envelope	3,500
National Museum of the American Indian (NMAI-DC)	Improve Kitchen Exhaust Ductwork Access	2,000
Smithsonian Astrophysical Observatory (SAO)	Improve Water System, FLW Observatory (AZ)	600
	Modernize Electronic Security, FLW Observatory (AZ)	500
	Improve Roads Phase 3, FLW Observatory (AZ)	400
	Install Site-wide Fall Protection, FLW Observatory (AZ)	<u>300</u>
	Total	1,800

Facility	Project	\$000
National Museum of African American History and Culture (NMAAHC)	Install Additional Chiller and Controls	1,000
Quadrangle	Replace Steam Humidification System	1,000
Multiple Locations	Building projects less than \$1,000,000 and Miscellaneous Repairs	11,300
	Construction Supervision and Administration (Multiple Projects)	<u>9,500</u>
	Total	20,800
TOTAL, REVITALIZATION PROJECTS		\$182,100
TOTAL, FACILITIES PLANNING AND DESIGN , includes \$2.0M for NMAL and SAWHM		\$46,900
Construction		
Suitland-Museum Support Center (MSC)	Construct Pod 6	36,000
TOTAL, CONSTRUCTION		<u>36,000</u>
FY 2023 TOTAL REQUEST		\$265,000

REVITALIZATION PROJECTS

PROJECT TITLE: Revitalize Historic Core
INSTALLATIONS: Smithsonian Institution Building (SIB) and Arts and Industries Building (AIB)
LOCATION: Washington, DC

<u>FY 2023 COST ESTIMATE (Thousands of Dollars):</u>	\$55,000*
<u>PRIOR-YEAR FUNDING:</u>	\$23,800*
<u>FUTURE-YEAR FUNDING:</u>	<u>\$615,000*</u>
Total	\$693,800*

* Does not include funding in Facilities Planning and Design (\$43 million).

PROJECT 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 \$55.0 million in FY 2023 to award the construction management contract and early contracts for site preparation, site utilities and telecommunications hub relocations, hazardous materials abatement, as well as to begin underground construction. Future foundation work will include excavation below both buildings, underpinning of existing foundations, and seismic base isolation at the Castle. Future work will also 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 dock 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. The Concept Design was submitted in FY 2021, the schematic design will be completed in FY 2022, and then design development will be initiated. Design work will continue through FY 2023.

IMPACT OF DELAY:

If this project does not move forward, the AIB will remain closed to the public and the SIB will remain at increasing risk of catastrophic electrical, mechanical, and plumbing systems failure, which would require permanently relocating all staff from the building and closing the facility to visitors. It is necessary to proceed with this work now to ensure the construction activity visible from the outside is completed before the semi-quincentennial celebrations on the National Mall.

PROJECT TITLE: Revitalize Building Envelope and Infrastructure
INSTALLATION: National Air and Space Museum (NASM) — National Mall Building
LOCATION: Washington, DC

<u>FY 2023 COST ESTIMATE (Thousands of Dollars):</u>	\$23,000*
<u>PRIOR-YEAR FUNDING:</u>	<u>\$654,000*</u>
Total	\$677,000*

* Does not include funding in Facilities Planning and Design (\$52 million).

PROJECT 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. Before the COVID-19 pandemic, the Museum 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 for energy conservation. There is no secondary weather seal on the marble walls. This missing barrier 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 building 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 Museum and risks damage to the priceless national collections.

PROJECT DESCRIPTION:

The Smithsonian requests \$23.0 million in FY 2023 to fund construction, artifact protection, and re-installation activities, and to provide 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 NASM project managers 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 contracts for the re-installation of artifacts in Zones 1 through 4-South and the de-installation of artifacts in Zones 4-North through 7 have been awarded. Construction is planned to be completed in Zones 1 through 4-South by the third quarter of FY 2022. Construction in Zones 4-North through 7 will occur from the third quarter of FY 2022 through the fourth quarter of FY 2024. Currently, construction is approximately 60 percent complete.

IMPACT OF DELAY:

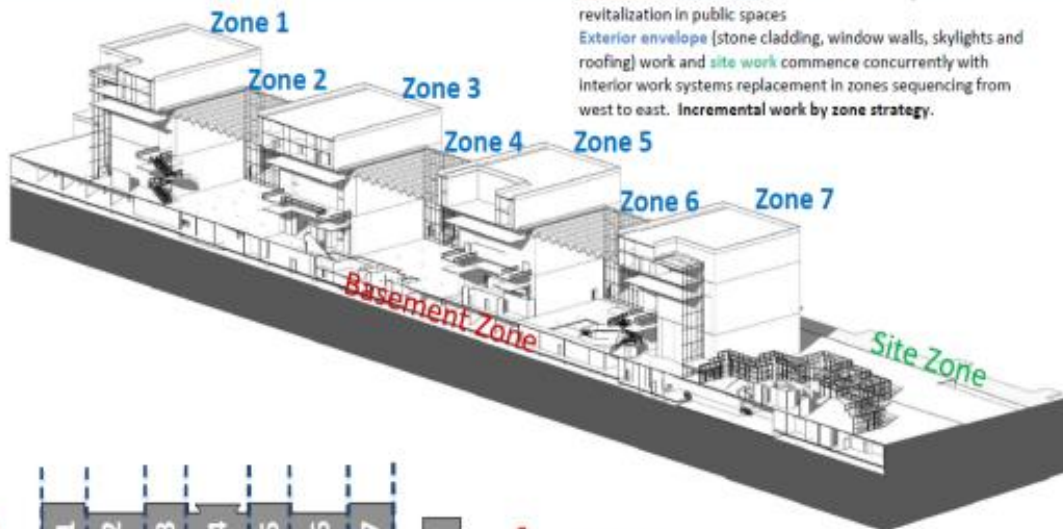
During phased construction, building systems in zones yet to be renovated will remain open to the public and therefore must stay operational until they are ultimately replaced. If federal funding is delayed, the pace of revitalization work begun in FY 2018 will slow. The stone façade and building systems in zones yet to be renovated 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.

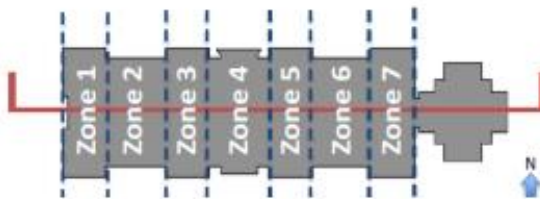
National Air and Space Museum (NASM)

Major Systems / Exterior Envelope Revitalization Project

Building Zones and Incremental Work Sequence Approach



Basement and **Third Floor** infrastructure work precedes revitalization in public spaces
Exterior envelope (stone cladding, window walls, skylights and roofing) work and **site work** commence concurrently with interior work systems replacement in zones sequencing from west to east. **Incremental work by zone strategy.**



Zones 1-3 contain the West Galleries (2 floors), Museum Store and Planetarium
Zones 5-7 contain the East Galleries (2 floors), and the IMAX Theater
Zone 4 contains the Milestones of Flight Gallery, north and south entrances and vestibules

PROJECT TITLE: Renovate Cheetah Conservation Station
INSTALLATION: National Zoological Park (NZN)
LOCATION: Washington, DC

<u>FY 2023 COST ESTIMATE (Thousands of Dollars):</u>	\$5,000*
<u>PRIOR-YEAR FUNDING:</u>	<u>\$4,700*</u>
Total	\$9,700*

* Does not include funding in Facilities Planning and Design.

PROJECT BACKGROUND:

Since 1891, various architects, including Olmsted Associates, created the National Zoological Park as we know it today. In contrast to earlier zoos which focused on displaying caged animals to the public, the Zoo in Rock Creek Park was formed for the care and conservation of endangered species in a more naturalistic habitat. For this purpose, landscape architect Frederick Law Olmsted (of New York City’s Central Park fame) was chosen to plan a system of paths winding gently through the steeply sloped, verdant park. Fellow Boston architect William Ralph Emerson designed a few of the early animal houses, such as the Buffalo Barn and the first Lion House. These buildings, made of rustic, local stone or wood, reflect the natural features of Rock Creek Park, and were meant to evoke images of the American wilderness.

The aging and soon-to-be obsolete Cheetah Conservation Station (CCS) is located at the 163-acre National Zoo’s Rock Creek Park campus. In addition to 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 site’s failing stormwater and sanitary utilities are negatively impacting animal welfare, with standing water and sanitary water backups. Over time, these conditions have damaged adjacent systems and structures, requiring a full building and site revitalization, including replacement of sidewalks and shelters. The mechanical, electrical, and plumbing systems can no longer be repaired, and their dilapidated condition is causing significant issues with plumbing backups and insufficient heating, cooling, and humidification. 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. This work is necessary 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 \$5.0 million in FY 2023 to continue renovating the Cheetah Conservation Station to include 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. As part of this revitalization, nearly all site and building infrastructure will be replaced, which will restore operational functionality and support animal care needs. In addition, due to erosion caused by intense storm run-off, the structural foundation for the station must be replaced and raised up to prevent future deterioration. The containment fence, visitor barriers, and security systems will be replaced in response to AZA inspections and to reduce the deferred maintenance backlog. Structural improvements will be made to address the safety of maintenance workers and support best practices in animal welfare and management of their habitats and housing.

PROGRESS TO DATE:

The initial design report was completed in November of 2021. Work on the full design package is expected to begin by the third quarter of FY 2022.

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: Upgrade Central Boiler Plant
INSTALLATION: National Zoological Park (NZIP)
LOCATION: Washington, DC

<u>FY 2023 COST ESTIMATE (Thousands of Dollars):</u>	<u>\$5,000*</u>
Total	\$5,000*

* Does not include funding in Facilities Planning and Design.

PROJECT BACKGROUND:

Since 1891, various architects, including Olmsted Associates, created the National Zoological Park as we know it today. In contrast to earlier zoos which focused on displaying caged animals to the public, the Zoo in Rock Creek Park was formed for the care and conservation of endangered species in a more naturalistic habitat. For this purpose, landscape architect Frederick Law Olmsted (of New York City's Central Park fame) was chosen to plan a system of paths winding gently through the steeply sloped, verdant park. Fellow Boston architect William Ralph Emerson designed a few of the early animal houses, such as the Buffalo Barn and the first Lion House. These buildings, made of rustic, local stone or wood, reflect the natural features of Rock Creek Park and were meant to evoke images of the American wilderness.

The National Zoological Park's 2008 Comprehensive Facilities Master Plan (CFMP) calls for a series of major capital renewal projects to be executed in order of priority during the next 20–25 years. Much progress has been made with renewing the failing buildings, but there are several facilities which remain a priority for renewal, including the Boiler Plant.

