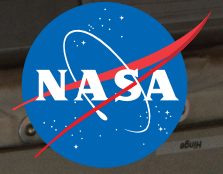
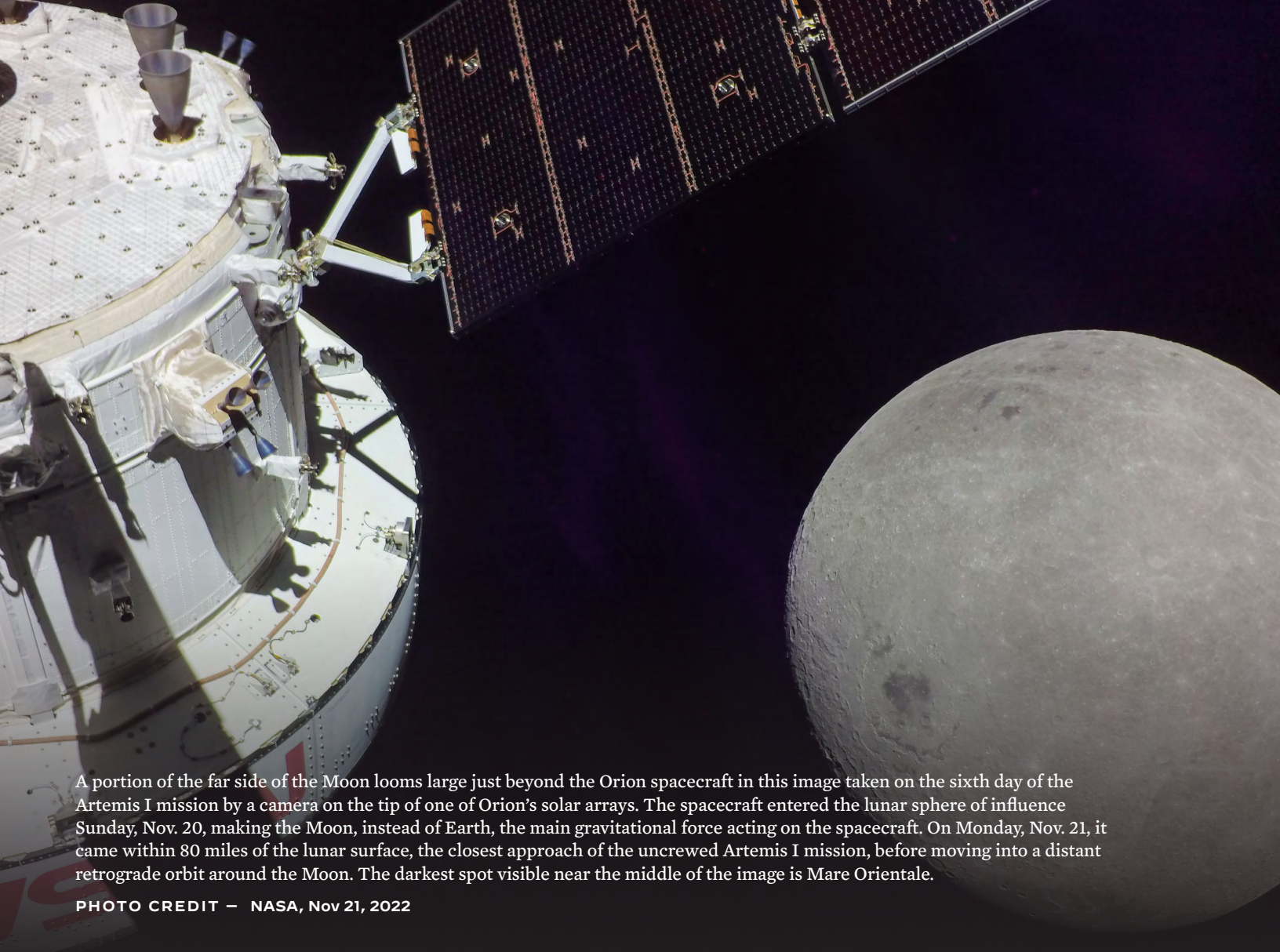


National Aeronautics and  
Space Administration



FY 2023

# AGENCY FINANCIAL REPORT



A portion of the far side of the Moon looms large just beyond the Orion spacecraft in this image taken on the sixth day of the Artemis I mission by a camera on the tip of one of Orion's solar arrays. The spacecraft entered the lunar sphere of influence Sunday, Nov. 20, making the Moon, instead of Earth, the main gravitational force acting on the spacecraft. On Monday, Nov. 21, it came within 80 miles of the lunar surface, the closest approach of the uncrewed Artemis I mission, before moving into a distant retrograde orbit around the Moon. The darkest spot visible near the middle of the image is Mare Orientale.

PHOTO CREDIT — NASA, Nov 21, 2022



**COVER IMAGE**  
**Caption and credits**

Expedition 68 Flight Engineer Koichi Wakata of the Japan Aerospace Exploration Agency (JAXA) is pictured in his Extravehicular Mobility Unit, or spacesuit, during his second spacewalk. He and fellow spacewalker Nicole Mann (out of frame) of NASA installed a modification kit on the International Space Station's starboard truss structure that will enable the future installation of the orbiting lab's next roll-out solar array.

PHOTO CREDIT — NASA, Feb 2, 2023

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Columbia astronaut William McCool's family representatives Jane Tani and Dan Tani, right, as well as family of Challenger astronaut Judy Resnik, Chuck Resnik, left, and Amy Resnik, center, help place a lei at the Space Shuttle Columbia Memorial during a wreath laying ceremony that was part of NASA's Day of Remembrance, Thursday, Jan. 26, 2023, at Arlington National Cemetery in Arlington, Va. Wreaths were laid in memory of those men and women who lost their lives in the quest for space exploration.

PHOTO CREDIT — NASA/Aubrey Gemignani

NASA OBSERVES DAY OF REMEMBRANCE AHEAD OF

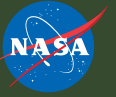
# Columbia 20th Anniversary

Each January NASA honors members of the NASA family who lost their lives while furthering the cause of exploration and discovery, including the crews of Apollo 1 and space shuttles Challenger and Columbia. In 2023, the Day of Remembrance was observed on Jan. 26, and marks the 20th anniversary of the loss of the Space Shuttle Columbia on Feb. 1, 2003.



NASA DAY OF REMEMBRANCE

Click [here](#) to view the full digital experience.



# MESSAGE FROM THE ADMINISTRATOR

I am pleased to present the Fiscal Year (FY) 2023 Agency Financial Report (AFR) for the National Aeronautics and Space Administration (NASA). This report demonstrates how we are investing the resources with which we have been entrusted and provides a complete picture of our financial results in accordance with Generally Accepted Accounting Principles. Under the leadership of the Office of the Chief Financial Officer, NASA has once again received an unmodified “clean” audit opinion on its financial statements for the 13th consecutive year, with no reported material weaknesses.

NASA is committed to delivering reliable, accurate, and comprehensive financial data with transparency regarding the Agency’s fiscal operations. We follow high-quality financial reporting practices, ensuring appropriate controls with efficient and effective management of appropriated and reimbursable Agency funds. The financial and performance data presented in this report are complete and reliable.

NASA supports good-paying American jobs; inspires humanity; and engages the next generation of scientists, engineers, and explorers. In FY 2023, NASA achieved remarkable breakthroughs in exploring new cosmic shores, advancing space exploration, enhancing air travel safety and efficiency through innovation, and safeguarding our planet through monitoring and scientific progress.

The successful Artemis I flight test proved the capabilities of the Space Launch System (SLS); and laid the foundation for future missions, with its record-breaking journey around the Moon and return to Earth of NASA’s Orion spacecraft. We are building on the momentum and lessons learned as we continue the historic preparations for the crewed Artemis II mission, on NASA’s path to human exploration of the South Pole of the Moon, to establish a long-term and sustainable lunar presence. The Artemis II crew represents thousands of people working tirelessly to bring us to the stars; they represent our creed: E pluribus unum – out of many, one. Through Artemis missions, NASA will use innovative technologies to explore more of the lunar surface than ever before and achieve historic progress by landing the first woman and first person of color on the Moon. We will go in partnership with a broad coalition of commercial and international partners. Then, we will use what we learn on and around the Moon to take the next giant leap: sending the first astronauts to Mars.

For more than 60 years, NASA has pushed the boundaries of human exploration for the benefit of all—we are harnessing that expertise to fuel United States (U.S.) commercial development in low Earth orbit. Our vision is to create a robust low Earth orbit economy, with a focus on both the supply of low Earth orbit services and sustainable demand for such services. In the past year, we have seen the successful completion of the second private astronaut mission to the International Space Station. NASA also recently committed to partnering with seven U.S. companies on a variety of commercial space projects, including additional space station destinations and transportation collaborations. Our commercial partners are making steady progress, demonstrating successful engineering design and development objectives for new low Earth orbit commercial space stations.

At NASA, our eyes are not just focused on stars but also fixated on the sky. NASA is committed to shaping the future of aviation, ushering in a new era where aircraft are greener, cleaner, and quieter—creating new possibilities for the flying public and American industry alike. Over the coming decades, we aim to reduce aviation energy use and emissions toward an aviation community goal of net-zero carbon emissions by 2050. Earlier this year, we announced a Funded Space Act Agreement with Boeing for the Sustainable Flight Demonstrator project—investing \$425 million alongside more than \$725 million contributed by Boeing and its partners—to build, test and fly a full-scale demonstrator aircraft and validate technologies aimed at lowering emissions. This project has already produced an experimental aircraft that received an official “X” designation from the U.S. Air Force, the X-66A. This is the first X-plane specifically focused on achieving net-zero aviation greenhouse gas emissions and has the potential to inform a new generation of more sustainable single-aisle aircraft—the workhorse of passenger airlines around the world.



## MESSAGE FROM THE ADMINISTRATOR (CONTINUED)

The first humans who will walk on Mars and the innovators who will help humanity reach the Red Planet are students in America's classrooms today. We need the whole of this Artemis Generation, from all parts of America and all walks of life, to achieve our goals, overcome challenges, and inspire the world. NASA is committed to promoting science, technology, engineering, and mathematics (STEM) engagement to students from diverse backgrounds to pursue an interest and a career in STEM and space industries. Our programs aimed at research and minority-serving institutions have enhanced research infrastructure and augmented capabilities and opportunities for students who have not previously participated equitably in aerospace activities. Further, NASA sponsors a multitude of challenges and competitions to develop STEM skills for students and provides authentic work experiences in which students contribute to the NASA mission through internships and fellowships.

NASA is working to better understand our home planet from the unique vantage point of space—and to share that knowledge with the world. With more than two-dozen Earth-observing satellites and instruments, NASA is the world's leading Agency for observing and understanding changes to the Earth system. We are seeing more clearly than ever the interconnected systems and impacts of climate change at a global level. Bold action is needed to protect our planet, and NASA continues to take the lead role on climate. This summer, NASA opened the Earth Information Center at NASA Headquarters, where visitors can see how our planet is changing in areas that affect lives and livelihoods—from temperatures in our cities to sea level rise, greenhouse gas emissions to agricultural productivity. We also released a [climate strategy](#) this year that outlines our continued commitment and how we intend to accomplish our ambitious climate goals.

I am inspired daily by the NASA workforce, who continue to find previously unimaginable solutions to some of our world's most challenging problems. We persist in breaking down barriers that impede fairness, ensuring access to opportunities for underserved communities to engage the important and diverse perspectives needed to take us to the Moon, Mars, and beyond. I am excited about the breakthroughs to come and to celebrate historic successes for our nation as we continue to explore the unknown in air and space, innovate for the benefit of humanity, and inspire the world through discovery.



Sincerely,

Bill Nelson

### NASA'S MAJOR THEMES AND STRATEGIC GOALS

#### I. DISCOVER

Expand human knowledge through new scientific discoveries.

#### II. EXPLORE

Extend human presence to the Moon and on towards Mars for sustainable long-term exploration, development, and utilization.

#### III. INNOVATE

Catalyze economic growth and drive innovation to address national challenges.

#### IV. ADVANCE

Enhance capabilities and operations to catalyze current and future mission success.

### SPANISH TRANSLATION AVAILABLE

Click [here](#) or view page 111 to read the Spanish version. Haga clic [aquí](#) o vea la página 111 para leer la versión en español.



Scientists recently named a mesa-like lunar mountain that towers above the landscape carved by craters near the Moon's South Pole. This unique feature will now be referred to as "Mons Mouton," after NASA mathematician and computer programmer Melba Roy Mouton.

PHOTO CREDIT — NASA, Feb 15, 2023

## HERSTORY:

# Moon Mountain Name Honors NASA Mathematician Melba Mouton

Scientists recently named a mesa-like lunar mountain that towers above the landscape carved by craters near the Moon's South Pole. This unique feature will now be referred to as "Mons Mouton," after NASA mathematician and computer programmer Melba Roy Mouton (MOO-tawn).



Members of NASA's Volatiles Investigating Polar Exploration Rover (VIPER) mission proposed the name to the International Astronomical Union (IAU). The flat-topped mountain is adjacent to the western rim of the Nobile Crater, on which VIPER will land and explore during its approximately 100-day mission as part of NASA's Artemis program.

### MONS MOUTON

Click [here](#) to learn more about Mons Mouton, the Moon Mountain named in honor of Melba Mouton.