PROJECT JUSTIFICATION:

The Boiler Plant was constructed in 1982 and has reached the end of its functional life expectancy. The boiler equipment has been discontinued, making it impossible to find replacement parts. The aging system makes a catastrophic failure more likely, which would harm the Zoo's living collections throughout the Park as well as impair normal visitor functions. If a failure were to happen in the middle of winter, it could negatively impact animal welfare and cause expensive emergency repairs which could take up to five or six months to complete. The structure has been classified mission-critical to protect and support the safety of animals, staff, and visitors.

PROJECT DESCRIPTION:

The Smithsonian requests \$5.0 million in FY 2023 to upgrade the Central Boiler Plant at Rock Creek Park. The existing Boiler Plant contains three cylindrical, firetube, dual-fuel steam boilers that were installed in 1994. They are primarily fired with medium-pressure natural gas, and as backup by diesel oil, which is stored in four above-ground oil storage tanks located next to the Boiler Plant. This project will replace one of the existing boilers with two modular, natural gas-fueled, 300-horsepower boilers. The work will also include upgrading the water treatment system and installing a new air-handling unit and controls.

PROGRESS TO DATE:

Preliminary design, cost estimating, and constructability studies are in progress, including an energy analysis for steam water requirements and planning to address flooding risk.

IMPACT OF DELAY:

Failure to renew the Central Boiler Plant will increase the risk of operational failures and require emergency responses which are costly, disruptive, and preventable. Delaying such system replacements and upgrades could result in serious harm to visitors and staff, as well as to the animals, along with the loss of vital scientific research essential to the survival of rare and endangered species.

PROJECT TITLE: Revitalize Beaver, Otter, and Raven Barrier Walls
INSTALLATION: National Zoological Park (NZN)
LOCATIONS: Washington, DC

<u>FY 2023 COST ESTIMATE (Thousands of Dollars):</u>	<u>\$2,800*</u>
Total	\$2,800*

* Does not include funding in Facilities Planning and Design.

PROJECT BACKGROUND:

Since 1891, various architects, including Olmsted Associates, created the National Zoological Park (NZN) as we know it today. In contrast to earlier zoos which focused on displaying caged animals to the public, the Zoo in Rock Creek Park was formed for the care and conservation of endangered species in a more naturalistic habitat. For this purpose, landscape architect Frederick Law Olmsted (of New York City's Central Park fame) was chosen to plan a system of paths winding gently through the steeply sloped, verdant park. Fellow Boston architect William Ralph Emerson designed a few of the early animal houses, such as the Buffalo Barn and the first Lion House. These buildings, made of rustic, local stone or wood, reflect the natural features of Rock Creek Park and were meant to evoke images of the American wilderness.

PROJECT JUSTIFICATION:

The faux rock barrier system at the Beaver, Otter, and Raven environment has been rapidly deteriorating, causing delamination of the thin material used to resemble the rocks and exposing the supporting steel reinforcing bar. This has increased the probability of structural failure and the exposed rebar causes tripping hazards. Staff regularly climb these rock walls to manage the living collections, which creates the potential for severe injury of staff or to animals. The Association of Zoos and Aquariums' (AZA) 2020 accreditation standards require that zoos consider the direct impact that the condition, appropriateness, and functionality of animal areas have on animal welfare.

PROJECT DESCRIPTION:

The Smithsonian requests \$2.8 million in FY 2023 to replace the deteriorated faux rock barrier system and adjacent infrastructure, including gate and fence improvements. The entire rock barrier system and assemblies must be completely revitalized to properly address water-infiltration issues and maintain safety and an effective animal care program. The current scope of rockwork barrier revitalization and adjacent infrastructure alterations included in the project renewal will comply with the AZA accreditation standards.

PROGRESS TO DATE:

Design and supporting cost estimates are in progress.

IMPACT OF DELAY:

Delaying these improvements and repairs could threaten AZA accreditation and cause harm to visitors, staff, and animals. Additionally, if this project is not funded, there would be an increased risk of Zoo animals escaping and predation of extinct-in-the-wild and highly endangered species.

PROJECT TITLE: Upgrade Seal and Sea Lion Shade Structures
INSTALLATION: National Zoological Park (NZN)
LOCATIONS: Washington, DC

<u>FY 2023 COST ESTIMATE (Thousands of Dollars):</u>	<u>\$600*</u>
Total	\$600*

* Does not include funding in Facilities Planning and Design.

PROJECT BACKGROUND:

Since 1891, various architects, including Olmsted Associates, created the National Zoological Park (NZN) as we know it today. In contrast to earlier zoos which focused on displaying caged animals to the public, the Zoo in Rock Creek Park was formed for the care and conservation of endangered species in a more naturalistic habitat. For this purpose, landscape architect Frederick Law Olmsted (of New York City's Central Park fame) was chosen to plan a system of paths winding gently through the steeply sloped, verdant park. Fellow Boston architect William Ralph Emerson designed a few of the early animal houses, such as the Buffalo Barn and the first Lion House. These buildings, made of rustic, local stone or wood, reflect the natural features of Rock Creek Park and were meant to evoke images of the American wilderness.

PROJECT JUSTIFICATION:

Critical site infrastructure for the Seal and Sea Lion environment is a priority to maintain accreditation by the Association of Zoos and Aquariums (AZA). The animal habitat and yard receive excessive solar glare that is posing a risk to the seals and sea lions. This project is the next phase in improving the living collections' animal habitat and yards throughout the NZN.

PROJECT DESCRIPTION:

The Smithsonian requests \$600,000 in FY 2023 to upgrade the shade structures in the animal habitat to protect the animals from excessive solar glare that is causing harm to the seals and sea lions.

PROGRESS TO DATE:

Scope of work for the design and construction procurement is in progress. The shade structure mock-ups were constructed in FY 2021 as a proof of concept for addressing the FY 2020 AZA recommendations and to continue with the projects.

IMPACT OF DELAY:

Delaying these improvements and repairs could harm the animals as well as threaten AZA accreditation. Failure to upgrade the living collections' infrastructure could result in the need for emergency responses which are costly, disruptive, and preventable.

PROJECT TITLE: Modernize Veterinarian Hospital Electronic Security
INSTALLATION: National Zoological Park (NZIP)
LOCATIONS: Washington, DC

FY 2023 COST ESTIMATE (Thousands of Dollars): \$600*

Total \$600*

* Does not include funding in Facilities Planning and Design.

PROJECT BACKGROUND:

Since 1891, various architects, including Olmsted Associates, created the National Zoological Park (NZIP) as we know it today. In contrast to earlier zoos which focused on displaying caged animals to the public, the Zoo in Rock Creek Park was formed for the care and conservation of endangered species in a more naturalistic habitat. For this purpose, landscape architect Frederick Law Olmsted (of New York City's Central Park fame) was chosen to plan a system of paths winding gently through the steeply sloped, verdant park. Fellow Boston architect William Ralph Emerson designed a few of the early animal houses, such as the Buffalo Barn and the first Lion House. These buildings, made of rustic, local stone or wood, reflect the natural features of Rock Creek Park and were meant to evoke images of the American wilderness.

PROJECT JUSTIFICATION:

The Veterinarian Hospital requires electronic and physical security modernization due to antiquated or non-existent security systems to comply with current Smithsonian security standards and Drug Enforcement Administration (DEA) requirements.

PROJECT DESCRIPTION:

The Smithsonian requests \$600,000 in FY 2023 to modernize electronic and physical security features, including cameras, access controls, door-badge readers, electronic lock interfaces, glass-break sensors, door and window sensors, motion detectors, control equipment, wiring, conduits, and security panels at the Veterinarian Hospital. This modernization will help the campus comply with Office of Protection Services (OPS) security standards for Smithsonian facilities, as well as federal DEA regulations.

PROGRESS TO DATE:

The Statement of Work for design is complete.

IMPACT OF DELAY:

Delaying the project puts the Veterinarian Hospital at risk for theft and loss of DEA accreditation.

PROJECT TITLE: Upgrade Site Utilities at *American Trail* Exhibit
INSTALLATION: National Zoological Park (NZN)
LOCATIONS: Washington, DC

<u>FY 2023 COST ESTIMATE (Thousands of Dollars):</u>	<u>\$500*</u>
Total	\$500*

* Does not include funding in Facilities Planning and Design.

PROJECT BACKGROUND:

Since 1891, various architects, including Olmsted Associates, created the National Zoological Park (NZN) as we know it today. In contrast to earlier zoos which focused on displaying caged animals to the public, the Zoo in Rock Creek Park was formed for the care and conservation of endangered species in a more naturalistic habitat. For this purpose, landscape architect Frederick Law Olmsted (of New York City's Central Park fame) was chosen to plan a system of paths winding gently through the steeply sloped, verdant park. Fellow Boston architect William Ralph Emerson designed a few of the early animal houses, such as the Buffalo Barn and the first Lion House. These buildings, made of rustic, local stone or wood, reflect the natural features of Rock Creek Park and were meant to evoke images of the American wilderness.

PROJECT JUSTIFICATION:

Power management and stormwater control are critical issues for the NZN and, until a comprehensive plan is completed, a series of small mitigating projects are proposed to address the worst locations. The *American Trail* requires immediate attention because of the volume of visitor traffic in the area and the need to protect and safeguard the animals in the Zoo's living collection.

PROJECT DESCRIPTION:

The Smithsonian requests \$500,000 in FY 2023 to upgrade site utilities for the *American Trail*, including stormwater control and power management infrastructure. Stormwater management upgrades will include additional trench drains and trail elevation adjustments to mitigate further damage.

PROGRESS TO DATE:

The project is in the planning and pre-design stage.

IMPACT OF DELAY:

The continued failure to upgrade stormwater control and provide reliable power management will threaten the NZN with greater loss of structures and possible loss of animal life due to power failure.

PROJECT TITLE: Renew Veterinary Hospital
INSTALLATION: National Zoological Park/Smithsonian Conservation Biology Institute (NZP/SCBI)
LOCATION: Front Royal, Virginia

<u>FY 2023 COST ESTIMATE (Thousands of Dollars):</u>	\$3,100*
<u>FUTURE-YEAR FUNDING:</u>	<u>\$4,100*</u>
Total	\$7,200*

* Does not include funding in Facilities Planning and Design.

PROJECT BACKGROUND:

The Smithsonian Conservation Biology Institute (SCBI) is a 3,200-acre facility located in the foothills of the Blue Ridge Mountains in Front Royal, Virginia. This facility houses between 30 to 40 endangered species at any given time, and includes a Geographic Information System (GIS), endocrine and gamete labs, veterinary clinic, radio tracking lab, 14 field stations, and biodiversity monitoring plots, as well as a conference center, dormitories, and education offices. The SCBI was originally an army remount station. Construction began in 1911 and by 1916 the complex contained officers' quarters, barns, and stables on vast acreage. Primarily used to breed horses for use by the U.S. Army, the complex was active during World War II as a prisoner-of-war camp for captured German soldiers. Many of the original structures still stand and have been repurposed to accommodate the research in rare and endangered animals. The Veterinary Hospital supports research and care for various species of zebras, onagers, Przewalski's horses, maned wolves, cheetahs, red pandas, and clouded leopards.

PROJECT JUSTIFICATION:

The Veterinary Hospital has only gotten a few minor upgrades since it was constructed in 1985. The rehabilitation of the Veterinary Hospital at the SCBI is an integral part of the 2008 Front Royal Comprehensive Facilities Master Plan and provides optimal operation of laboratory space, operating theaters, office space, animal quarantine area(s), and the pharmacy.

PROJECT DESCRIPTION:

The Smithsonian requests \$3.1 million in FY 2023 for the rehabilitation of the 13,250-square-foot Veterinary Hospital at the SCBI to provide a modernized facility that will allow for state-of-the-art veterinary care for the animals

PROGRESS TO DATE:

Design work started in FY 2021 and will be completed in FY 2022, with the construction award planned for FY 2023.

IMPACT OF DELAY:

Delaying the renewal and rehabilitation of the Veterinary Hospital at the SCBI could result in lack of care to the animals, along with the loss of vital scientific research essential to the survival of rare and endangered species, as well as the potential emergency situations that could harm the animals in the care of the Smithsonian.

PROJECT TITLE: Upgrade Post Area Utilities, Phase 3F
INSTALLATION: National Zoological Park/Smithsonian Conservation Biology Institute (NZIP/SCBI)
LOCATION: Front Royal, Virginia

<u>FY 2023 COST ESTIMATE (Thousands of Dollars):</u>	<u>\$1,200*</u>
<u>PRIOR-YEAR FUNDING:</u>	<u>\$4,000*</u>
Total	\$5,200*

* Does not include funding in Facilities Planning and Design.

PROJECT BACKGROUND:

The Smithsonian Conservation Biology Institute (SCBI) is a 3,200-acre facility located in the foothills of the Blue Ridge Mountains in Front Royal, Virginia. This facility houses between 30 and 40 endangered species at any given time, and includes a Geographic Information System (GIS), endocrine and gamete labs, veterinary clinic, radio tracking lab, 14 field stations, and biodiversity monitoring plots, as well as a conference center, dormitories, and education offices. The SCBI was originally an army remount station. Construction began in 1911 and by 1916 the complex contained officers' quarters, barns, stables, and a racetrack on vast acreage. Primarily used to breed horses for use by the U.S. Army, the complex was quite active during World War II as a prisoner-of-war camp for captured German soldiers. Many of the original structures still stand and have been repurposed to accommodate the research of animal life.

PROJECT JUSTIFICATION:

The SCBI prepared a comprehensive utilities master plan in 2008 to serve as the basis for designing an upgraded utility infrastructure to support the entire campus for water, sewer, electric, and telecommunications systems and storm drains. The last phase of the project is Phase 3F, and the utilities upgrade for Long Hill Drive. The existing electrical, sewer, water supply, and telecommunications distribution systems have reached the end of their useful service life. The utility infrastructure systems are prone to failure and unreliable service which include unexpected power loss and mission interruption. The on-site sewer system is made of terra cotta or vitrified clay construction that is between 60 and 100 years old and contributing to recent problems with the sewer breaks at various locations on the campus.

PROJECT DESCRIPTION:

The Smithsonian requests \$1.20 million in FY 2023 as part of the utility upgrade Phase 3F that will improve sanitary sewer, electrical, communications, and water utilities along the Long Hill Road and Meade Road portions of the campus. Approximately 3,400 feet of new 4- or 6-inch lateral and submain sewers and 18 sanitary manholes are required to replace the existing on-site collection system and extend the sewer collection system along the crane yards from the main campus. Based on the age and condition of the existing on-site overhead electric distribution system, and the numerous code-related deficiencies, most of the system will need to be replaced, including the existing overhead

electric distribution system. Additionally, a new underground electric distribution system will need to be installed.

PROGRESS TO DATE:

Procurement documents for Phase 3F are in progress for award in FY 2023. The 2008 comprehensive utilities master plan detailed the scope of work for water, sewer, stormwater management, electrical distribution, and telecommunications. Concurrently, in April of 2008, the Smithsonian included a zero-energy Zoo study sponsored by the Department of Energy's Federal Energy Management Program.

IMPACT OF DELAY:

The utility infrastructure systems have reached the end of their useful service life and are prone to systematic failures. Large-scale utility disruption could occur if this comprehensive overhaul is not completed soon, potentially creating risks for staff and the animals in their care.

PROJECT TITLE: Improve Animal Holding Facilities (Barn Program)
INSTALLATION: National Zoological Park/ Smithsonian Conservation Biology Institute (NZP/SCBI)
LOCATION: Front Royal, Virginia

<u>FY 2023 COST ESTIMATE (Thousands of Dollars):</u>	<u>\$1,000*</u>
<u>FUTURE-YEAR FUNDING:</u>	<u>\$4,000*</u>
Total	\$5,000*

* Does not include funding in Facilities Planning and Design.

PROJECT BACKGROUND:

The Smithsonian Conservation Biology Institute (SCBI) is a 3,200-acre facility located in the foothills of the Blue Ridge Mountains in Front Royal, Virginia. This facility houses between 30 and 40 endangered species at any given time, and includes a Geographic Information System (GIS) lab, endocrine and gamete labs, veterinary clinic, radio tracking lab, 14 field stations, and biodiversity monitoring plots, as well as a conference center, dormitories, and education offices. The SCBI was originally an army remount station. Construction began in 1911 and by 1916 the complex contained officers' quarters, barns, stables, and a racetrack on vast acreage. Primarily used to breed horses for use by the U.S. Army, the complex was quite active during World War II as a prisoner-of-war camp for captured German soldiers. Many of the original structures still stand and have been repurposed to accommodate the research of animal life. The animal holding facilities are large open structures used for the safe care and holding of animals. Many of these envelope systems were constructed before the 1970s-era energy crisis and are therefore thermally and energy inefficient.

PROJECT JUSTIFICATION:

The barn building roofs and exterior enclosures have failed, resulting in active leaks from stormwater penetrating the interior and causing water damage. Associated systems are failing and result in poor indoor air-quality and adverse health issues to both human and animal occupants. More efficient thermal, air, water, and vapor-barrier assemblies are needed.

PROJECT DESCRIPTION:

The Smithsonian requests \$1.0 million in FY 2023 to upgrade various old barns and animal holding buildings to meet current codes and standards for animal holding and protect the structure from further deterioration. The project will renew building envelopes; fire protection and detection systems; heating, ventilating, and air-conditioning (HVAC); and electrical systems; as well as provide proper sub-slab sanitary waste drainage and stormwater management systems and improved information technology (IT) infrastructure. Environmentally sustainable designs will create roof and wall assemblies which will conserve energy by reducing heat and cooling loads, increase airflow, and reduce interior condensation to prevent mold. The project will also include installing skylights and overhead doors to increase natural light.

PROGRESS TO DATE:

The barn renewal phase in the planning and design stage, with construction award planned for FY 2023.

IMPACT OF DELAY:

A further delay in addressing the poor conditions and code deficiencies of the barns will accelerate the deterioration of these structures, resulting in even worse indoor air-quality and an adverse safety and health environment for both human and animal occupants.

PROJECT TITLE: Upgrade Living Collections Infrastructure
INSTALLATION: National Zoological Park/ Smithsonian Conservation Biology Institute (NZP/SCBI)
LOCATION: Front Royal, Virginia

<u>FY 2023 COST ESTIMATE (Thousands of Dollars):</u>	\$600*
<u>PRIOR-YEAR FUNDING:</u>	\$775*
<u>FUTURE-YEAR FUNDING:</u>	<u>\$2,125*</u>
Total	\$3,500*

* Does not include funding in Facilities Planning and Design.

PROJECT BACKGROUND:

The Smithsonian Conservation Biology Institute (SCBI) is a 3,200-acre facility located in the foothills of the Blue Ridge Mountains in Front Royal, Virginia. This facility houses between 30 and 40 endangered species at any given time and includes a Geographic Information System (GIS) lab, endocrine and gamete labs, veterinary clinic, radio tracking lab, 14 field stations, and biodiversity monitoring plots, as well as a conference center, dormitories, and education offices. The SCBI was originally an army remount station. Construction began in 1911 and by 1916 the complex contained officers' quarters, barns, stables, and a racetrack on vast acreage. Primarily used to breed horses for use by the U.S. Army, the complex was quite active during World War II as a prisoner-of-war camp for captured German soldiers. Many of the original structures still stand and have been repurposed to accommodate the research of animal life.

PROJECT JUSTIFICATION:

The Upgrade Living Collections Infrastructure Program is a multi-year- funded, phased implementation of relatively small projects, identified, ranked, and prioritized to support the requirements of park management, animal care, and science staff. There are dozens of deficiencies which will be corrected by this project.

This project is required to resolve an Association of Zoos and Aquariums (AZA) accreditation inspection that discovered deficiencies and animal life and safety concerns. Remediation work will fix weather-related deficiencies for various animal holding buildings that require removal of hazardous materials and demolition of failing structures to mitigate unsafe conditions for both staff and animals. This includes animal pools and containment fences, which keep out wild predators such as bears, coyotes, and foxes. Required improvements to the animal-containment facilities include taller fences, hot wires, and electrical infrastructure, as well as dig barriers, animal-shift gates, human-access safety gates, and climbing structures for animal exercise.

PROJECT DESCRIPTION:

The Smithsonian requests \$600,000 in FY 2023 to address stormwater issues impacting the Cheetah Science Facility animal yards and internal road systems at the SCBI. In addition, the primary containment fencing for the taxonomic family of horses in the Longfield and King areas of the campus will be replaced. Future work will 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; replacement of pools/water systems: and quality improvements and controls required for the humane and responsible stewardship of captive animals.

PROGRESS TO DATE:

The project is in the planning and design phase, with a construction award planned for FY 2023.

IMPACT OF DELAY:

Delaying these improvements and repairs could threaten AZA accreditation, leave highly endangered species vulnerable to wild animal predation and escape, as well as cause harm to visitors, staff, and animals. In addition, failure to upgrade the living collections infrastructure could result in the need for emergency repairs, which are costly, disruptive, and preventable.

PROJECT TITLE: Upgrade Fire-Alarm Panels and Mass-Notification Systems
INSTALLATION: National Museum of Natural History (NMNH)
LOCATION: Washington, DC

<u>FY 2023 COST ESTIMATE (Thousands of Dollars):</u>	\$11,300*
<u>PRIOR-YEAR FUNDING:</u>	\$6,900*
<u>FUTURE-YEAR FUNDING:</u>	<u>\$3,200*</u>
Total	\$21,400*

* Does not include funding in Facilities Planning and Design.