SECTION 1

# Management's Discussion and Analysis



Vice President Kamala Harris delivers remarks during a tour of NASA's Goddard Space Flight Center with President Yoon Suk Yeol of the Republic of Korea, Tuesday, April 25, 2023, in Greenbelt, MD.

PHOTO CREDIT

NASA/Joel Kowsky



# WELCOME TO NASA



The women who comprise the Artemis launch team are photographed inside Firing Room 1 of the Launch Control Center at NASA's Kennedy Space Center in Florida on Feb. 10, 2023. In the center of the front row is NASA's first female Launch Director Charlie Blackwell-Thompson. The team, which is about 30% women, launched the agency's Artemis I mission – the first in an increasingly complex series of missions to return humans to the Moon – from Kennedy's Launch Pad 39B on Nov. 16, 2022.

PHOTO CREDIT – NASA/Kim Shiflett

The FY 2023 AFR presents NASA's audited FY 2023 and FY 2022 financial statements and disclosures, the related Independent Auditors' opinion, required supplemental information, preliminary top-level performance results for FY 2023, and other information. The FY 2023 AFR can be found on NASA's website ([www.nasa.gov](http://www.nasa.gov)) at [Agency Financial Reports](#).

NASA inspires the world through exploration and discovery, leading scientific and technological advancements that benefit Americans and all humanity. Our efforts in space help to further the national economy, including through innovative commercial partnerships with American businesses. With the increasing threat of climate change, NASA's efforts to study and understand the Earth are of critical global significance. In addition, NASA's partnerships with academic institutions support a robust science, technology, engineering, and mathematics (STEM) workforce and promote diversity, equity, inclusion, and accessibility (DEIA) in the fields of science and technology.

NASA's achievements of tomorrow are being built on a solid foundation of fiscal operations and performance management. Through the rigorous application of controls and standards, we ensure that our programs and projects have the resources they need to continue this forward momentum. We use credible, quality data to drive Agency decision-making and planning. NASA is transparent in these efforts, complying fully with requirements on accountability and performance management.

NASA demonstrates stewardship of its resources and accountability for results through compliance with the [Chief Financial Officers Act of 1990 \(CFO Act\)](#)<sup>1</sup> and the [Government Performance and Results Act Modernization Act of 2010 \(GPRAMA\)](#)<sup>2</sup>. Financial aspects of the Agency's business operations are accounted for according to U.S. Generally Accepted Accounting Principles (GAAP). GAAP, for Federal entities, are the standards prescribed by the Federal Accounting Standards Advisory Board (FASAB).

NASA presents both performance and financial results of operations by Strategic Goals as identified in NASA's [2022 Strategic Plan](#)<sup>3</sup>. Highlights of key program activities contributing to each Strategic Goal are provided in the Mission Performance section (starting on [page 13](#)). A high-level summary of the linkage between program results and the cost of operations is available in the Statement of Net Cost (SNC), found in the Financial section (starting on [page 44](#)). The SNC presents comparative net cost of operations during FY 2022 and FY 2023 by Strategic Goal and for the Agency as a whole. In addition, the Financial Highlights, in the Financial Performance section, explain any significant changes in NASA's financial condition from FY 2022 to FY 2023.

<sup>1</sup>Chief Financial Officers Act of 1990 (CFO Act) <https://govinfo.library.unt.edu/npr/library/misc/cfo.html>

<sup>2</sup>Government Performance and Results Act Modernization Act of 2010 (GPRAMA) <https://www.congress.gov/111/plaws/publ352/PLAW-111publ352.pdf>

<sup>3</sup>NASA's 2022 Strategic Plan [https://www.nasa.gov/wp-content/uploads/2018/01/2022\\_nasa\\_strategic\\_plan\\_0.pdf](https://www.nasa.gov/wp-content/uploads/2018/01/2022_nasa_strategic_plan_0.pdf)

# ACHIEVING OUR VISION AND MISSION



The United States Air Force Thunderbirds arrive at NASA's Wallops Flight Facility. The flight teams are stationed at Wallops while they participate in the Ocean City Air Show scheduled for June 11 and 12 in Ocean City, Maryland.

PHOTO CREDIT — NASA/Terry Zaperach, Jun 7, 2023

NASA embraces the challenge of furthering global scientific and technological achievement and expands the realm of what is possible in aeronautics and space. This challenge is our passion, our purpose, and is reflected in the Vision and Mission described in our 2022 Strategic Plan<sup>4</sup>.

NASA's long-term success will be largely determined by the strategic decisions and investments we make today, as well as constant adherence to our five guiding Core Values, shown below.

## NASA'S CORE VALUES

NASA's existing Core Values of Safety, Integrity, Inclusion, Teamwork, and Excellence mandate individual and organizational behavior across the Agency at all levels:

### Safety

NASA's constant attention to safety is the cornerstone upon which we build mission success.

### Inclusion

NASA is committed to a culture of diversity, inclusion, and equity, where all employees feel welcome, respected, and engaged.

### Excellence

To achieve the highest standards in engineering, research, operations, and management in support of mission success, NASA is committed to nurturing an organizational culture in which individuals make full use of their time, talent, and opportunities to pursue excellence in conducting all Agency efforts.

### Integrity

NASA is committed to maintaining an environment of trust, built upon honesty, ethical behavior, respect, and candor.

### Teamwork

NASA's most powerful asset for achieving mission success is a multidisciplinary team of diverse, talented people across all NASA Centers.

## VISION

Exploring the secrets of the universe for the benefit of all.

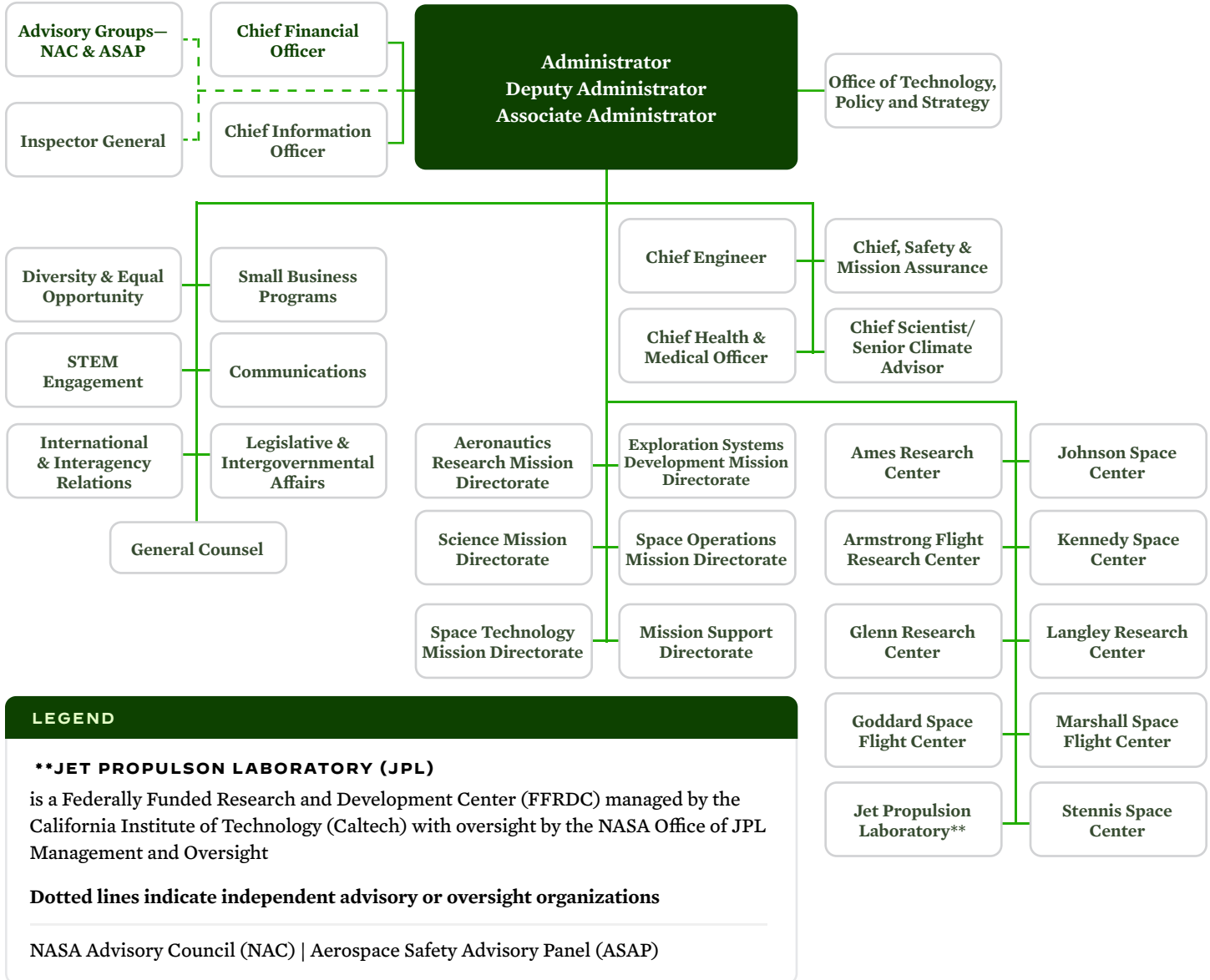
## MISSION

NASA explores the unknown in air and space, innovates for the benefit of humanity, and inspires the world through discovery.

<sup>4</sup>NASA produces a Strategic Plan every four years in accordance with GPRAMA. NASA published the 2022 Strategic Plan on March 28, 2022, concurrent with publication of our FY 2023 Congressional Justification. The Strategic Plan is available at [https://www.nasa.gov/wp-content/uploads/2018/01/2022\\_nasa\\_strategic\\_plan\\_0.pdf](https://www.nasa.gov/wp-content/uploads/2018/01/2022_nasa_strategic_plan_0.pdf)

# ORGANIZATIONAL STRUCTURE

NASA's Headquarters, located in Washington, DC, provides the overall guidance and direction to the Agency under the leadership of the Administrator. A skilled and diverse group of technical and business professionals conduct day-to-day activities throughout our 10 Centers and multiple unique facilities.

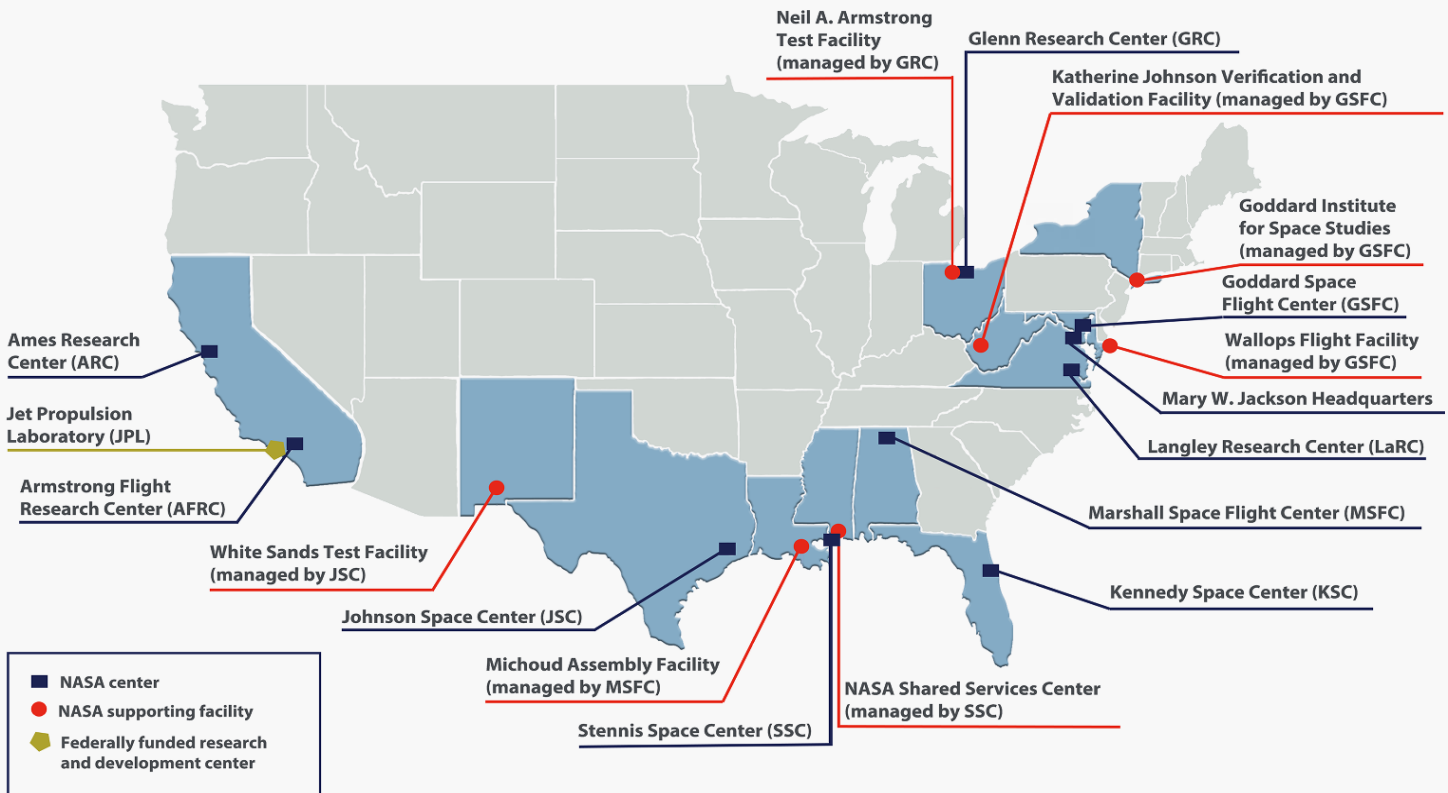


The innovative, responsive, and dynamic nature of NASA's work benefits from our highly leveraged relationships with and between Mission Directorates, Mission Support Offices, and Centers. This organizational model ensures that our leaders can take both a holistic and more narrowly focused approach to programmatic, operational, business, and safety management<sup>5</sup>.