PROJECT BACKGROUND:

The NMNH building was designed by architects Hornblower and Marshall, with contributions by Charles McKim, and 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 1.3-million-square-foot-building houses more than 147 million specimens and artifacts in its collections (used by both resident and visiting researchers), and educational, scientific, and administrative facilities serving approximately 1,200 people. The NMNH is usually one of the most visited museums in the world and hosts between seven and eight million visitors annually.

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 \$11.3 million in FY 2023 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 first quarter of FY 2022. The construction contract award is planned for the fourth quarter of FY 2022, with a continuation of contracting in FY 2024.

IMPACT OF DELAY:

An aging, outdated life-safety system runs the risk of failure and endangering collections, visitors, and staff. In the worst-case scenario, a malfunctioning fire-alarm system could put lives at risk, as well as delay notification of an active fire, possibly causing severe damage to the Museum and the national collections. 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 man-made emergencies ranging from severe storms to active shooter incidents.

PROJECT TITLE: Replace North Tower Air-Handling Units (AHUs)
INSTALLATION: National Museum of Natural History (NMNH)
LOCATION: Washington, DC

<u>FY 2023 COST ESTIMATE (Thousands of Dollars):</u>	\$3,500*
<u>PRIOR-YEAR FUNDING:</u>	<u>\$2,000*</u>
Total	\$5,500*

* Does not include funding in Facilities Planning and Design.

PROJECT BACKGROUND:

The NMNH building was designed by architects Hornblower and Marshall, with contributions by Charles McKim, and 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 1.3-million-square-foot-building houses more than 147 million specimens and artifacts in its 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 hosts between seven and eight million visitors annually.

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 projects in the early 1960s. The systems service the third floor of the Museum's main building, supporting some collections, offices, and laboratories. 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 and expensive to operate, and create a liability for the 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 for the associated utility and condensate lines poses a health hazard for maintenance personnel.

PROJECT DESCRIPTION:

The Smithsonian requests \$3.5 million in FY 2023 to continue replacing and modernizing 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 variable air-volume fans for ease of control. As part of the project, fresh 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 priceless collections.

PROGRESS TO DATE:

Design was awarded for the initial schematic and design development in 2020. The complete design with construction documentation was finalized in November of 2021, and the 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, preventing ongoing research, and 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 are energy inefficient due to the outdated standards under which they were designed as well as the deterioration that has occurred over time. 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 would otherwise be recognized by doing this work now.

PROJECT TITLE: Upgrade Electronic Security System
INSTALLATION: Fort Pierce Research Station
LOCATION: Fort Pierce, Florida

FY 2023 COST ESTIMATE (Thousands of Dollars):

\$500*

* Does not include funding in Facilities Planning and Design.

PROJECT BACKGROUND:

Created in 1969, the Smithsonian Marine Science Station in Fort Pierce, Florida is dedicated to studying south Florida's ecosystems and biodiversity. It has evolved from its first home on a World War II-vintage floating barge to a campus with structures designed in a simple tropical style. The Tyson House is a modern version of tropical vernacular architecture prevalent at the Station. Designed by Florida architect Peter Jefferson in 1977 for Peter and Jeanne Tyson, it was relocated from Vero Beach, Florida to the research station as a gift from the owners. Today it is used as a residence for visiting scientists.

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 \$500,000 in FY 2023 to upgrade electronic security systems to meet current Smithsonian security standards. The Fort Pierce Research Station's electronic security systems modernization project will include installation of fiber-optic infrastructure, data-gathering panels, network video recorders (NVRs), access readers, cameras, intercoms, and intrusion-detection devices.

PROGRESS TO DATE:

Design for the system has been delayed due to COVID-19 pandemic travel restrictions which have prevented Smithsonian personnel, who are responsible for inspections and surveys, from being on site. Survey work is expected to commence by the fourth quarter of FY 2022.

IMPACT OF DELAY:

Delaying the project will leave the Fort Pierce Scientific Research Station 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, posing a potential risk to on-site staff and their data and work.

PROJECT TITLE: Replace Collection Storage Air-Conditioning Units (ACUs), Floors 4 and 5
INSTALLATION: National Museum of American History (NMAH)
LOCATION: Washington, DC

FY 2023 COST ESTIMATE (Thousands of Dollars): \$6,300*

FUTURE-YEAR FUNDING: \$7,000*

Total \$13,300*

* Does not include funding in Facilities Planning and Design.

PROJECT 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, revitalizations 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 better flood protection.

PROJECT JUSTIFICATION:

The air-conditioning units (ACUs) 1–4 serve the fourth and fifth floor collections storage areas. The ACUs are about 25 years old and at or past most estimates of useful ACU service life. Even with constant maintenance, the equipment cannot meet the need for environmental protection of the diverse collections at this Museum. The NMAH should benefit from a significant improvement to its energy use profile, and see reduced energy costs, after the total air-handling unit (AHU) system project is completed.

PROJECT DESCRIPTION:

The Smithsonian requests \$6.3 million in FY 2023 to begin replacing the ACUs. This project will replace all aging, major ACUs with new AHUs serving collection storage spaces on the fourth and fifth floors. These new units will optimize the collection storage environment and mitigate ongoing maintenance. Two types of air-handling systems will be used. The first type will be a constant volume reheat system, and the second type will be a constant volume reheat system with a desiccant wheel. The second type of air-handling system will be deployed in areas which require a cooler, drier climate. All air-handling equipment will produce six air changes per-hour, as specified for collection storage spaces in the 2019 American Society of Heating, Refrigeration, and Air-Conditioning Engineers’ *HVAC Applications Handbook*. The project will also include installing a new hot-water

converter to generate hot water, which will replace the reheat coils system within the fourth-floor mechanical rooms. Also, temporary cooling will need to be provided for collections storage spaces during construction, when the air-handling systems are not operational. The area of work will be confined to the mechanical rooms on the fourth floor and penthouse level.

PROGRESS TO DATE:

A study was completed in 2019 to review physical requirements and provide the basis for the design of AHU replacement, as well as the timing, sequence, and logistics of installing the replacements. Construction documents will be completed in the second quarter of FY 2022, with the contract award expected in early FY 2023.

IMPACT OF DELAY:

Air-conditioning equipment will continue to degrade and increased maintenance will be required if this work is not done soon. Collections in the storage spaces will be at higher risk due to potential failures and emergency shutdowns.

PROJECT TITLE: Renovate East Wing, Floors 2–4
INSTALLATION: National Museum of American History (NMAH)
LOCATION: Washington, DC

<u>FY 2023 COST ESTIMATE (Thousands of Dollars):</u>	\$1,000*
<u>FUTURE-YEAR FUNDING:</u>	<u>\$128,700*</u>
Total	\$129,700*

* Does not include funding in Facilities Planning and Design.

PROJECT 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, revitalization 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 better flood protection.

PROJECT JUSTIFICATION:

The 2006 master plan (updated in 2018) noted that the East Wing requires major revitalization of its exhibit galleries and public spaces, as well as expansions of educational, interactive, and multimedia offerings. Currently the East Wing’s infrastructure does not meet the needs of the Museum staff or the public. The exterior ribbon windows and center core window curtain walls are failing, allowing water to infiltrate, and in some instances the ribbon windows have become detached. The escalators also require the same type of refurbishing as was done in the West Wing. In addition, the heating, ventilation, and air-conditioning (HVAC) and fire-protection systems require upgrading to accommodate this revitalization.

PROJECT DESCRIPTION:

The Smithsonian requests \$1.0 million in FY 2023 to begin moving collections to storage facilities to make way for the revitalization. The Public Space Renewal Program IV (PSRP IV) is the major revitalization of the three public floors on the east side of the building. Most of the revitalization will be on the second and third floors, which are the major public floors. Major systems, including HVAC, vertical transportation, and lighting will be updated to support the modern exhibit experience for educational, interactive, and multimedia offerings. In addition, space currently used for collections storage and offices will be converted to gallery shells ready for future exhibits. Elements of the building’s

perimeter enclosure, including the four stories of ribbon windows and center core curtain window walls, will be replaced. There will be additional work to replace the perimeter heat convection units on the non-public fourth floor. When this work is completed, it will create the perception of the entire building being one cohesive space. The East Wing will complement the revitalized West Wing (PSRP III); however, the East Wing will focus on a cleaner aesthetic with fewer visual interruptions in the exhibit spaces, as requested by the Pre-Project Planning Steering Committee. Funds permitting, the lower levels will be revitalized in FY 2031.

PROGRESS TO DATE:

A pre-planning study report was produced in 2018 and is the framework for the scope of work for PSRP IV to meet current Museum requirements and the associated costs. Programming is in progress to define the design scope of work. The preliminary design contract is expected to be awarded in FY 2023 and work completed in FY 2025.

IMPACT OF DELAY:

Delays to the East Wing revitalization project increase the risks of infrastructure failures, such as those that occurred with the ribbon windows which failed in 2019, and delayed relocation of collections storage to Pod 6 at the Museum Support Center. Gallery and public space improvements are needed to meet the Museum's program renewal schedule, and failure to accomplish these tasks would put the national collections at risk.

PROJECT TITLE: Revitalize Sculpture Garden and Tunnel
INSTALLATION: Hirshhorn Museum and Sculpture Garden (HMSG)
LOCATION: Washington, DC

<u>FY 2023 COST ESTIMATE (Thousands of Dollars):</u>	\$8,700*
<u>PRIOR-YEAR FUNDING:</u>	<u>\$9,000*</u>
Total	\$17,700*

* Does not include funding in Facilities Planning and Design.

PROJECT 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 rainfall 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 \$8.7 million in FY 2023 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:

Final construction documents are expected to be completed in the second quarter of FY 2022, with the construction award expected in the fourth quarter of FY 2022.

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 leaks. Longer term, the 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 whole HMSG site prevents both projects from being done simultaneously.

PROJECT TITLE: Revitalize Naos Laboratory Buildings
INSTALLATION: Smithsonian Tropical Research Institute (STRI)
LOCATION: Naos Site, Panama

<u>FY 2023 COST ESTIMATE (Thousands of Dollars):</u>	\$4,500*
<u>FUTURE-YEAR FUNDING:</u>	<u>\$10,000*</u>
Total	\$14,500*

* Does not include funding in Facilities Planning and Design.

PROJECT BACKGROUND:

Located in Panama City, the Naos Marine and Molecular Laboratory site provides facilities for Pacific Ocean marine research, intertidal zones behavioral research, archaeology, and evolutionary speciation of terrestrial plants and animals. The laboratories house a seawater system that uses molecular biology tools to study marine organisms, their behaviors, ecology, and physiology, and their interaction with invasive species. Among many other research activities, environmental monitoring programs study the impact of human activities on coral reefs and other marine ecosystems.