The Administrator and senior officials lead NASA by providing top-level strategy, policy, and direction. NASA's Office of the Chief Financial Officer leads the Agency's budget, financial, and performance management processes. Mission Directorates and Mission Support Offices at Headquarters manage decisions on programmatic investments and guide operations of the Centers.

<sup>5</sup>The Agency's organization structure, roles, and responsibilities are described in NASA Policy Directive 1000.3E, NASA Organization <https://nodis3.gsfc.nasa.gov/displayDir.cfm?t=NPD&c=1000&s=3E>

# NASA CENTERS AND FACILITIES



## Testing Capabilities Support Future Mission Success

NASA maintains a wide selection of testing capabilities for aircraft, spacecraft, and exploration vehicles. These capabilities allow us to simulate real environmental stresses, physiological reactions, and other conditions that can affect mission success. Below is a sample of some of our testing capabilities.



NASA researchers Jeanette Le, Curt Hanson, and Erik Waite, look on as pieces of a newly installed motion simulator are tested at NASA Armstrong Flight Research Center in Edwards, California, on April 26, 2023. The simulator includes virtual reality goggles depicting an aircraft cabin and city environment, as well as noise and seat motion, to simulate an air taxi ride. NASA researchers will be able to provide guidance on elements of air taxi design like seat placement and window size based on the results of these experiments. It will also help inform where the aircraft will take off, land and fly. *Photo Credit – NASA/Genaro Vavuris*



The Volatiles Investigating Polar Exploration Rover (VIPER) engineering test team uses lunar soil simulants and hand-picked rocks to carefully shape the terrain to realistically mimic actual features at the surface of the Moon's South Pole at the Simulated Lunar Operations Laboratory at Glenn Research Center in Cleveland, Ohio. Kevin May, rover and mission systems engineering intern at the Ames Research Center in California leads the terrain preparation for [the test](#). *Photo Credit – NASA/Bridget Caswell, May 30, 2023*



More than 500 NASA Stennis, NASA Shared Services Center, and NASA contractor employees and family members viewed a hot fire on the Fred Haise Test Stand at NASA's Stennis Space Center near Bay St. Louis, Mississippi, on June 15, 2023. The test marked the 11th in the 12-test [series](#) to certify production of new RS-25 engines for NASA's Space Launch System (SLS) rocket that will help power future Artemis missions to the Moon. *Photo Credit – NASA/Stennis*

# NASA BY THE NUMBERS

FY 2023 BUDGET

**\$25.6 Billion**

**\$13.6B** Research, Engineering, & Development

**\$9.4B** Operations

**\$1.3B** Grants

**\$1.3B** Facilities and Equipment

Note: The \$25.6 billion contains \$556.4 million of Disaster Relief Supplemental Appropriations. Totals are estimates because as of September 30, 2023, \$1.2 billion in funding had yet to be committed.

NASA'S CIVIL SERVICE WORKFORCE BY CENTER

**18,325 Employees**

**482** (3%)  
Other

**1,334** (7%)  
Ames Research Center (ARC)

**1,606** (9%)  
NASA Headquarters (HQ)

**2,046** (11%)  
Kennedy Space Center (KSC)

**3,155** (17%)  
Johnson Space Center (JSC)

**577** (3%)  
Armstrong Flight Research Center (AFRC)

**1,526** (9%)  
Glenn Research Center (GRC)

**1,903** (10%)  
Langley Research Center (LaRC)

**2,378** (13%)  
Marshall Space Flight Center (MSFC)

**3,318** (18%)  
Goddard Space Flight Center (GSFC)

For more information about NASA's workforce visit [wicn.nssc.nasa.gov](http://wicn.nssc.nasa.gov)

DID YOU KNOW



PHOTO CREDIT  
Relativity Space

**3D Printed Rocket Launched Using Innovative NASA Alloy**

In March, the Relativity Space Terran 1 rocket lit up the night sky as it launched from Cape Canaveral Space Force Station in Florida. This was the first launch of a test rocket made entirely from 3D-printed parts, measuring 100 feet tall and 7.5 feet wide. A form of additive manufacturing, 3D printing is a key technology for enhancing capabilities and reducing cost. Terran 1 included nine additively manufactured engines made of an innovative copper alloy, which experienced temperatures approaching 6,000 degrees Fahrenheit.

This image shows the Terran 1's rocket exhaust during launch in March 2023.

# Mission Performance



Principal technician Billy Keim installs a cover plate over the detectors for NASA's Nancy Grace Roman Space Telescope (Roman). The heart of Roman was recently delivered to Ball Aerospace in Boulder, Colorado, for integration into the WFI (Wide Field Instrument). Called the FPS (Focal Plane System), it serves as the core of Roman's camera. When the mission launches in 2027, astronomers will use this system to gather exquisite images to help unravel the secrets of dark energy and dark matter, discover exoplanets, and explore many topics in infrared astrophysics.

PHOTO CREDIT

NASA/Chris Gunn, May 16, 2023

# STRATEGIC PLAN FRAMEWORK

NASA's 2022 Strategic Plan defines a framework that consists of Strategic Goals aligned to our Mission; Strategic Objectives describing our strategies for achieving the Strategic Goals; and multiyear, outcome-oriented Performance Goals, with annual targets and milestones that measure and track incremental progress towards achieving the Performance Goals. The Performance Goals and annual targets are consistent with our fiscal year budget request and Agency priorities.



NASA'S PERFORMANCE FRAMEWORK BREAKDOWN

04

Strategic Goals

12

Strategic Objectives

49

Performance Goals

NASA elevates a subset of performance goals — Agency Priority Goals — for additional attention and external reporting. Agency Priority Goals reflect both NASA and Administration priorities. In the 2022 Strategic Plan, NASA presented four Agency Priority Goals for the FY 2022-2023 performance cycle: Artemis, Climate Change Research, Space Technology Leadership, and James Webb Space Telescope. During FY 2023, we are finalizing Agency Priority Goals for the FY 2024-2025 cycle.

The President signed the [Foundations for Evidence-Based Policymaking Act of 2018](#) (Evidence Act) into law in January of 2019. The Evidence Act establishes a framework for agencies to organize evidence building, data management, and data access functions to ensure an integrated connection to data and evidence. The 2022 Strategic Plan includes NASA's first-ever Learning Agenda, a roadmap for NASA to systematically plan evidence-building activities that will allow the Agency to make evidence-based policy decisions. The Learning Agenda identifies a set of broad questions NASA sees as urgent to moving our operations and Mission forward over the next four years. As these questions are answered, they will help us work more effectively and efficiently, using evidence to make decisions relating to missions, programs, and investments.

The President's Management Agenda outlines three priorities<sup>6</sup>, identified by the Biden-Harris administration in November 2021, to improve how the Federal Government operates and performs. Working together, agencies develop strategies for addressing each priority.

<sup>6</sup> More on the President's Management Agenda priorities and supporting strategies is available at <https://www.performance.gov/pma/>. These priorities focus on ensuring an equitable, effective, and accountable Federal Government that delivers results for all.

# STRATEGIC GOALS AND OBJECTIVES

NASA has identified four Strategic Goals that will strengthen our ability to accomplish our Mission and contribute to maintaining American leadership in space, aeronautics, climate research, and innovation while driving economic growth in the civil space sector. The Strategic Goals, as well as their corresponding Strategic Objectives, are outlined below.

Four major themes, each characterized by a single word, reflect the focus of NASA's four Strategic Goals:

- **DISCOVER** references NASA's enduring purpose of scientific discovery
- **EXPLORE** references NASA's push to expand the boundaries of human presence in space
- **INNOVATE** references NASA's broad mandate to promote the technologies of tomorrow
- **ADVANCE** references the capabilities, workforce, and facilities that allow NASA to achieve our Mission

## DISCOVER

**Expand human knowledge through new scientific discoveries.**

- 1.1 Understand the Earth system and its climate.
- 1.2 Understand the Sun, solar system, and universe.
- 1.3 Ensure NASA's science data are accessible to all and produce practical benefits to society.

## EXPLORE

**Extend human presence to the Moon and on towards Mars for sustainable long-term exploration, development, and utilization.**

- 2.1 Explore the surface of the Moon and deep space.
- 2.2 Develop a human spaceflight economy enabled by a commercial market.
- 2.3 Develop capabilities and perform research to safeguard explorers.
- 2.4 Enhance space access and services.

## INNOVATE

**Catalyze economic growth and drive innovation to address national challenges.**

- 3.1 Innovate and advance transformational space technologies.
- 3.2 Drive efficient and sustainable aviation.

## ADVANCE

**Enhance capabilities and operations to catalyze current and future Mission success.**

- 4.1 Attract and develop a talented and diverse workforce.
- 4.2 Transform mission support capabilities for the next era of aerospace.
- 4.3 Build the next generation of explorers.



# AGENCY PRIORITY GOALS

Agency Priority Goals support improvements in near-term outcomes and advance progress toward longer-term, outcome-focused Strategic Objectives. They reflect a limited number of top priorities of Agency leadership and the Administration. Agency Priority Goals are selected for implementation over a two-year cycle.

For the FY 2022-2023 cycle, NASA continued the previous Agency Priority Goals on James Webb Space Telescope and Artemis and developed two new goals, on Climate Change Research and Space Technology Leadership. Below is the goal statement and an overview of each Agency Priority Goal. Action plans and quarterly updates are available at [www.performance.gov/agencies/nasa](http://www.performance.gov/agencies/nasa) and results for FY 2023 will be published in the FY 2024 Volume of Integrated Performance (VIPer).

## James Webb Space Telescope **SUPPORTING STRATEGIC GOAL 1**

After launch, deployment, and start of science operations, the James Webb Space Telescope will study every phase in the history of our universe, ranging from the first luminous glows after the Big Bang, to the formation of other stellar systems capable of supporting life on planets like Earth, to the evolution of our own solar system. By September 30, 2023, NASA will complete commissioning of the James Webb Space Telescope, the most powerful and complex space telescope ever built, and begin Webb's Cycle 2 observations.

Webb will allow us to explore deeper into space and see things that even the Hubble Space Telescope cannot see. Webb is a partnership between NASA's Cosmic Origins program, the European Space Agency (ESA), and the Canadian Space Agency (CSA) and is operated by the Space Telescope Science Institute (STScI), which also operates the Hubble Space Telescope.

### DID YOU KNOW



#### Webb Makes First Detection of Crucial Carbon Molecule (Orion Bar NIRCam Image)

While observing the Orion Bar, Webb made the first detection ever of a crucial carbon molecule called methyl cation (pronounced cat-eye-on) in space. Carbon compounds are the foundation of life as we know it, and methyl cation (CH<sub>3</sub><sup>+</sup>) plays an important role in forming more complex carbon-based molecules. [Find out more →](#)

*Photo Credit – ESA/Webb, NASA, CSA, M. Zamani (ESA/Webb), PDRs4ALL ERS Team, Jun 26, 2023*

## Climate Change Research **SUPPORTING STRATEGIC GOAL 1**

Use the global vantage point of space to advance our understanding of the Earth system, its processes, and changing climate. By September 30, 2023, NASA will advance climate change research by delivering two new observing systems and an upgrade to NASA's primary global Earth systems model.

NASA will deliver two new observing systems, Landsat 9 and the Surface Water and Ocean Topography (SWOT) mission, and an upgrade to Goddard Institute for Space Studies (GISS) Model E, NASA's model used most extensively in assessments of climate change. NASA also will complete several activities that will enable us to conduct Earth System Observatory research in a way that better addresses diverse community needs and will expand our ability to use the global vantage point of space to advance our understanding of the Earth System.

### DID YOU KNOW



#### SWOT Launch

A SpaceX Falcon 9 rocket launches with the Surface Water and Ocean Topography (SWOT) spacecraft onboard, Friday, Dec. 16, 2022, from Space Launch Complex 4E at Vandenberg Space Force Base in California. Jointly developed by NASA and Centre National D'Etudes Spatiales (CNES), with contributions from the Canadian Space Agency (CSA) and United Kingdom Space Agency, SWOT is the first satellite mission that will observe nearly all water on Earth's surface, measuring the height of water in the planet's lakes, rivers, reservoirs, and the ocean. [Find out more →](#)

*Photo Credit – NASA/Keegan Barber*

## AGENCY PRIORITY GOALS (CONTINUED)

### Artemis SUPPORTING STRATEGIC GOAL 2

Advance America's goal to land the first woman and the first person of color on the Moon and pursue a sustainable program of exploration by demonstrating capabilities that advance lunar exploration. By September 30, 2023, NASA will launch Artemis I, deliver the Core Stage for Artemis II to Kennedy Space Center for processing, and have multiple companies under contract to develop systems for sustainable human lunar exploration.

On November 16, 2022, the SLS and Orion spacecraft launched from Kennedy Space Center, Florida, to begin the uncrewed Artemis I mission. The Orion spacecraft traveled 1.4 million miles – beyond the Moon and back – and splashed down safely in the Pacific Ocean on December 11. NASA is now working towards Artemis II, which will be the first crewed mission.

#### DID YOU KNOW



#### Artemis II Crew at GSFC

NASA astronaut Reid Wiseman, second from left, answers a question alongside CSA (Canadian Space Agency) astronaut Jeremy Hansen, left, and NASA astronauts Victor Glover second from right, and Christina Hammock Koch right, during an employee engagement event, Friday, May 19, 2023, at NASA's Goddard Space Flight Center in Greenbelt, Md. Wiseman, Glover, Hammock Koch, and Hansen, who will fly around the Moon on NASA's Artemis II flight test, visited Washington to discuss their upcoming mission with members of Congress and others. [Find out more →](#)

*Photo Credit – NASA/Joel Kowsky*

### Space Technology Leadership SUPPORTING STRATEGIC GOAL 3

Ensure American global leadership in space technology innovations through increased partnering with industry and demonstrating key lunar surface and deep space technologies. By September 30, 2023, NASA will demonstrate leadership in space technology by:

1. Enhancing partnerships with industry through delivery or completion of milestones for at least 4 Tipping Point opportunities, and at least 3 critical small business technology transitions to develop capabilities that support NASA and commercial needs;
2. Delivering at least 3 new technologies that will be demonstrated on the lunar surface or in lunar orbit; and
3. Completing at least 2 major milestones for projects that increase the Nation's capabilities in deep space.

NASA will lay the groundwork for the aerospace breakthroughs of tomorrow through demonstration of new technologies on the lunar surface and in deep space. Achievement will require working closely with stakeholders, enlisting partnerships, utilizing evidence-based decision making, and promoting diversity, equity, inclusion, and accessibility (DEIA).

#### DID YOU KNOW



#### NASA's Moon Rover Prototype Conquers Steep, Scary Lander Exit Test

NASA signed a contract in May 2023 that will extend and adapt innovations, developed through Small Business Innovative Research (SBIR), to support the VIPER mission. These technologies are needed by VIPER to improve the mission's rover locomotion performance. Antoine Tardy, VIPER rover egress driver, adjusts the cables that power and send commands to the VIPER test unit as engineers practice its exit/descent from the model Griffin lunar lander at NASA's Ames Research Center in California. [Find out more →](#)

*Photo Credit – NASA/Dominic Hart, Jun 30, 2023*

# Strategic Goals and Highlights



NASA Administrator Bill Nelson, left, shows Secretary of Education Miguel Cardona, right, images taken by the James Webb Space Telescope prior to a memorandum of understanding (MOU) signing ceremony, Wednesday, May 24, 2023, at the Mary W. Jackson NASA Headquarters building in Washington. The NASA and Department of Education MOU is focused on strengthening the collaboration between the two agencies, including efforts that advance STEM education across the nation.

PHOTO CREDIT

NASA/Keegan Barber

# ASSESSMENT APPROACH

Every Strategic Objective is supported by at least one Performance Goal. NASA's Performance Goals consist of an outcome-based statement, a measurement approach that describes how the Performance Goal will be measured throughout its lifespan, and an annual target consistent with the budget. Below is an example of a Performance Goal supporting Strategic Objective 2.2: Develop a human spaceflight economy enabled by a commercial market.

For NASA's 49 Performance Goals, we indicate the preliminary progress, based on the FY 2023 targets, by assigning a color rating of Green (complete or on target to complete), Yellow (below target), or Red (significantly below target/at risk). Internal success criteria establish the thresholds for a Yellow or Red rating. A Grey rating indicates that the Performance Goal could not be assessed in time for the AFR publication, but a final rating will be provided in the FY 2025 Volume of Integrated Performance (VIPer)<sup>7</sup>.

**EXAMPLE**

**MEASUREMENTS STATEMENT:**

Provide NASA crew transportation through commercial partners to the International Space Station (ISS) and low Earth orbit.

**MEASUREMENTS APPROACH:**

Number of Commercial Crew missions launched

**TARGET FOR FY 2023:**

4 Commercial Crew missions

**ANTICIPATED NUMBER OF MISSIONS COMPLETED:**

4

**ANTICIPATED RATING FY 2023:**

**Green**

**GREEN**

**Complete or On Target Complete**

NASA has completed or is on target to complete the Performance Goal/ Agency Priority Goal as planned.

**YELLOW**

**Below Target**

NASA is below target or behind schedule for the fiscal year but currently expects the work being measured to be completed as planned by the end of the Performance Goal's time frame.

**RED**

**Significantly Below Target/At Risk**

NASA is significantly below target or behind schedule for the fiscal year. The work being measured is at risk of not being completed within the Performance Goal's time frame.

**GREY**

**Currently Unrated**

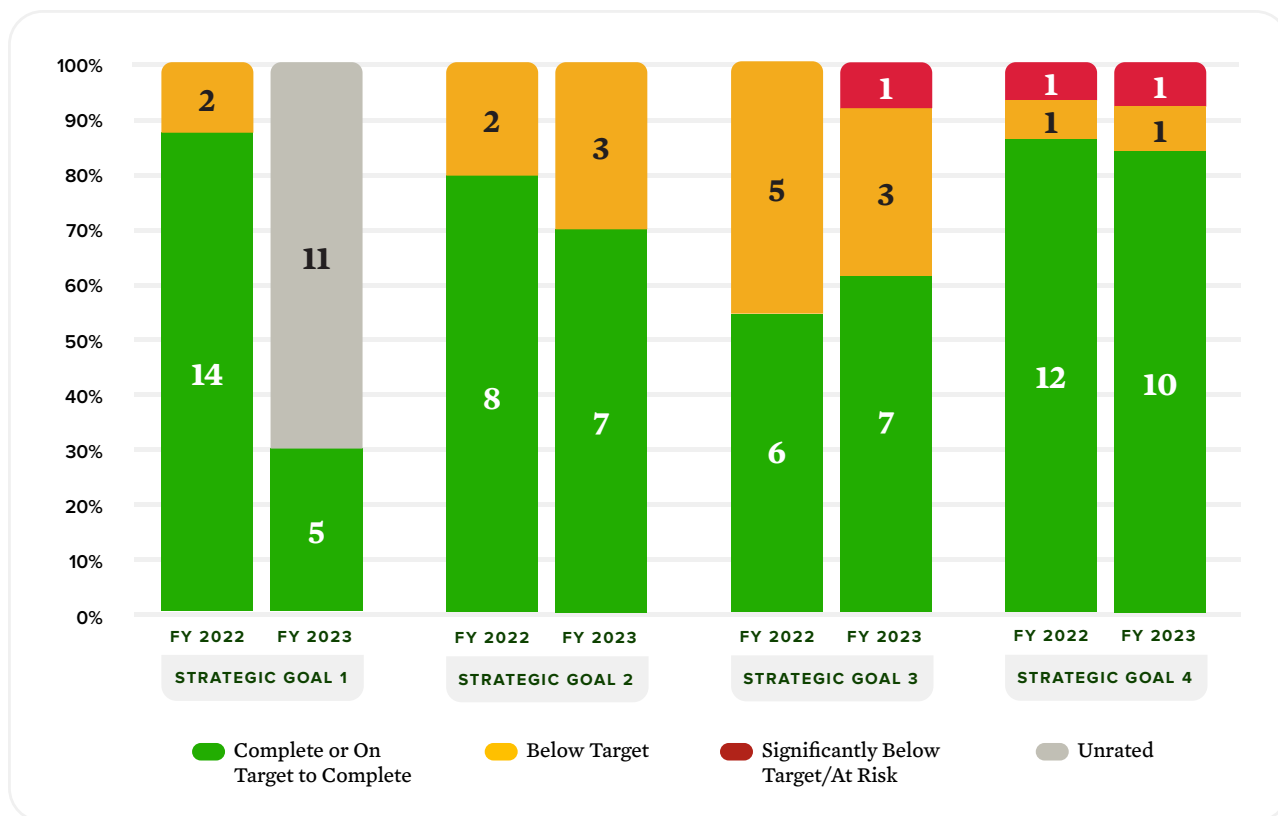
Information needed to evaluate performance was not available in time for AFR publication. A final rating will be provided in the FY 2025 VIPer.

<sup>7</sup>NASA's VIPer document is comprised of the Annual Performance Report of fiscal year performance results and the Agency Performance Plan, which lists the Performance Goals, annual targets consistent with the budget request, and adjusted targets consistent with the previous budget year's appropriations.

# FY 2023 PERFORMANCE ASSESSMENT

Throughout FY 2023, program officials assessed progress towards achieving NASA's 49 Performance Goals and determined whether the goals' annual targets were met and assigned one of the color ratings described above.

The following graph shows the summary of preliminary FY 2023 ratings summarized by Strategic Goal compared to the FY 2022 ratings that were published in the FY 2024 VIPer. For each Strategic Goal, the graph shows how the Performance Goals were rated at the time of publication. The FY 2025 VIPer, which will be published concurrently with the FY 2025 President's Budget Request, will provide the final performance results for each Performance Goal.



Eleven Performance Goals supporting Strategic Goal 1 remained unrated at the time of the FY 2023 AFR's publication. The [Science Advisory Committees](#) recommend ratings (based on relevant published, peer-reviewed science findings and other criteria) for NASA's science focused Performance Goals at their fall meetings. The Science Mission Directorate considers those recommendations when assigning the fiscal year rating.

Only two of NASA's Performance Goals were rated Red in FY 2023. Performance Goal 3.2.2 focuses on demonstrating the ability to reduce the perceived loudness of sonic booms and enabling future industry innovation in commercial supersonic aircrafts. There have been contractor schedule delays for the X-59 high altitude/high-speed chase missions associated with integration and ground testing. However, the Flight Demonstrations and Capabilities project, or FDC, remains on track to be mission-ready for the Quiet SuperSonic Technology (QueSST) Mission.

Performance Goal 4.2.4, which focuses on safeguarding NASA's information technology (IT) resources, was also rated Red for FY 2023. Progress is being made to improve the Agency's cybersecurity posture, however, NASA is at risk of not achieving its target by the end of FY 2023. Agency efforts are focused on achieving the Government-wide actions set by the National Security Council in three specific capabilities: 1) Multi-Factor Authentication; 2) Data-at-Rest encryption; and 3) Data-in-Transit encryption.

## 01

## STRATEGIC GOAL I. DISCOVER

**Expand Human Knowledge Through New Scientific Discoveries.**

**Strategic Goal 1 is supported by 16 Performance Goals. Of these, 5 were rated Green and 11 were unrated at the time of publication.**

**Overview**

NASA's enduring purpose is scientific discovery and exploration for the benefit of the United States and all of humanity. NASA seeks to discover the secrets of the universe, search for life elsewhere, and protect and improve life on Earth and in space. Finding answers to these profound science questions requires support for national priorities in science and exploration, enhancing new opportunities for cross-disciplinary science, and expanding the societal benefits of our science programs.

NASA is undertaking new work that builds on our past successes in individual disciplines to enable a more collaborative environment at the forefront of science and science applications. We have an open data policy that makes our science data available to all. Current data systems are focused on disseminating data to the science community to support research in five science disciplines: Earth Science, Astrophysics, Planetary Science, Heliophysics, and Biological and Physical Sciences.

**Highlights****Equity and Environmental Justice**

As climate change makes its impact felt across the United States and the globe, NASA is rising to meet the challenge. The Earth System Observatory (ESO), a group of interdependent missions, are key to meeting this objective, providing an unprecedented, holistic view of Earth – significantly advancing the ability to measure, predict, and respond to changes to our home planet. NASA has made significant progress on the ESO in 2022 and 2023, including entering formulation for both Atmospheric Observing System (AOS) missions, Surface Biology and Geology (SBG), and Mass Change (MC).

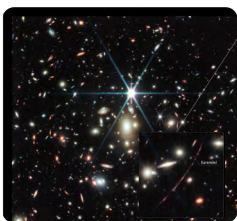
In December 2022, NASA launched the Surface Water and Ocean Topography (SWOT) mission, with first light images released in March 2023 that demonstrate SWOT's cutting-edge capabilities in surveying Earth's surface water. The Agency also initiated the Landsat Next mission that will continue an over 50-year record of measurement of the global land surface.

In early 2023, NASA delivered the NASA-Indian Space Research Organization (ISRO) Synthetic Aperture Radar (NISAR) to India in preparation for launch in early 2024. In April 2023, NASA launched Tropospheric Emissions: Monitoring of Pollution (TEMPO), NASA's first Earth Venture Instrument selection, which marks a new era in the Agency's ability to observe air pollution over North America. While some cost and schedule challenges arose, each of these accomplishments fulfilled criteria for strategic success in the near term.

**Understanding the Sun, Solar System, and Universe**

The James Webb Space Telescope, the most powerful and complex space telescope ever built, completed its first year of observations in July. During that year, Webb has given us a more intricate understanding of galaxies, stars, and the atmospheres of planets outside of our solar system than ever before, laying the groundwork for NASA to lead the world in a new era of scientific discovery and the search for habitable worlds.