PROJECT JUSTIFICATION:

With the renewal of the Contract with the Nation of Panama, STRI will continue to occupy the current Naos Laboratories well into the future. For STRI to fulfill its mission, the existing buildings require major renovations, reconfiguration of spaces, and update or replacement of the mechanical, electrical, and plumbing systems needed to properly house several marine biology and archeological collections gathered by STRI scientists through the years. Additionally, with the requested funds, unoccupied or unused structures will be repurposed and refurbished to serve new purposes, such as to provide swing spaces, new seawater laboratories, and an enhanced seawater processing system.

PROJECT DESCRIPTION:

The Smithsonian requests \$4.5 million in FY 2023 to begin this project with the renovation and refurbishment of Building 332, which will serve as swing space during the renovation of laboratory buildings 352 and 359, as well as house the permanent seawater laboratory. Finishes and electrical and mechanical systems will be modernized or replaced, and physical and electronic security will be added for all facilities involved in this project. This project will also include improvements to collections storage spaces, upgrading security and fire protection to protect STRI's marine biology and archeological artifacts, and exterior improvements to enhance accessibility between buildings and optimize sea diving and general maintenance operations.

PROGRESS TO DATE:

The concept design for the Naos site was completed in February of 2022. The design for the first phase of work on Building 352 will be completed in January of 2023. The construction contract award for the renovation of Building 352 is targeted for mid-2023.

IMPACT OF DELAY:

The planned long-term presence of STRI at the Naos site demands proper revitalization and modernization of the existing buildings' spaces and electrical and mechanical systems, and the reconfiguration and repurposing of existing science program spaces to fit current needs. Additionally, much of Building 332 is in deteriorating condition and requires renovation and reconstruction. Although this building's roof and exterior siding were recently replaced to keep the structure from becoming hazardous to occupy, a full renovation is required to use these spaces to their full potential and for specific scientific functions. This major revitalization project will bring the Institute's essential research site up to required standards for a new generation of scientists who are continuing to provide broader research diversity at STRI.

PROJECT TITLE: Replace and Improve Galeta Facilities
INSTALLATION: Smithsonian Tropical Research Institute (STRI)
LOCATION: Galeta Site, Panama

<u>FY 2023 COST ESTIMATE (Thousands of Dollars):</u>	\$2,300*
<u>FUTURE-YEAR FUNDING:</u>	<u>\$12,400*</u>
Total	\$14,700*

* Does not include funding in Facilities Planning and Design.

PROJECT BACKGROUND:

The Galeta Marine Station is located near the Caribbean terminal of the Panama Canal and the city of Colon. It serves as a laboratory, marine and wetland environmental monitoring station, as well as an education and outreach center for STRI. The site includes several small dormitories, a laboratory building, a small administration structure, and support buildings.

PROJECT JUSTIFICATION:

The buildings at Galeta Marine Station are located directly on an eroding shoreline and are experiencing seawater infiltration during high tides and windy conditions. In addition, the existing laboratory and dormitories are located in old, outdated buildings which do not comply with current building codes. Among the many deficiencies, they do not have a fire-suppression system and the current sanitary and potable water systems are substandard.

PROJECT DESCRIPTION:

The Smithsonian requests \$2.3 million in FY 2023 for Phase 1 of this project, which includes the installation of a new fire-suppression system and potable water upgrades at the Station to serve current and future facilities. As part of STRI's Facilities Master Plan, the existing dormitories and laboratory will be replaced with code-compliant structures to safely host the research, education, and outreach activities at the Galeta site. Phase 2 of the project includes a new wastewater system, upgrades to the existing main electrical and communication systems, and new shoreline barriers to protect the land from sea erosion. Subsequent phases of this project will incorporate a replacement laboratory/administration building (Phase 3) and a replacement dormitory building (Phase 4).

PROGRESS TO DATE:

Design is complete and construction contract award for Phase 1 is expected in mid-2023.

IMPACT OF DELAY:

The Galeta Marine Station requires major renovations at many essential facilities, including the laboratory, administration building, and dormitories. Basic infrastructure systems for sanitary and potable water urgently need upgrades. Delaying this project will increase maintenance costs and impair STRI's ability to conduct research and educational programs at the Galeta site, and potentially endanger visitors and staff. In addition, the potable water installation at the site is not big enough to meet future demands and needs to be upgraded and modernized.

PROJECT TITLE: Replace and Reinforce Tupper Library Roof
INSTALLATION: Smithsonian Tropical Research Institute (STRI)
LOCATION: Tupper Site, Panama

<u>FY 2023 COST ESTIMATE (Thousands of Dollars):</u>	\$1,100*
<u>PRIOR-YEAR FUNDING:</u>	<u>\$700*</u>
Total	\$1,800*

* Does not include funding in Facilities Planning and Design.

PROJECT 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 and research 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 working life.

PROJECT DESCRIPTION:

The Smithsonian requests \$1.1 million in FY 2023 to continue replacing and reinforcing the library roof. The project will also require a structural evaluation of the existing framework, which will support the new roofing material. In addition, the special collections of books will be relocated from the Annex Building to the reading/office area, where the controlled environmental conditions are better.

PROGRESS TO DATE:

The design contract has been issued, with completion of the design phase expected by the end of 2022.

IMPACT OF DELAY:

Delaying this project will increase the need for costly emergency and temporary repairs to keep the roof from leaking. Water leaks create safety hazards to STRI’s staff and visitors and could damage precious historical and research publications and rare books inside the building.

PROJECT TITLE: Renovate Tupper Laboratory
INSTALLATION: Smithsonian Tropical Research Institute (STRI)
LOCATION: Tupper Site, Panama

<u>FY 2023 COST ESTIMATE (Thousands of Dollars):</u>	\$500*
<u>FUTURE-YEAR FUNDING:</u>	<u>\$1,000*</u>
Total	\$1,500*

* Does not include funding in Facilities Planning and Design.

PROJECT BACKGROUND:

The Smithsonian Tropical Research Institute's administrative base is the Earl S. Tupper Research and Conference Center located on Ancon Hill. This complex includes a library, lecture hall, laboratories, and offices, was designed by the Panamanian architect Octavio Mendez Guardia and dedicated in 1990. It was built on the site of the historic 1906 Tivoli Hotel, which was demolished in 1975, where visitors came to view the construction of the Panama Canal. The main structure is the Tupper Building, which houses several administrative and research programs, as well as the main offices for STRI's director.

PROJECT JUSTIFICATION:

While the Tupper Building continues to be operational through maintenance actions and programs that have helped preserve the building through the years, there are areas, systems, and finishes which have deteriorated over time and need modernizing to ensure the building can remain functional.

PROJECT DESCRIPTION:

The Smithsonian requests \$500,000 in FY 2023 to begin replacing the deteriorated metal cabinets in the laboratory spaces, as well as the old drop ceilings. In addition, the heating, ventilation, and air-conditioning (HVAC) system's main air-handling units will be replaced with modern equipment that can provide enhanced internal air filtration. In future phases, the bathrooms will be renovated and the ceilings, laboratory cabinets, and corroded fire-suppression system pipes will be replaced.

PROGRESS TO DATE:

A scope of work for design services is being prepared. The design is expected to be complete by January of 2023.

IMPACT OF DELAY:

Delaying this project will increase the deterioration of the laboratory, eventually rendering it unusable. The fire-suppression system has started to show leaks caused by the corroding steel pipes. Therefore, it is essential to begin this phased project before further deterioration takes place and requires more expensive measures to repair.

PROJECT TITLE: Replace Laboratory and Storage Pod Air-Handling Units
INSTALLATION: Museum Support Center (MSC)
LOCATION: Suitland Collections Center (SCC), Suitland, Maryland

<u>FY 2023 COST ESTIMATE (Thousands of Dollars):</u>	\$7,000*
<u>PRIOR-YEAR FUNDING:</u>	\$13,400*
<u>FUTURE-YEAR FUNDING:</u>	<u>\$15,000*</u>
Total	\$35,400*

* Does not include funding in Facilities Planning and Design.

PROJECT 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 \$7.0 million in FY 2023 to continue replacing AHUs in Labs 1 and 2. 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 and is 85 percent complete. 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: Decontaminate Objects in Building 16
INSTALLATION: Building 16, Silver Hill Facility (SHF)
LOCATION: Suitland Collections Center (SCC), Suitland, Maryland

<u>FY 2023 COST ESTIMATE (Thousands of Dollars):</u>	\$1,000*
<u>FUTURE-YEAR FUNDING:</u>	<u>\$2,000*</u>
Total	\$3,000*

* Does not include funding in Facilities Planning and Design.

PROJECT BACKGROUND:

A study of the Smithsonian's collections storage space has identified the Suitland Collections Center, specifically, the Garber collections storage site, as having almost half of the Smithsonian's below-acceptable collections space. Much of the more than 230,000 square feet of space, including Building 16, is compromised by hazardous materials in and around the collections.

PROJECT JUSTIFICATION:

Building 16 contains collections which have been contaminated with asbestos from the interior building insulation. Encapsulation systems to shield the objects from the asbestos have failed and only a few highly trained and qualified Smithsonian staff are permitted in the building. The collections within the building are not available for research, exhibition, display, or loan, and are off limits to academia and the public. Funds received in FY 2017 and earlier were used to build temporary collections storage swing space and to decontaminate collections in other buildings. Building 16 is the next logical phase in this sequence. This project will decontaminate the collections objects in Building 16 and move them to a suitable storage location at the recently decontaminated and renovated Building 15. The collections will then be accessible for inventory, condition assessment, and research and exhibition.

PROJECT DESCRIPTION:

The Smithsonian requests \$1.0 million in FY 2023 to build a decontamination chamber within Building 16 and continue the process of decontaminating the collections in Phase 2 of the project. This labor-intensive process includes accounting and inventory assessments, stabilizing the collection, and moving cleaned collections into a temporary swing space (Building 15) at the Garber facility. This swing space will serve as the area for emergency conservation and treatment, as well as packing and crating, until the items can be permanently moved into the Museum Support Center's Pod 6 when that facility is completed. Phases 3 and 4 of the project will continue to decontaminate and re-locate objects on the shelves of Building 16 and in various storage trailers adjacent to the building.

PROGRESS TO DATE:

The contract for Phase 1 of the project was awarded in FY 2021 and site work began in February of 2022.

IMPACT OF DELAY:

Given that Building 16 was constructed as a 10- to 15-year temporary building in 1959, a delay in decontaminating the collections objects and moving them to a suitable storage facility will perpetuate the poor care and inaccessibility of important objects and slow implementation of the Institution's Collection Space Framework Plan and the SCC master plan.

PROJECT TITLE: Consolidate Maintenance Facilities
INSTALLATION: Smithsonian Environmental Research Center (SERC)
LOCATION: Edgewater, Maryland

<u>FY 2023 COST ESTIMATE (Thousands of Dollars):</u>	\$5,500*
<u>PRIOR-YEAR FUNDING:</u>	<u>\$4,100*</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 \$5.5 million in FY 2023 to complete construction of the facility, which will consolidate the grounds maintenance functions (previously at the Research Core) along the Dock Road, freeing up space at the Research Core, and to install 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 staff productivity.