NASA also completed the caching and deposit of Mars samples by the Perseverance Rover in preparation for the Mars Sample Return campaign, as well as the tremendously successful Double Asteroid Redirection Test (DART), which demonstrated the ability to deflect a potentially hazardous asteroid in space.

**DID YOU KNOW****Webb Reveals Colors of Earendel, Most Distant Star Ever Detected**

This image from NASA's James Webb Space Telescope of a massive galaxy cluster called WHL0137-08 contains the most strongly magnified galaxy known in the universe's first billion years: the Sunrise Arc, and within that galaxy, the most distant star ever detected. In this image, the Sunrise Arc appears as a red streak just below the diffraction spike at the 5 o'clock position.

*Photo Credit – NASA, ESA, CSA, Dan Coe (STScI/AURA for ESA, JHU), Brian Welch (NASA-GSFC, UMD), with image processing by Zolt G. Levay, Aug 9, 2023*

## 02

## STRATEGIC GOAL II. EXPLORER

**Extend Human Presence to the Moon and on Towards Mars for Sustainable Long-term Exploration, Development, and Utilization.**

**Strategic Goal 2 is supported by 10 Performance Goals. Of these, 7 were rated Green and 3 were rated Yellow at the time of publication.**

**Overview**

NASA's rich history of human spaceflight provides the foundation for today's exploration vision: to maintain U.S. leadership in space, establish a lasting presence on and around the Moon, and pave the way forward to Mars and beyond. This strategy begins with the Artemis, a series of missions that will land the first woman and the first person of color on the lunar surface, marking the first time in nearly 50 years that humans have landed on the Moon.

We are building on more than two decades of operations in low Earth orbit aboard the ISS and leveraging our wealth of experience with groundbreaking exploration. This era of human exploration will require innovative technologies and systems — some of which have not yet been demonstrated — to explore new and more challenging locations, like the lunar South Pole.

Developing these capabilities will spur advancements in critical fields like medicine, energy, materials science, manufacturing, and climate science. Artemis mission success will require the continuation of existing partnerships and the development of new ones. Working with commercial partners enables NASA to focus its attention forward, while creating jobs and stimulating the economy.

**Highlights****Exploring the Surface of the Moon and Deep Space**

NASA's Artemis campaign has achieved several significant milestones over the last year. After delays, NASA successfully demonstrated the integrated capability of a crew vehicle during the historic Artemis I mission, which launched on November 16, 2022, and completed a 23-day mission to the Moon and back.

NASA developed and released a Moon to Mars (M2M) Strategy in April 2023, that is meant to be a blueprint for sustained human presence and exploration throughout the Solar System. We also conducted the first annual Architecture Concept Review (ACR) to review the Artemis strategy; the purpose of the ACR is to gain concurrence on the current state of M2M architecture planning that is driven by the Agency's exploration objectives. NASA will also use the ACR as an opportunity to assess the current state of technology, to ensure that the M2M architecture incorporates the latest technology in its plans.

**Developing a Human Spaceflight Economy Enabled by a Commercial Market**

NASA continues to maximize its use of the ISS and its capabilities to aid in the development of U.S. industry's ability to provide the necessary platforms and services in low Earth orbit (LEO). In FY 2023, NASA continued to support the eight proposals selected in FY 2022 enabling U.S. businesses and institutions of higher learning to raise the technological readiness level of their manufacturing technologies and products for In-Space Production Applications. To complement these growing commercial activities on board the ISS, the use of Private Astronaut Missions (PAMs) on commercial destinations and the development of commercial space stations, supported by NASA's Commercial LEO Development program, shows promise as a major step towards unfettered commercial research and services in Space.

**DID YOU KNOW**

Artemis II crew members, shown inside the Neil Armstrong Operations and Checkout Building at NASA's Kennedy Space Center in Florida, stand in front of their Orion crew module on Aug. 8, 2023. From left are: Jeremy Hansen, mission specialist; Victor Glover, pilot; Reid Wiseman, commander; and Christina Hammock Koch, mission specialist. The crew module is undergoing acoustic testing ahead of integration with the European Service Module. Artemis II is the first crewed mission on NASA's path to establishing a long-term lunar presence for science and exploration under Artemis.

*Photo Credit — NASA/Kim Shiflett*

## 03

## STRATEGIC GOAL III. INNOVATE

**Catalyze Economic Growth and Drive Innovation to Address National Challenges.**

**Strategic Goal 3 is supported by 11 Performance Goals. Of these, 7 were rated Green, 3 were rated Yellow, and 1 was rated Red at the time of publication.**

**Overview**

Originally tied to keeping the Nation secure and advancing U.S. leadership in aeronautics, communications satellites, and Earth remote sensing, NASA's mandate is broader today. The challenges NASA addresses relate to gathering climate change data; driving American innovation through aerospace research and development; developing commercial and human space launch, transportation, and exploration capabilities; understanding cosmic phenomena as wide-ranging as space weather, asteroids, and exoplanets; supplying technological solutions that could also apply to terrestrial problems; and improving the Nation's innovation capacity.

Today, NASA invests in a broad portfolio of both space technology and aeronautics research, development, and demonstration. We invest more than 80 percent of our funds in U.S. industry and academia. Where possible, the Agency leverages public-private partnerships, reducing development costs, accelerating infusion of new technologies, meeting national needs, and potentially enabling new markets. Each year, NASA creates over 1,000 new technologies, and the Agency works diligently to ensure that the American people receive maximum benefit from those advancements through patent licenses, software usage agreements, and other commercialization efforts.

**Highlights****Innovating and Advancing Transformational Space Technologies**

NASA investments continue to serve as a catalyst for the new technology required for the varied needs of multiple stakeholders. The Agency has made significant progress by developing and delivering new technologies and capabilities. Examples include the successful launch, test, and retrieval of low Earth orbit Flight Test Inflatable Decelerator (LOFTID); launch and successful completion of the power-on and check out activities of Laser Communications Relay Demonstration (LCRD); launch of the Cislunar Autonomous Positioning System Technology Operations and Navigation Experiment (CAPSTONE), a lunar orbiter paving the way for the Gateway; and numerous significant technology transitions and infusions.

**Driving Efficient and Sustainable Aviation**

In FY 2023, NASA completed Low Boom Flight Demonstration (LBFD) shock tests, its assessment of Urban Air Mobility (UAM) Gen-2 vehicle noise testing, and wind tunnel tests of the Transonic Truss Braced Wing (TTBW). Furthermore, the Aeronautics Research Mission Directorate issued a funded Space Act Agreement to Boeing for the Sustainable Flight Demonstration project, which will mature innovative aeronautical designs into the future of commercial aircraft.

NASA's contractor building the LBFD experienced delays, pushing back the first flight and testing cadence, resulting in cost overruns.

**DID YOU KNOW**

NASA's X-59 sits in support framing while undergoing the installation of its lower empennage, or tail section, at Lockheed Martin Skunk Works in Palmdale, California, in this image from late March 2023. Once complete, the X-59 aircraft—the centerpiece of NASA's Quesst mission—is designed to demonstrate the ability to fly supersonic while reducing the loud sonic boom to a quiet sonic thump. The Quesst mission will then fly the X-59 over several U.S. communities to gather data on human responses to the sound generated during supersonic flight and deliver that data set to U.S. and international regulators. *Photo Credit — Lockheed Martin*



## 04

## STRATEGIC GOAL IV. ADVANCE

**Enhance Capabilities and Operations to Catalyze Current and Future Mission Success**

**Strategic Goal 4 is supported by 12 Performance Goals. Of these, 10 were rated Green, 1 was rated Yellow, and 1 was rated Red at the time of publication.**

**Overview**

NASA's complex and bold missions require modern, adaptable technical and professional support capabilities to enable mission readiness, resilience, and our continued leadership in science, exploration, discovery, and innovation. We pursue the goal of enhancing capabilities and operations to ensure that NASA has the right people, infrastructure, technology, and technical excellence and oversight needed to advance the Agency into the Artemis era and beyond. To this end we are:

- Attracting and maintaining a diverse workforce, empowered in an equitable, inclusive, and accessible environment.
- Evolving our safety, health and medical, and engineering oversight policies and practices to protect the Agency, public, and orbital and planetary environments from potential harm.
- Transforming and modernizing our mission support capabilities to address rapidly changing enterprise needs.
- Ensuring critical capabilities and assets are mission-ready, reliable, and affordable.
- Developing a diverse and skilled STEM workforce today and in the future.

**Highlights****Attracting and Developing a Talented and Diverse Workforce**

While NASA employees continue to rate it the best large Federal agency to work for, streamlining the hiring process to bring in top talent remains a priority for the Agency. Time to hire, for all hires excluding Senior Executive Service (SES) and Pathways, was reduced from 99 to 73 days in the first quarter of FY 2023, and we are currently taking steps to gain efficiency through multiple initiatives, such as using existing certificates to reduce the time and resources required to acquire new hires. In the first quarter of FY 2023, NASA had 54% of its selections come from existing certificates. These efforts are paramount for attracting technical talent in a hyper competitive labor market in a growing aerospace industry.

In FY 2022 NASA released its first-ever Equity Action Plan, which established key focus areas for tracking progress toward improved DEIA both internal and external to NASA. The Agency took significant steps towards launching assessments and completing steps of the plan, most notably an Agency-wide anti-harassment self-assessment in 2023. However, given the increased work to support the Agency's and Administration's emphasis on promoting DEIA, there is a possibility that resource, service, and performance trade-offs will be made.

**Building the Next Generation of Explorers**

NASA supported 25 active national partnerships via Space Grant and 21 informal collaborations to share student content, such as with Nickelodeon, Discovery, Lego, and Girl Scouts. Furthermore, the creation of a consolidated, Agency-wide cloud service contract has helped save on personnel and administrative costs.

NASA's STEM FY 2023-2024 [Learning Agenda](#) poses questions that will prepare the Agency for the future of its engagement initiatives. Two assessments in this learning agenda were completed in FY 2023 and the Agency is making progress on two more evaluations, including assessment of NASA internship outcomes regarding NASA/industry employment and Phase 2 of the K-12 Student Outcome Study.

**DID YOU KNOW**

From left to right, NASA Earth Science Division Deputy Director Julie Robinson, NASA Scientific Visualization Studio Lead Mark Subbarao, NASA Jet Propulsion Laboratory (JPL) Art Director Erica Bernhard, and Former NASA Astronaut Nicole Stott participate in a fireside chat during an Earth Information Center (EIC) student engagement event, Friday, June 23, 2023, at the Mary W. Jackson NASA Headquarters building in Washington. The EIC is a new immersive experience that combines live data sets with cutting-edge data visualization and storytelling to allow visitors to see how our planet is changing. *Photo Credit – NASA/Keegan Barber*

# Financial Performance



NASA astronaut Alvin Drew shakes hands with a guest during the White House Easter Egg Roll, Monday, April 10, 2023, on the South Lawn of the White House in Washington.