PROGRESS TO DATE:

Project design was completed in FY 2021 and the construction contract was awarded in the fourth quarter of FY 2021. Continuing funding in FYs 2022 and 2023 will support the construction effort.

IMPACT OF DELAY:

A delay would cause 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: Construct Turbidity Filter System
INSTALLATION: Smithsonian Environmental Research Center (SERC)
LOCATION: Edgewater, Maryland

<u>FY 2023 COST ESTIMATE (Thousands of Dollars):</u>	\$400*
<u>PRIOR-YEAR FUNDING:</u>	<u>\$500*</u>
Total	\$900*

* 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 \$400,000 in FY 2023 to finish installing a new cloth-disk filter facility next to the existing ultraviolet (UV) disinfection building.

PROGRESS TO DATE:

A study to review the current water reclamation system and provide phased-approach recommendations was completed in October of 2019. Once repairs to the primary wastewater treatment system are complete, analysis of the primary effluent will inform the design scope of work. The design is expected to be complete in the fourth quarter of FY 2022 and the construction contract award is expected by the second quarter of FY 2023.

IMPACT OF DELAY:

The 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, thus wasting resources and incurring additional costs.

PROJECT TITLE: Repair Miller-Fox Façades and Envelope
INSTALLATION: Cooper Hewitt, Smithsonian Design Museum (CHSDM)
LOCATION: New York, New York

<u>FY 2023 COST ESTIMATE (Thousands of Dollars):</u>	\$3,500*
<u>PRIOR-YEAR FUNDING:</u>	<u>\$3,000*</u>
Total	\$6,500*

* Does not include funding in Facilities Planning and Design.

PROJECT 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 Museum’s 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 of them need to be repaired or replaced. Numerous water leaks have occurred in recent years, disrupting staff and putting valuable collections at risk of damage.

PROJECT DESCRIPTION:

The Smithsonian requests \$3.5 million in FY 2023 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 will be required 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 and replacements.

PROGRESS TO DATE:

Construction documents for the repair of the copper façade bows and bays were completed in 2017. The architect-engineering (A-E) design contract for the masonry and window repairs was awarded in the second quarter of FY 2020. Design has progressed to 100 percent and is expected to be completed and ready for procurement in the second quarter of FY 2022. The full scope award for construction is anticipated in the fourth quarter of FY 2022.

IMPACT OF DELAY:

Delaying this project further will continue to risk damage to collections areas and objects, as well as interrupt staff operations due to water intrusion and condensation from uninsulated window units. In addition, failure to repair deteriorated stone and masonry elements, which are next to the 90th Street sidewalks, will pose a tripping hazard and potential harm to pedestrians and risk public safety.

PROJECT TITLE: Improve Kitchen Exhaust Ductwork Access
INSTALLATION: National Museum of the American Indian (NMAI-DC)
LOCATION: Washington, DC

<u>FY 2023 COST ESTIMATE</u> (Thousands of Dollars):	\$2,000*
<u>FUTURE-YEAR FUNDING:</u>	<u>\$4,000*</u>
Total	\$6,000*

* Does not include funding in Facilities Planning and Design.

PROJECT BACKGROUND:

The curvilinear asymmetry of the National Museum of the American Indian provides a strong visual contrast to the regularity of the rest of the National Mall. Designed through consultations with the diverse Native groups and tribes of the Americas, the building reflects the broad commonalities in Indian tradition which emerged from those meetings. The incorporation of nature is seen throughout the structure of the Museum, which was designed by Douglas Cardinal of the Canadian Blackfoot tribe and the Philadelphia-based architectural firm GBQC and Polshek Partnership. In its sculptural form, the building illustrates the force of nature's energy through its effect upon the Kasota sandstone. In addition, the exterior of the building reflects traditional Indian culture. The landscaping contains indigenous plants from areas where Indians once lived. Water flows around three sides of the building, adding to the illusion of water-worn limestone on the curved exterior. More than 40 boulders surround the Museum, representing ancestors of the Native Americans. The building faces east toward the rising sun, reflecting Native American tradition. The Museum opened to the public in 2004 and was launched with a week of festivities attended by more than 20,000 Indians from tribes across the Americas.

PROJECT JUSTIFICATION:

The kitchen exhaust system requires improvements to ensure the facility complies with life and safety requirements, and to reduce repair and maintenance costs.

PROJECT DESCRIPTION:

The Smithsonian requests \$2.0 million in FY 2023 to improve the three kitchen exhaust systems. Specifically, the project will improve kitchen exhaust duct maintenance access, replace critical mechanical components, including hoods and fans, and reconfigure duct work as necessary to improve efficiency. The project will make it easier to maintain the kitchen exhaust system and reduce repair and maintenance costs, as well as provide a better visitor experience.

PROGRESS TO DATE:

A study was completed in May of 2020 to recommend improvements to the kitchen exhaust system. Concept design began in early FY 2022, with construction document completion expected in the fourth quarter of FY 2022 so the construction services contract can be awarded in FY 2023.

IMPACT OF DELAY:

Kitchen exhaust ductwork and fans are difficult to maintain properly due to lack of access into exhaust ductwork for cleaning, causing more frequent repair and replacement of mechanical components. Buildup of grease within exhaust ductwork due to poor drainage also poses a fire hazard and impairs compliance with life-safety code requirements. In addition, the deficiency also negatively impacts the visitor experience because strong grease odors spread to the second-floor gallery due to poorly sealed exhaust ductwork from the Mitsitam Cafe below. This project will correct those deficiencies.

PROJECT TITLE: Improve Water System, Fred L. Whipple Observatory (Phase III)
INSTALLATION: Smithsonian Astrophysical Observatory (SAO)
LOCATION: Amado, Arizona

FY 2023 COST ESTIMATE (Thousands of Dollars): \$600*

* Does not include funding in Facilities Planning and Design.

PROJECT BACKGROUND:

The SAO's Fred Lawrence Whipple Observatory (FLWO) in Arizona conducts world-renowned astrophysical research from the Multiple Mirror Telescope (MMT) building on the summit of Mt. Hopkins as well as many other telescope sites on the peaks around the FLWO campus. The water system (above the Base Camp) that serves all the FLWO buildings was constructed over the course of several decades as the facility grew in response to the expanding SAO mission.

PROJECT JUSTIFICATION:

The water system has experienced service failures in recent years and is almost 40 years old. The water system draws on sources of spring, well, and runoff water but the automated system failed several years ago and currently does not treat the water. Recent tests indicate a water quality issue that is creating a hazard to personnel health and safety. In addition, the staff must manually control pumps to refill tanks and keep the tanks tied to the fire-protection system full.

PROJECT DESCRIPTION:

The Smithsonian requests \$600,000 in FY 2023 to implement Phase III construction of this project to replace all water, power, and communication infrastructure between the water source spring and the residence tanks. This will augment the pumping units installed within the buildings in the previous Phase II. These pumping units will be designed based on pumping to the Ridge Site and a local tank. The local tank is the existing 2,500-gallon Water Tank 4. At the Ridge site, a pumping station shall be designed and constructed to pump water to the Aspen site. Two existing 20,000-gallon tanks are located at the Aspen site. The addition of the water, power, and communication infrastructure will automate the safety of water potability and support a water source for fire protection.

PROGRESS TO DATE:

The design work for this project will be completed in FY 2022.

IMPACT OF DELAY:

A delay in Phase III would raise staff life-safety issues and impair fire protection of property. The SAO currently provides bottled water to all facilities on the mountain as a safety precaution, and this will need to continue until repairs are made. In addition, the staff must now manually control pumps to refill tanks and keep critical tanks tied to the fire-protection system full due to the failed system that wastes considerable staff time monitoring and adjusting the chlorine levels in the storage tanks. Despite SAO's best efforts and the dedication of significant staff time, the water quality is often questionable and continues to risk the health and safety of on-site personnel.

PROJECT TITLE: Modernize Electronic Security, Fred L. Whipple Observatory
INSTALLATION: Smithsonian Astrophysical Observatory (SAO)
LOCATION: Amado, Arizona

FY 2023 COST ESTIMATE (Thousands of Dollars): \$500*

* Does not include funding in Facilities Planning and Design.

PROJECT BACKGROUND:

The SAO's Fred Lawrence Whipple Observatory (FLWO) in Arizona conducts world-renowned astrophysical research from the Multiple Mirror Telescope (MMT) building on the summit of Mt. Hopkins as well as many other telescope sites on the peaks around the FLWO campus.

PROJECT JUSTIFICATION:

The MMT building is a multi-million-dollar scientific research facility that does not have an electronic security system; therefore, it does not meet current Smithsonian security standards. It contains high-value, specialty-built scientific equipment that is at risk without a robust security system. Any loss of equipment would not only be costly but would delay months of cutting-edge astrophysical research.

PROJECT DESCRIPTION:

The Smithsonian requests \$500,000 in FY 2023 to install electronic security systems to meet current security standards. The FLWO electronic security systems modernization project will include fiber-optic infrastructure, data-gathering panels, network video recorders (NVRs), access readers, cameras, intercoms, and the latest intrusion-detection devices.

PROGRESS TO DATE:

Design work for this project will be completed in FY 2022.

IMPACT OF DELAY:

Delaying this project will leave the MMT building without any physical security system. The facility is already out of compliance with current Smithsonian and industry best practice security standards. A further delay of this project would continue to put the facility and its high-value equipment and research at risk.

PROJECT TITLE: Improve Roads, Phase 3, Fred L. Whipple Observatory
INSTALLATION: Smithsonian Astrophysical Observatory (SAO)
LOCATION: Amado, Arizona

<u>FY 2023 COST ESTIMATE (Thousands of Dollars):</u>	\$400*
<u>FUTURE-YEAR FUNDING:</u>	<u>\$800*</u>
Total	\$1,200*

* Does not include funding in Facilities Planning and Design.

PROJECT BACKGROUND:

The Smithsonian Astrophysical Observatory (SAO) Fred Lawrence Whipple Observatory (FLWO) in Arizona conducts world-renowned astrophysical research from the Multiple Mirror Telescope (MMT) building on the summit of Mt. Hopkins as well as many other telescope sites around the FLWO campus. The 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 located on the summit peaks. SAO activities on Mt. Hopkins require access between its facilities at the Base Camp (located at 4,500 feet) and the summit to conduct basic operations, research, and educational activities which form its core mission.

PROJECT JUSTIFICATION:

The road improvement project will stabilize the roadbed and guard rails for the safety of Smithsonian staff, contractors, and visitors. Safe travel is essential on the roads between the various sites of the FWLO.