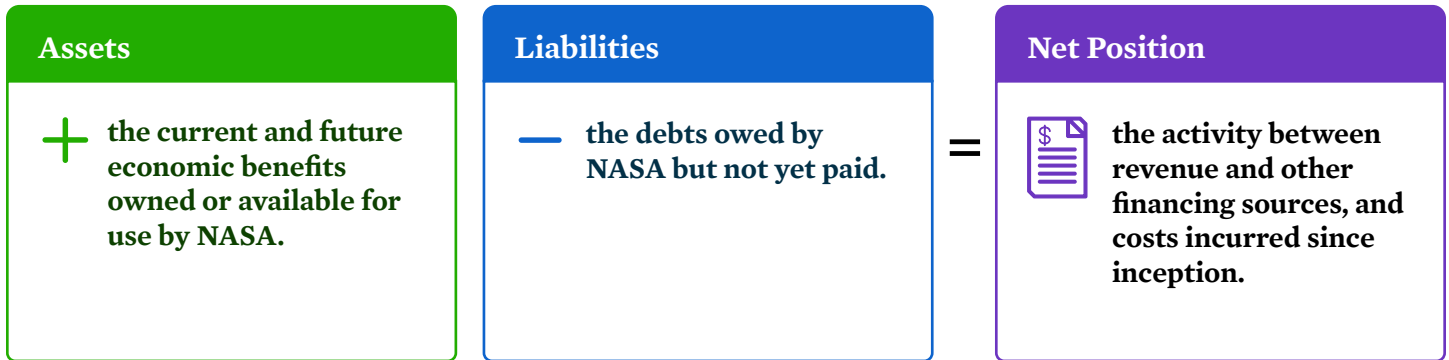
PHOTO CREDIT

NASA/Keegan Barber

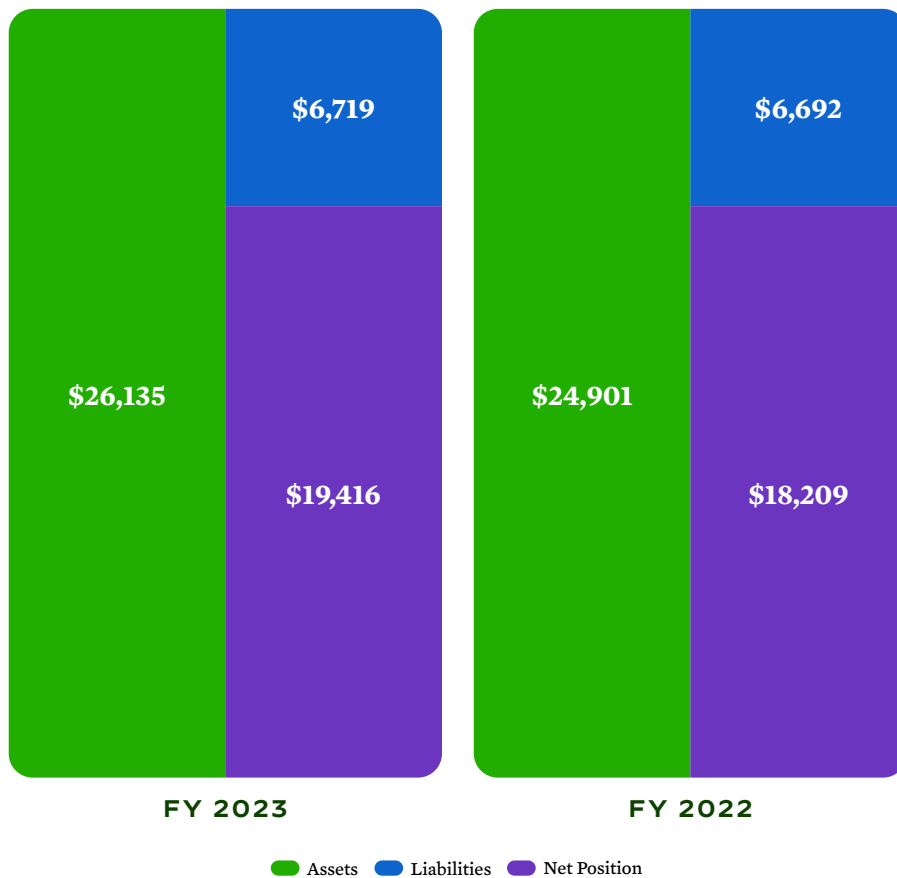
# FINANCIAL HIGHLIGHTS

## Overview of Financial Position

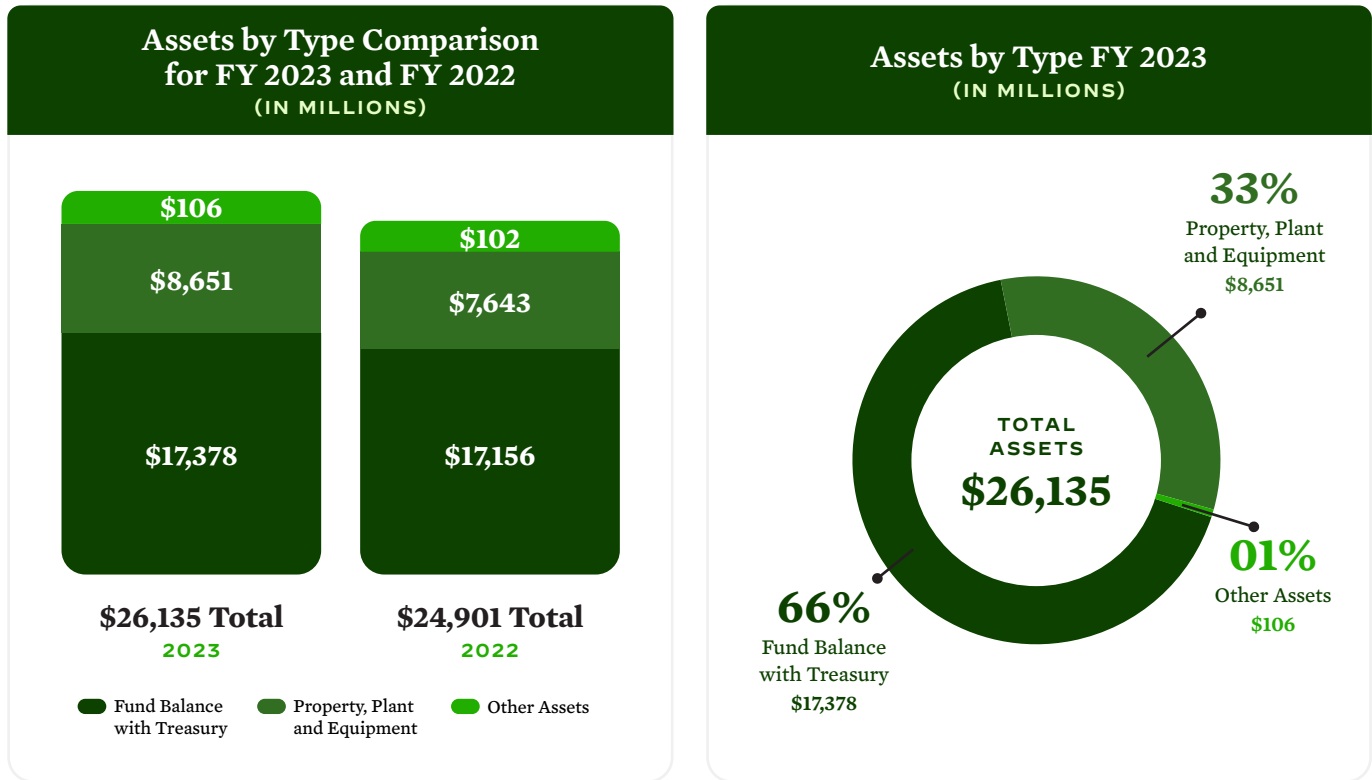
NASA's Balance Sheet provides a comparable snapshot of the Agency's financial position as of September 30, 2023 and September 30, 2022. It displays amounts in three primary categories.



**Balance Sheet Components FY 2023 and FY 2022**  
(IN MILLIONS)



**Total Assets** were the largest of the three categories (Total Liabilities plus Total Net Position will always equal Total Assets). NASA's total asset balance, as of September 30, 2023, was \$26.1 billion, five percent higher than FY 2022.



The Agency's Fund Balance with Treasury (FBWT) and its Property, Plant and Equipment (PP&E) were the two primary components of the total asset balance.

FBWT, which represents NASA's cash balance with the U.S. Department of the Treasury, was the largest asset at \$17.4 billion, 66 percent of total assets. This cash balance includes Congressional appropriated funds available for NASA's mission operations (for example, employee labor or purchased goods or services from contractors) that have not yet been paid.

The five percent increase in total assets is attributable to the increase in NASA's PP&E net book value. PP&E had a net book value of \$8.7 billion as of September 30, 2023, 33 percent of total assets or a 13 percent increase compared to FY 2022. The increase is due primarily to fabrication of assets that will support Artemis, Gateway, and the International Space Station (ISS) program requirements; Facilities revitalization and construction activities; as well as the production work on the Mobile Launcher-2.

The Other category represents Accounts Receivable, Advances and Prepayments, and Investments as of September 30, 2023. This category increased by \$4 million, or four percent.

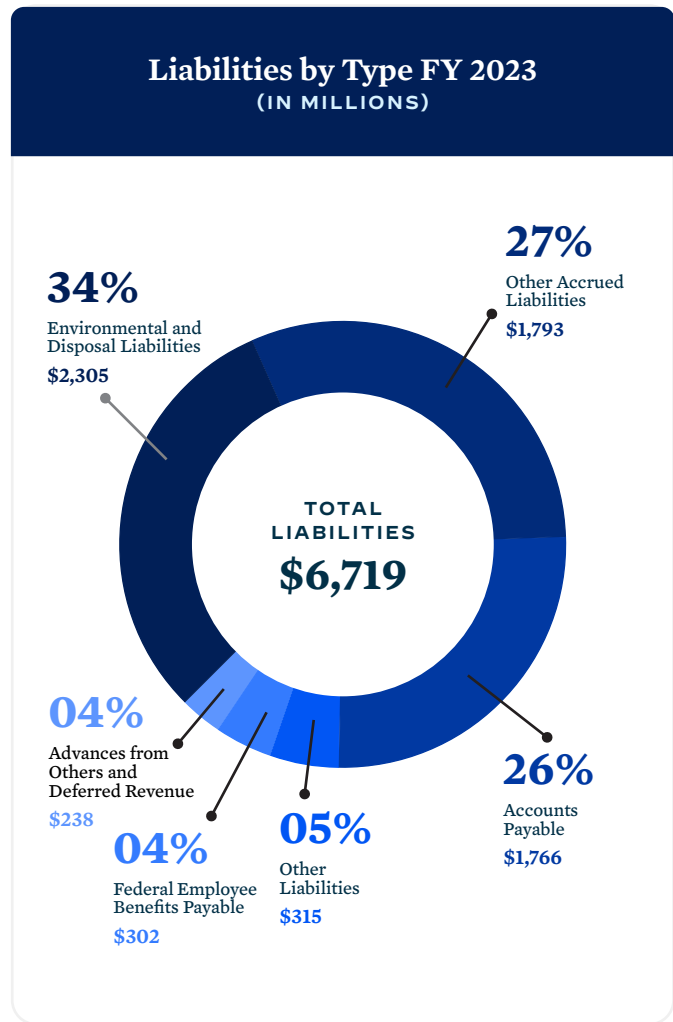
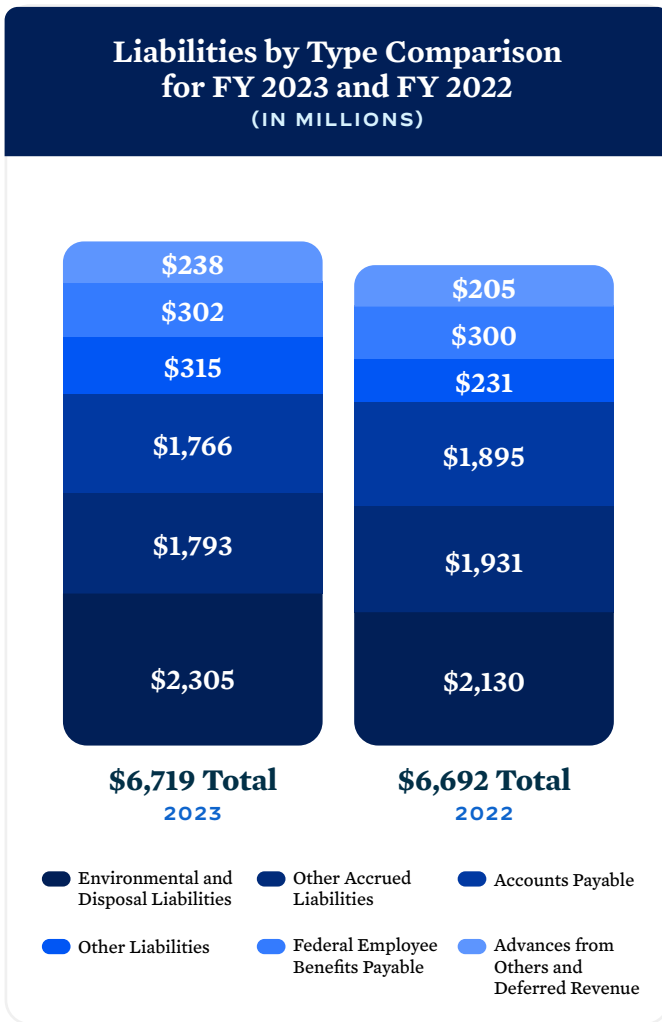
**Total Liabilities**, as of September 30, 2023, were \$6.7 billion, less than one percent higher than FY 2022. Environmental and Disposal Liabilities, Accounts Payable, and Other Accrued Liabilities represent the majority of NASA's liabilities.

Environmental and Disposal Liabilities of \$2.3 billion represent the estimated cost to clean up both known and projected environmental hazards. This category had an increase of \$175 million, eight percent higher than FY 2022.

Accounts Payable, which represents amounts owed to other entities, was \$1.8 billion, a decrease of \$129 million, or seven percent, compared to FY 2022.

Other Accrued Liabilities with public entities were \$1.8 billion, a decrease of \$138 million, or seven percent, compared to FY 2022. Other Liabilities, which represent various amounts including Accrued Funded Payroll and Contingent Liabilities, were \$315 million, an increase of \$84 million or a 36 percent increase over FY 2022.

Federal Employee Benefits Payable are amounts the Department of Labor estimates on behalf of NASA for future workers' compensation liabilities for current employees.