PROJECT DESCRIPTION:

The Smithsonian requests \$400,000 in FY 2023 to continue stabilizing and correcting deficiencies of the roadbed 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 capability of most drivers, standard vehicles, and pedestrians. Most crucially, the road has many 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 disruption of power to the facilities will be mitigated by replacing the metal culverts with concrete ones.

PROGRESS TO DATE:

Project design is complete. Construction of the prioritized six sections was completed in FYs 2019–2021 so this project can continue to replace culverts and install new guardrails in hazardous areas. Work to replace culverts and install guardrails has begun and will continue through FY 2023.

IMPACT OF DELAY:

If this project is delayed, SAO staff, visitors, and scientists will continue to face increased life-safety risks when driving to and from the Observatory, especially during the nightly science operations when vehicles must dim their lights to ensure optimal conditions for using the telescopes.

PROJECT TITLE: Install Site-Wide Fall Protection, Fred L. Whipple Observatory
INSTALLATION: Smithsonian Astrophysical Observatory (SAO)
LOCATION: Amado, Arizona

<u>FY 2023 COST ESTIMATE (Thousands of Dollars):</u>	\$300*
<u>FUTURE-YEAR FUNDING:</u>	\$1,500*
Total	\$1,800*

* Does not include funding in Facilities Planning and Design.

PROJECT BACKGROUND:

The SAO's Fred Lawrence Whipple Observatory (FLWO) in Arizona conducts world-renowned astrophysical research from the Multiple Mirror Telescope (MMT) building on the summit of Mt. Hopkins as well as many other telescope sites around the FLWO campus. Telescopes are located on the summit peaks. SAO activities on Mt. Hopkins require access to and from its facilities at the Base Camp and the summit to conduct basic operations, research, and educational activities which form its core mission.

PROJECT JUSTIFICATION:

Presently, there is no safe access to the equipment on the high-pitched roof of the Submillimeter Array (SMA) Control Building directly over the maintenance hangar. The SMA building, 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.

PROJECT DESCRIPTION:

The Smithsonian requests \$300,000 in FY 2023 to create a safe access walkway and platform on the SMA Control Building roof, which will include railings and all associated code-compliant harness attachment points. Additionally, improvements will be made to the horizontal lifeline system (HLL) on the roof of the Veritas building as well as at other site-wide locations where Smithsonian employees and contractors are exposed to the risks of hazardous falls.

PROGRESS TO DATE:

The Smithsonian Institution's FLWO performed a fall hazard risk assessment (FHRA) in June of 2014. A project study was awarded in FY 2021 and will provide concept design for the Base Camp buildings, Ridge buildings, Summit MMT (interior and exterior), and support buildings and Ridge water tanks. Design completion is expected by late FY 2022.

IMPACT OF DELAY:

A delay will continue to put SAO/Smithsonian staff and contractors who maintain the equipment on the roofs at risk of falls when doing their essential work to support the Observatory's mission.

PROJECT TITLE: Install Additional Chiller and Controls
INSTALLATION: National Museum of African American History and Culture
LOCATION: Washington, DC

FY 2023 COST ESTIMATE (Thousands of Dollars): \$1,000*

Total \$1,000*

* Does not include funding in Facilities Planning and Design.

PROJECT BACKGROUND:

The National Museum of African American History and Culture’s (NMAAHC) exhibits cover more than 400 years of African American history and culture. The architectural and engineering team of Freelon Adjaye Bond SmithGroup began work on the design in November of 2009 after the Smithsonian Institution selected the firm through a design competition process. The design concept leverages the image of the Corona by placing this singular building element within the landscape. Reaching toward the sky, the Corona expresses faith, hope, and resiliency. Internal to the building, the Corona forms a perimeter zone that surrounds the primary galleries. Daylight enters this zone through openings in the screen panels and skylights — bringing in light while providing views upward and outward. The Corona rests on a base of clear glass panels which afford generous views into and through the building as well as outward from the interior into the surrounding landscape and the Washington Monument grounds. The design of the porch reinforces its importance in African American culture as a gathering and welcoming space. The landscape design is an essential component of the visitor experience. A reflecting pool at the south entrance includes both turbulent and still waters to symbolize the African American experience in the United States.

PROJECT JUSTIFICATION:

The redundant chiller was deferred from the initial construction of the building for budget reasons. Reliability concerns of the other chillers during peak loads now support the installation of this redundant chiller. In addition, fluctuating HVAC setpoints during extreme temperatures, and increased maintenance due to the existing chillers’ age, have caused problems with the operation of the chillers.

PROJECT DESCRIPTION:

The Smithsonian requests \$1.0 million in FY 2023 to install a fourth chiller and connect it to the existing infrastructure. Additionally, operating controls will be updated to work with the existing Building Automated System (BAS).

PROGRESS TO DATE:

Design services were awarded in the third quarter of FY 2021.

IMPACT OF DELAY:

The current situation is no longer sustainable. Existing equipment is stressed to its limits during extreme weather conditions. If the workloads are not lightened and one of the three chillers fails, it would jeopardize the NMAAHC’s collections and negatively impact both Museum staff and the public’s visitor experience.

PROJECT TITLE: Replace Steam Humidification System
INSTALLATION: Smithsonian Quadrangle
LOCATION: Washington, DC

<u>FY 2023 COST ESTIMATE (Thousands of Dollars):</u>	\$1,000*
<u>FUTURE-YEAR FUNDING:</u>	<u>\$1,000*</u>
Total	\$2,000*

* Does not include funding in Facilities Planning and Design.

PROJECT BACKGROUND:

The Smithsonian 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 the architectural firm of Shepley, Bullfinch, and Abbott.

PROJECT JUSTIFICATION:

The building's steam humidification systems are reaching the end of their useful life expectancy, have experienced leaks, and need to be upgraded to meet current performance standards which will provide a comfortable environment for staff and visitors and prevent damage to the national collections.

PROJECT DESCRIPTION:

The Smithsonian requests \$1.0 million in FY 2023 to upgrade steam humidification systems to meet current standards for collections stewardship and the comfort of staff and the visiting public.

PROGRESS TO DATE:

Design work will be completed in FY 2022.

IMPACT OF DELAY:

Delaying the project will leave the Quadrangle with steam humidification systems that are near the end of their useful life, making them more prone to malfunction and failure. It will also leave the building out of compliance with current standards for collections protection, visitor comfort, and systems performance and reliability.

PROJECT TITLE: Building Projects Less than \$1,000,000 and Miscellaneous Repairs
INSTALLATION: Multiple Locations
LOCATION: Institution-wide

FY 2023 COST ESTIMATE (Thousands of Dollars): \$11,300

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, swing space for one of our new museums, and conservation and related studies.

PROJECT TITLE: Construction Supervision and Administration
INSTALLATION: Multiple Locations
LOCATION: Institution-wide

FY 2023 COST ESTIMATE (Thousands of Dollars): \$9,500

PROJECT DESCRIPTION:

This request supports the essential 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, and term and temporary staff required to perform the specialized work associated with Facilities Capital Program projects. Included in this request is \$1.0 million to hire additional staff necessary to begin creating the congressionally mandated National Museum of the American Latino and the Smithsonian American Women's History Museum. These personnel will assist with planning, design, site selection, programming, cost estimating, and environmental assessments for the two new museums.

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. A central construction management administration section coordinates all funding, contract changes, technical issues, and project physical and fiscal closeouts.

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 help procure 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 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. The funding will enable development of project baselines, including costs, scopes, 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 enable timely award of construction contracts upon receipt of future-year funding.

The Institution requests a total of **\$46,900,000** for planning and design in FY 2023. 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 (\$2.0 million). These funds will continue design for the Hirshhorn Museum and Sculpture Garden major revitalization (\$9.8 million); design for the renovation of the east end loading dock at the National Air and Space Museum to support east end projects (\$1.8 million); start the master plan update and other major revitalization projects at the National Museum of Natural History (\$2.5 million); the National Zoological Park and Smithsonian Conservation Biology Institute (\$3.4 million); major revitalization of the National Museum of American History (\$6.8 million); Smithsonian Tropical Research Institute (\$1.5 million); Smithsonian Astrophysical Observatory (\$0.75 million); and the National Postal Museum (\$0.55 million). Planning and design funds for security-related projects will include electronic security system modernizations at various facilities (\$3.6 million). In addition, this request includes funding for a preliminary design to expand collections storage spaces at the National Museum of the American Indian's (NMAI) Cultural Resource Center in Suitland, Maryland (\$2.25 million), the Dulles Collections Center Storage Module Building (\$2.0 million), as well as various collections storage projects (\$1.85 million). 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 (\$8.1 million), which will help guide the Smithsonian's 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 2023 Cost Estimate	Design	\$0	\$0
FY 2023 Cost Estimate	Construction	\$36,000	\$27,208
Prior-Year Funding	Design	\$6,850	\$2,610
Prior-Year Funding	Construction	\$7,600	\$11,460
Future-Year Funding	Construction	\$43,820	\$24,572
TOTAL		\$94,270	\$65,850

PROJECT 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. An 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 project 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 next 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 \$36.0 million in FY 2023 to continue construction of Pod 6. 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. When built, 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 145,538 net square feet of storage space, which includes 84,214 net square feet for the Smithsonian and 61,324 net square feet for the NGA. Project design will be completed in the first quarter of FY 2022, with construction award expected in the fourth quarter of FY 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 documents were received in April of 2021 and final design and construction documents were submitted in January of 2022. 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. A construction solicitation will be issued in the second quarter of FY 2022, with contract award anticipated in the fourth quarter of FY 2022.

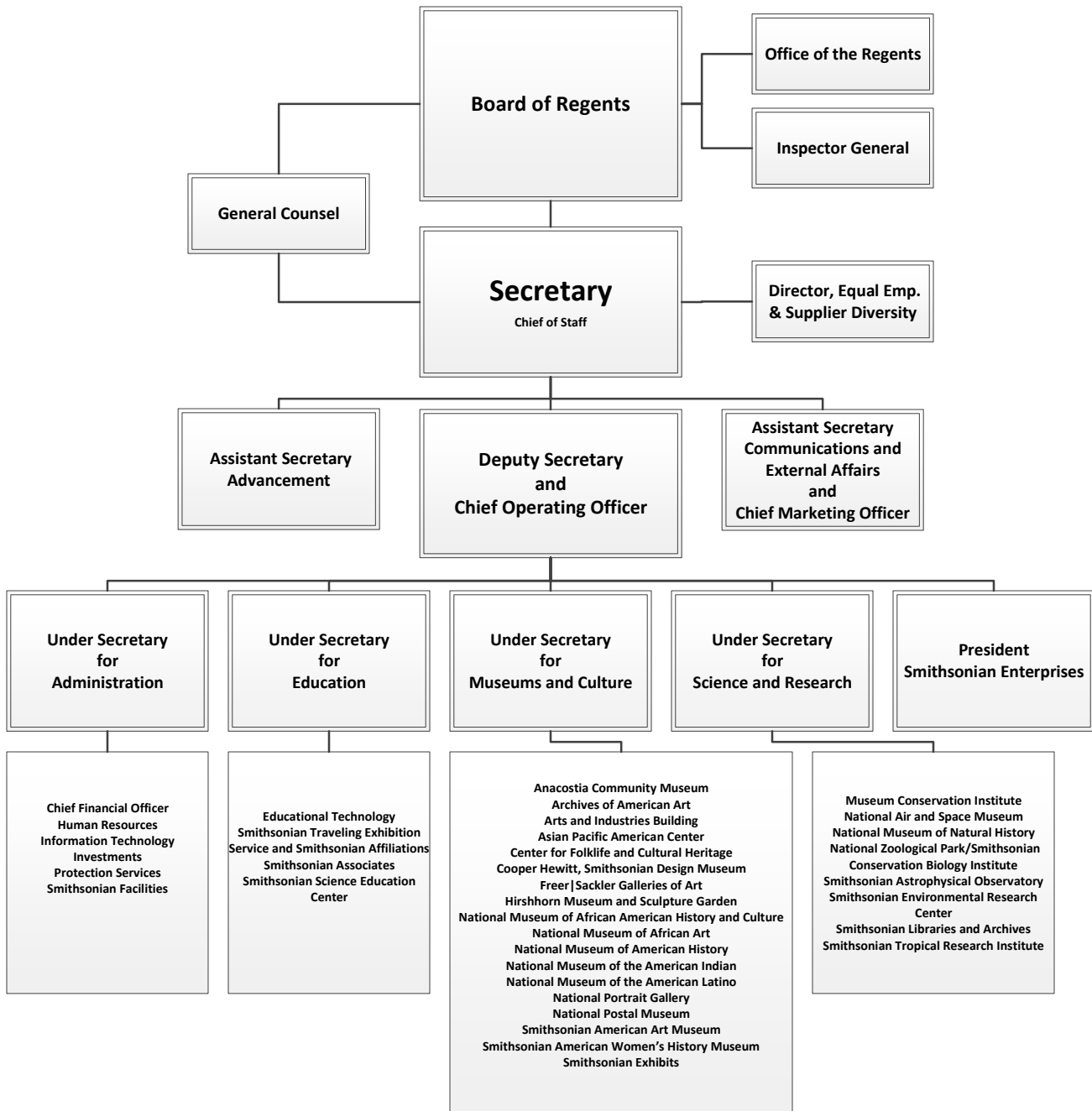
IMPACT OF DELAY:

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 and galleries when they know there will be permanent safekeeping of their gifts for the public good.

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SMITHSONIAN INSTITUTION

PROPOSED – JANUARY 2022



VISITS TO THE SMITHSONIAN
FYs 2017–2021

<u>MUSEUM</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>
MALL					
SI Castle	1,131,280	1,082,016	955,949	298,325	75,191
A&I Building ¹	64,343	18,329	27,514	1,599	0
Natural History	6,103,289	5,177,357	4,228,940	1,465,253	502,222
Air and Space	7,120,722	6,382,500	3,869,046	749,475	197,575
American Indian	1,157,460	1,109,424	985,781	358,732	133,712
Freer Gallery ²	0	294,866	300,066	110,412	38,297
Sackler Gallery	195,051	142,548	153,213	57,339	0
African Art	165,343	144,175	130,414	51,270	17,697
Ripley Center	164,853	127,850	150,663	60,799	0
American History	3,914,493	4,026,325	3,061,396	741,281	352,052
Hirshhorn	1,097,847	808,498	982,816	299,090	95,030
African American History and Culture	2,508,403	2,039,364	1,923,563	836,768	244,887
OFF MALL					
DW Reynolds Center (AA/PG)	1,242,707	2,118,434	1,819,355	706,155	198,986
Anacostia	31,775	37,562	11,038	10,064	956
Cooper Hewitt	355,672	316,732	267,948	99,284	33,124
American Indian ³ (Heye Center/CRC)	439,325	417,829	357,554	147,234	30,014
Renwick	371,201	795,523	430,101	134,210	56,921
National Zoo	2,025,148	1,664,579	1,885,116	816,703	793,702
Postal	470,723	525,168	489,120	189,021	5,629
Udvar-Hazy Center	<u>1,570,706</u>	<u>1,546,780</u>	<u>1,317,082</u>	<u>589,120</u>	<u>396,730</u>
TOTAL^{4/5}	30,130,341	28,775,859	23,346,675	7,722,134	3,171,813

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 Includes the George Gustav Heye Center in New York City and the Cultural Resources Center (CRC) in Suitland, Maryland.

⁴ 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.

⁵ The drop in visits in FYs 2020–2021 is due to the COVID-19 pandemic closures in March of 2020 and thereafter.

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 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 2021 Actuals	FY 2022 Estimates
General Trust	54.2	53.0
Donor/Sponsor-Designated	362.2	251.7
Government Grants and Contracts	118.1	97.0
Total Available for Operations	\$534.5	\$401.7

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 national 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 2022 general trust funds total \$53,000,000. These funds

are used to support administrative programs such as central management, legal counsel, accounting, personnel, contracting, and budget activities, 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 2022 are projected to total \$251,700,000. 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 2022, Government grants and contracts are projected to total \$97,000,000. Of this amount, \$73,000,000 is planned for astrophysical research and development programs carried out by the Smithsonian Astrophysical Observatory.

APPROPRIATION LANGUAGE

SALARIES AND EXPENSES

For necessary expenses of the Smithsonian Institution, as authorized by law, including research in the fields of art, science, and history; development, preservation, and documentation of the National Collections; presentation of public exhibits and performances; collection, preparation, dissemination, and exchange of information and publications; conduct of education, training, and museum assistance programs; maintenance, alteration, operation, lease agreements of no more than 30 years, and protection of buildings, facilities, and approaches; not to exceed \$100,000 for services as authorized by 5 U.S.C. 3109; and purchase, rental, repair, and cleaning of uniforms for employees, \$852,215,000, to remain available until September 30, 2023, except as otherwise provided herein; of which not to exceed \$12,798,000 for the instrumentation program, collections acquisition, exhibition reinstallation, and the repatriation of skeletal remains program shall remain available until expended; and including such funds as may be necessary to support American overseas research centers: *Provided*, That funds appropriated herein are available for advance payments to independent contractors performing research services or participating in official Smithsonian presentations: *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, SW, Washington, DC, to the extent that federally supported activities will be housed there: *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 44 of the Further Consolidated Appropriations Act, 2020 (Public Law 116–94; 133 Stat. 2536) on the intended sale.

FACILITIES CAPITAL

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), and for construction, including necessary personnel, \$265,000,000, to remain available until expended, of which not to exceed \$10,000 shall be for services as

authorized by 5 U.S.C. 3109. Note.— A full-year 2022 appropriation for this account was not enacted at the time the budget was prepared; therefore, the budget assumes this account is operating under the Continuing Appropriations Act, 2022 (Division A of P.L. 117–43, as amended). The amounts included for 2022 reflect the annualized level provided by the continuing resolution.

APPROPRIATION 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 2023 appropriations language.

Appropriation: Salaries and Expenses

1. For necessary expenses of the Smithsonian Institution, as authorized by law, including research in the fields of art, science, and history;

20 U.S.C. § 50 provides that “...all objects of art and of foreign and curious research, and all objects of natural history, plants, and geological and mineralogical specimens...shall be so arranged and classified...as best to facilitate the examination and study of them...”

20 U.S.C. § 53a provides that “Appropriations are hereby authorized for...the making of solar observations at high altitudes...”

20 U.S.C. § 69 provides that “The Secretary of the Smithsonian Institution is hereby authorized...to continue independently or in cooperation anthropological researches among the American Indians and the natives of lands under the jurisdiction or protection of the United States...”

20 U.S.C. § 75b(b) provides that “The [National Portrait] Gallery shall function as a free public museum for the exhibition and study of portraiture and statuary depicting men and women who have made significant contributions to the history, development, and culture of the people of the United States and of the artists who created such portraiture and statuary.”

20 U.S.C. § 76bb(c) provides that “The Joseph H. Hirshhorn Museum and Sculpture Garden...shall be used for the storage, exhibition, and study of works of art...”

20 U.S.C. § 77a provides that “Said national air and space museum shall...provide educational material for the historical study of aviation and space flight.”

20 U.S.C. § 78 provides that “The Secretary of the Smithsonian Institution is hereby authorized to cooperate with any State, educational institution, or scientific organization in the United States, for continuing paleontological investigations...”

20 U.S.C. § 80m(a)(3) provides that “(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...”

Section 104(a)(2), Division T, Title I, of Public Law 116-260 (December 27, 2020), provides that the Council of the Smithsonian American Women's History Museum shall have the sole authority to "purchase, accept, borrow, and otherwise acquire artifacts for addition to the collections of the museum..."

Section 201(d)(2)(B)(i), Division T, Title II, of Public Law 116-260 (December 27, 2020), provides that the Board of Trustees of the National Museum of the American Latino shall have the sole authority to "purchase, accept, borrow, or otherwise acquire artifacts and other objects for addition to the collections of the museum..."

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...”

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.”

9. *Provided*, That funds appropriated herein are available for advance payments to independent contractors performing research services or participating in official Smithsonian presentations:

31 U.S.C. § 3324(b)(1) provides that (b) “An advance of public money may be made only if it is authorized by-- (1) a specific appropriation or other law...”

Appropriation: Facilities Capital

1. For necessary expenses of repair, revitalization, and alteration of facilities owned or occupied by the Smithsonian Institution, by contract or otherwise, as authorized by section 2 of the Act of August 22, 1949 (63 Stat. 623),

20 U.S.C. § 53a provides that “Appropriations are hereby authorized...for repairs and alterations of buildings and grounds occupied by the Smithsonian Institution in the District of Columbia and elsewhere...”

20 U.S.C. § 81 provides that “The National Zoological Park is placed under the direction of the Regents of the Smithsonian Institution, who are authorized...to administer and improve the said Zoological Park for the advancement of science and the instruction and recreation of the people.”

2. and for construction,

Section 107(c), Division T, Title I, of Public Law 116-260 (December 27, 2020) provides that: “The Board of Regents,...may plan, design, and construct a building for the [Smithsonian American Women’s History] Museum, which shall be located at the site designated by the Board of Regents...”

Section 201(g)(1)(C), Division T, Title II, of Public Law 116-260 (December 27, 2020) provides that: “The Board of Regents,...is authorized to prepare plans, design, and construct a building or modify an existing building for the [National] Museum [of the American Latino], which shall be located at the site designated by the Board of Regents...”

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. \$ _____ 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.”

4. 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.”