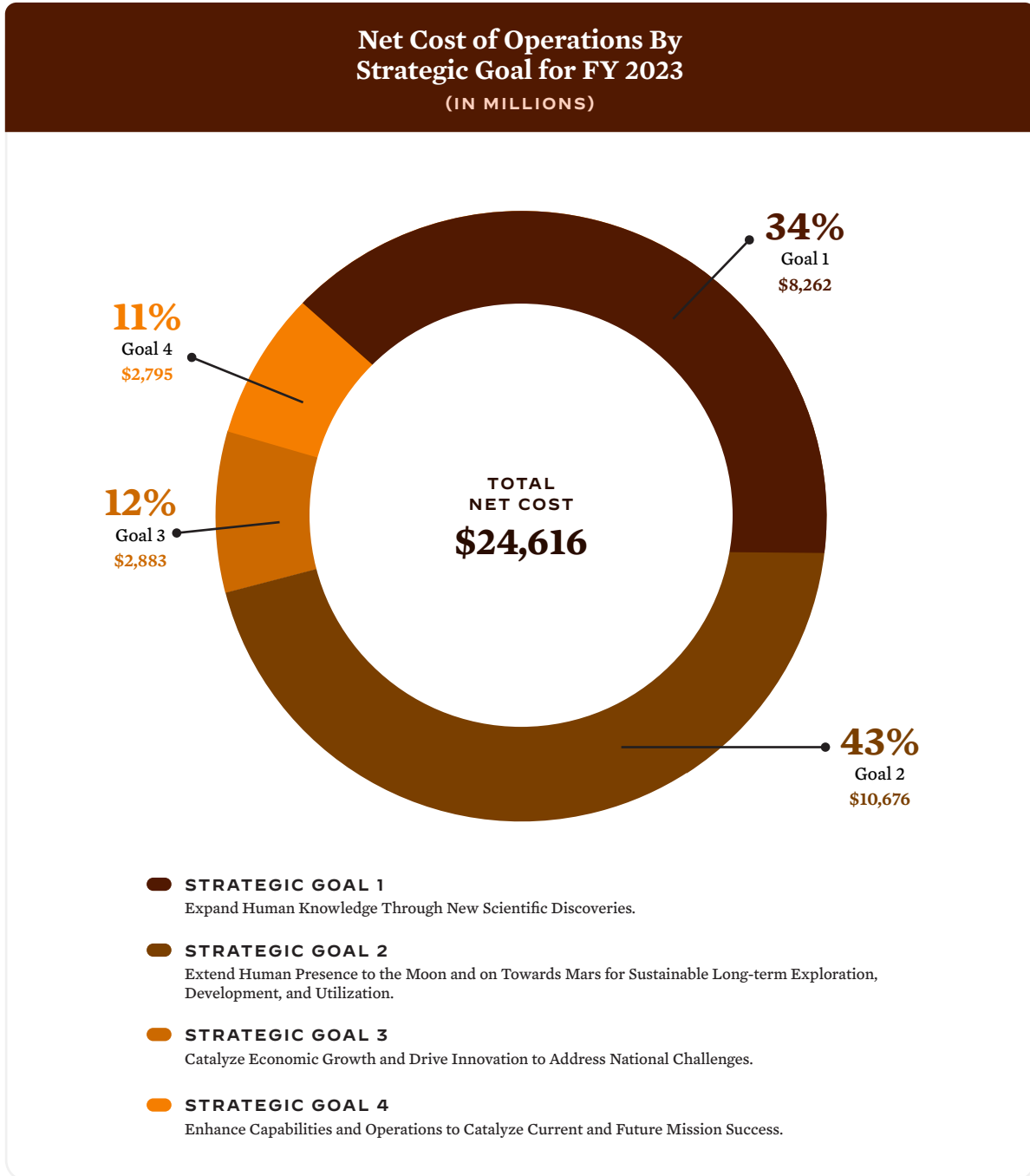


**Total Net Position** comprised of Unexpended Appropriations and Cumulative Results of Operations (“net worth”), increased by \$1.2 billion, seven percent higher than FY 2022. Unexpended Appropriations, at \$13.3 billion, increased by \$382 million or three percent from FY 2022. Cumulative Results of Operations, increased by \$825 million or 16 percent from FY 2022. The change in Total Net Position is primarily due to the change in NASA's costs for equipment that meets the capitalization criteria, and therefore, reclassified to Work in Progress for Personal Property.

# RESULTS OF OPERATIONS

## Net Cost of Operations

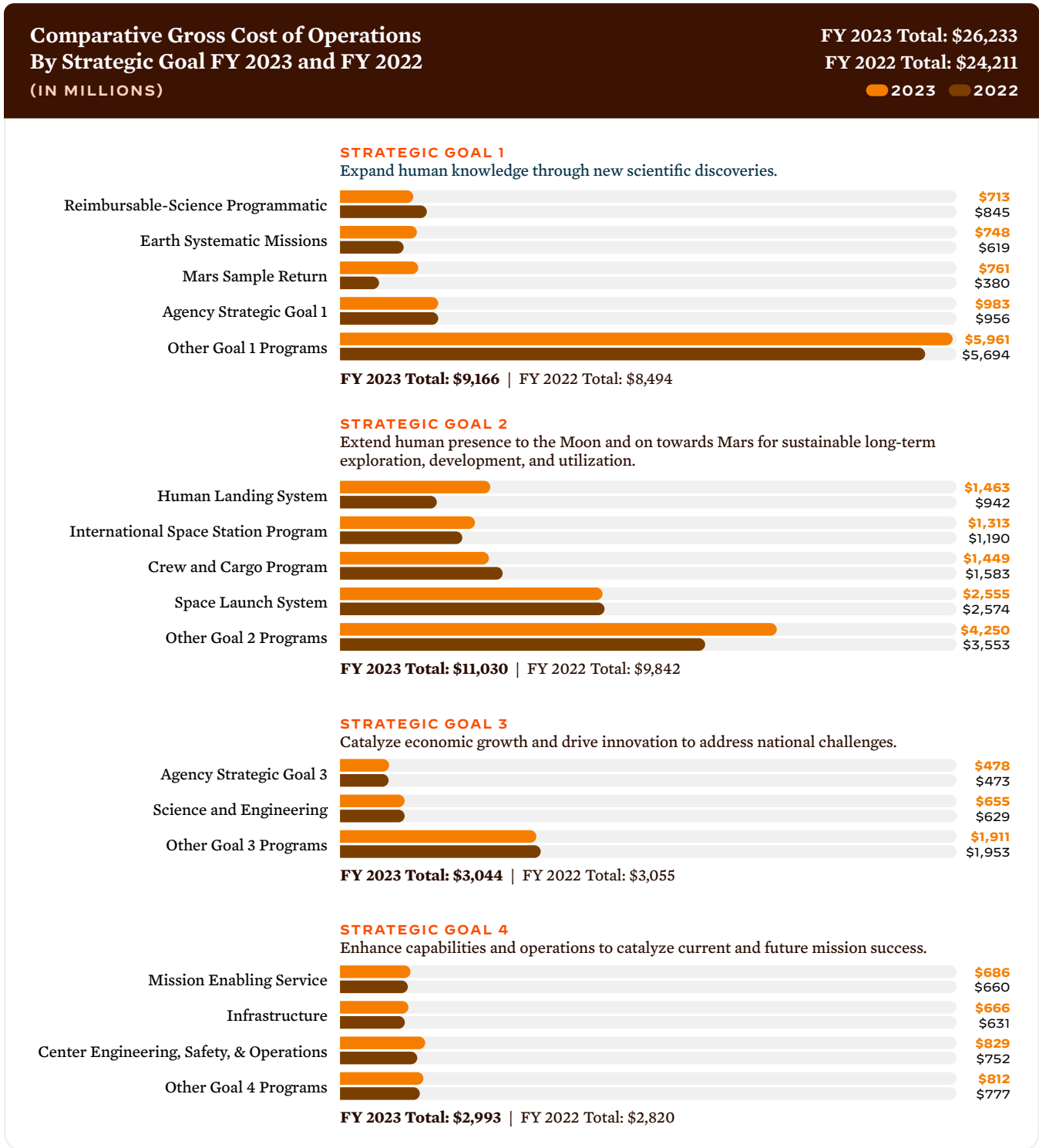
The Statement of Net Cost presents NASA's Net Cost of Operations by strategic goal. NASA's strategic goals are described in the Mission Performance section of the Agency Financial Report ([page 13](#)). The Net Cost of Operations represents gross cost incurred less revenue earned for work performed for other government organizations or private entities. As of September 30, 2023, NASA's gross costs were \$26.2 billion, an increase of \$2 billion from FY 2022. Earned Revenue from other governmental organizations or private entities was \$1.6 billion, a \$45 million increase from FY 2022. This leaves NASA with a FY 2023 net cost of \$24.6 billion, an increase of \$2 billion from FY 2022.



# RESULTS OF OPERATIONS (CONTINUED)


## Gross Cost of Operations

NASA's day-to-day operations are performed at NASA and contractor facilities around the globe and in space. Gross cost of operations is presented in the following table, detailing select NASA programs that support each strategic goal. Gross cost of operations include expenses incurred for NASA's research and development (R&D) investments that are expected to maintain or increase national economic productive capacity or yield other future benefits. Top programs by strategic goal in relation to gross cost have remained consistent year to year.



# SOURCES OF FUNDING

The Statement of Budgetary Resources (SBR) provides information on the budgetary funding available to NASA. NASA's resources consist primarily of funds received from two sources:



**Appropriations from Congress for the current fiscal year and unobligated balances from prior fiscal years.**

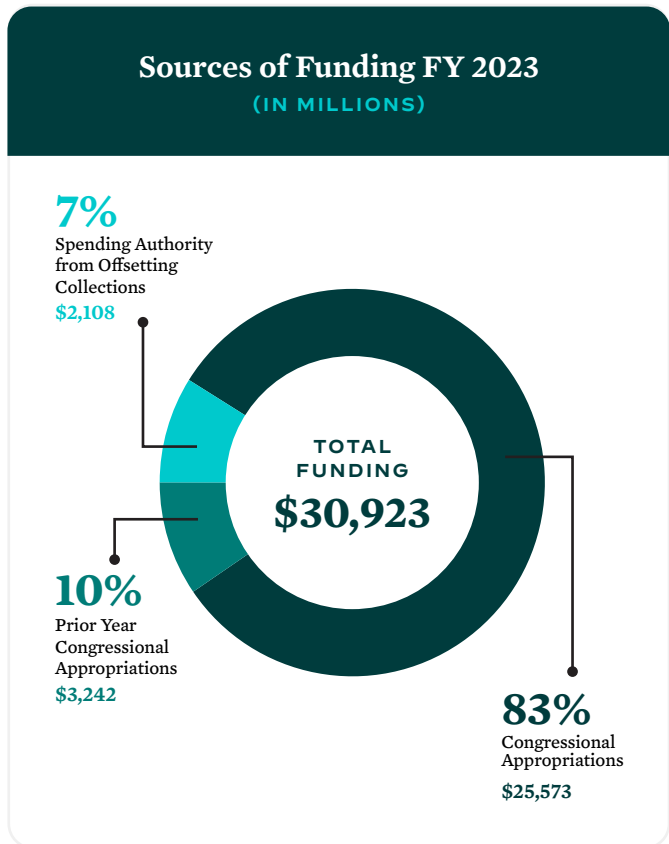
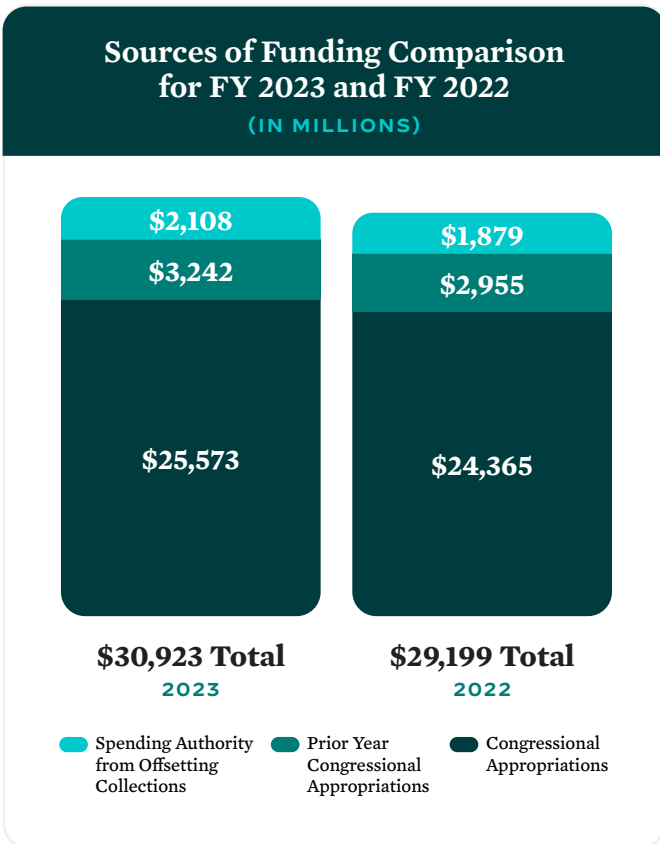
**Revenue from agreements with other governmental organizations or private entities.**

In FY 2023, the total funds available for use by the Agency were \$30.9 billion — an increase of \$1.7 billion or six percent, compared to FY 2022.

The \$25.6 billion in appropriations from Congress for FY 2023 accounted for 83 percent of the total funds available for use by the Agency. Congress designates the funding available to the Agency for a specific NASA mission. Appropriations that remained available from prior years totaled \$3.2 billion, 10 percent of NASA's available resources in FY 2023.

NASA's FY 2023 funding also included \$2.1 billion of spending authority from offsetting collections, primarily comprised of revenue earned and collected from agreements, seven percent of NASA's available resources in FY 2023. Revenue is earned under NASA's authority to provide goods, services, or use of facilities to other entities on a reimbursable basis.

In FY 2023, NASA obligated \$28.3 billion of the \$30.9 billion available for Agency programmatic and institutional objectives. An obligation binds the Government to make an expenditure (or outlay) of funds and reflects a reservation of budget authority that will be used to pay for a contract, labor, or other items. The remaining \$2.6 billion may be obligated until the funds' periods of availability expire.





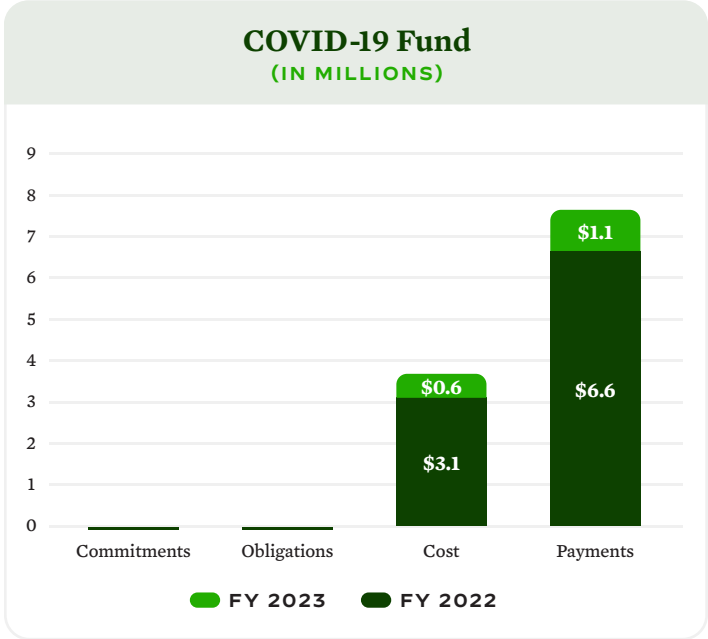
# FINANCIAL AND PERFORMANCE IMPACT OF COVID-19



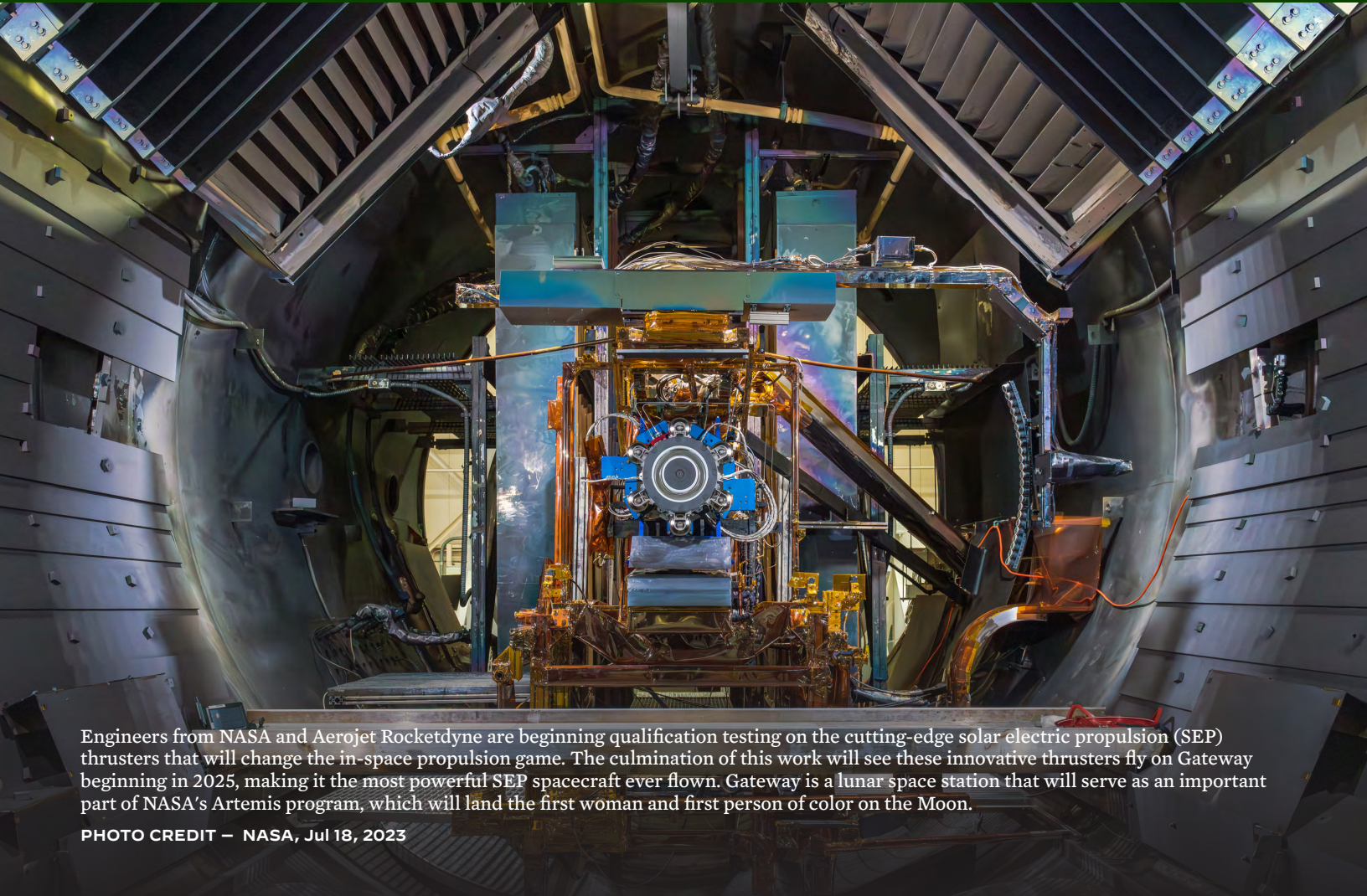
Recovery teams participate in helicopter training in preparation for the retrieval of the sample return capsule from NASA's OSIRIS-REx mission, Wednesday, July 19, 2023, at the Department of Defense's Utah Test and Training Range. The sample was collected from the asteroid Bennu in October 2020 by NASA's OSIRIS-REx spacecraft and will return to Earth on September 24th, landing under parachute at the Utah Test and Training Range.

PHOTO CREDIT – NASA/Keegan Barber

The Coronavirus Aid, Relief, and Economic Security Act or, CARES Act, was passed by Congress and signed by President Donald Trump on March 27, 2020. This bill allotted \$2.2 trillion to provide fast and direct economic aid to the American people negatively impacted by the COVID-19 pandemic. Of those funds, \$60 million was provided to NASA within its Safety, Security, and Mission Services appropriation to prevent, prepare for, and respond to the coronavirus domestically or internationally. These funds were primarily used for contractor impact claims, information technology services, cleaning supplies, and personal protective equipment. These funds include the costs of increased cleaning efforts at each NASA facility to protect the health and safety of our workforce and ensuring the well-being of every employee. No additional CARES Act funding was received for FY 2023.



# LIMITATIONS OF THE FINANCIAL STATEMENTS



Engineers from NASA and Aerojet Rocketdyne are beginning qualification testing on the cutting-edge solar electric propulsion (SEP) thrusters that will change the in-space propulsion game. The culmination of this work will see these innovative thrusters fly on Gateway beginning in 2025, making it the most powerful SEP spacecraft ever flown. Gateway is a lunar space station that will serve as an important part of NASA's Artemis program, which will land the first woman and first person of color on the Moon.

PHOTO CREDIT – NASA, Jul 18, 2023

The financial statements are prepared to report the financial position, financial condition, and results of operations, consistent with the requirements of 31 U.S.C. § 3515(b). The statements are prepared from records of Federal entities in accordance with Federal Generally Accepted Accounting Principles (GAAP) and the formats prescribed by the Office of Management and Budget (OMB). Reports used to monitor and control budgetary resources are prepared from the same records. Users of the statements are advised that the statements are for a component of the U.S. Government.

# Systems, Controls, and Legal Compliance



A Rocket Lab Electron rocket stands on Pad B, Launch Complex 1, in Māhia, New Zealand, just ahead of a successful launch on Friday, May 26, with NASA's Time-Resolved Observations of Precipitation structure and storm Intensity with a Constellation of Smallsats (TROPICS) CubeSats payload. Now that the final pair of CubeSats are in orbit, TROPICS will study the formation and development of tropical cyclones, known as hurricanes in the Atlantic and typhoons in the West Pacific. Hurricane season begins June 1, and the increase of cyclone data collected by TROPICS may lead to improved tropical cyclone forecasts, ultimately helping decision makers and first responders.

PHOTO CREDIT  
Rocket Lab

# INTERNAL CONTROL FRAMEWORK

## NASA Federal Managers' Financial Integrity Act Annual Statement of Assurance Process

The Federal Managers' Financial Integrity Act (FMFIA)<sup>1</sup> requires agency heads to evaluate and report on the internal control and financial systems to ensure the integrity of Federal programs and operations. This evaluation aims to provide reasonable assurance that internal controls are operating effectively to ensure efficient operations, reliable financial reporting, and compliance with applicable laws and regulations.

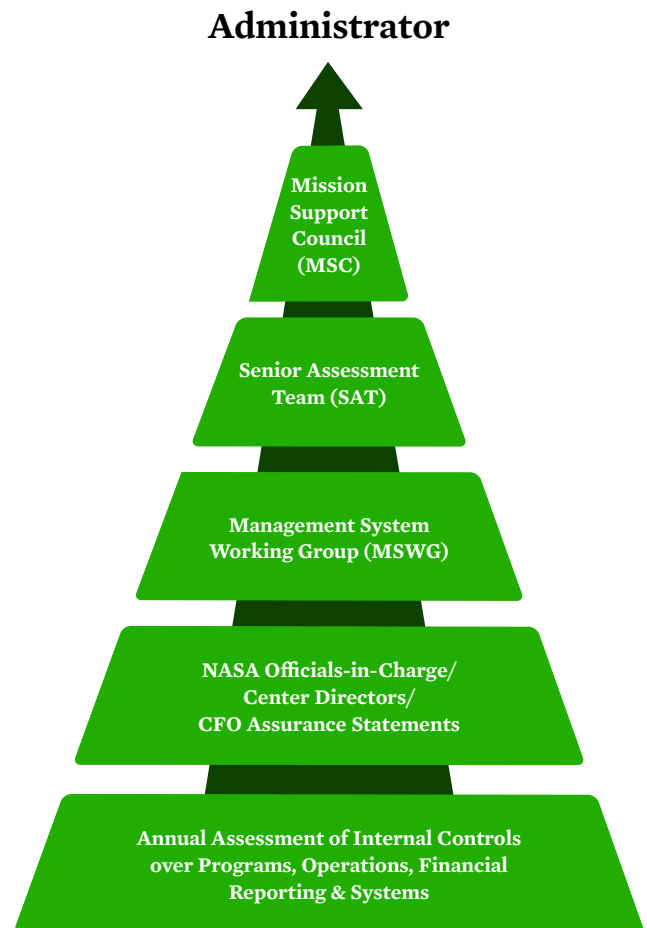
An effective system of internal control is at the core of NASA fulfilling its mission and meeting its objectives while safeguarding governmental resources. NASA's management is responsible for implementing internal control activities that support the organization in meeting established objectives. NASA complies with the Office of Management and Budget's (OMB) Circular No. A-123<sup>2</sup>, *Management's Responsibility for Enterprise Risk Management and Internal Control*, which provides Government-wide requirements for internal control and accountability, based on the FMFIA. OMB Circular No. A-123 also requires agencies to establish internal controls over operations, reporting and compliance.

NASA evaluates internal control across the Agency at various levels of the organization to ensure significant risks are identified, and related internal controls that address those risks are evaluated. NASA assesses the effectiveness of the internal controls over operations, management systems, and reporting with consideration of reviews and other relevant sources of information. NASA's executive leadership provides annual reporting and certifications on the effectiveness of internal controls that are implemented to meet intended objectives.

In addition, the NASA Office of the Chief Financial Officer (OCFO) deploys an extensive annual assessment methodology and internal control testing techniques that evaluate internal controls over financial reporting.

In its execution of the Administrator's Statement of Assurance (SoA) Process, NASA considers Enterprise Risk Management (ERM) Program activities, including reviews of the Agency Risk, and Fraud Risk Profiles, to inform the evaluation of and provide assurance over internal controls.

The FMFIA assurance statement is based upon self-certifications submitted by NASA Officials-in-Charge that ultimately support the Administrator's SoA as well as a review of various internal and external sources of information.



**FIGURE 1:**  
**NASA FMFIA Annual Statement  
of Assurance Process**

<sup>1</sup>The Federal Managers' Financial Integrity Act (FMFIA) <https://www.congress.gov/97/statute/STATUTE-96/STATUTE-96-Pg814.pdf>

<sup>2</sup>OMB Circular No. A-123, *Management's Responsibility for Enterprise Risk Management and Internal Control* [https://www.whitehouse.gov/wp-content/uploads/legacy\\_drupal\\_files/omb/memoranda/2016/m-16-17.pdf](https://www.whitehouse.gov/wp-content/uploads/legacy_drupal_files/omb/memoranda/2016/m-16-17.pdf)

## NASA Federal Managers' Financial Integrity Act Annual Statement of Assurance Process (CONTINUED)

The self-certifications are based upon organizational self-assessments guided by the Government Accountability Office's (GAO) *Standards for Internal Control in the Federal Government* (known as the Green Book). The self-certifications and subsequent reviews are informed by relevant sources of information such as internal reviews of controls, as well as recommendations for improvements from external audits, investigations, and reviews conducted by the Office of Inspector General (OIG) and the GAO. MSC, the organization responsible for oversight of NASA's Internal Control Program, advises the Administrator on the Statement of Assurance. The Senior Assessment Team (SAT), which supports the MSC, provides oversight for the internal control evaluation and reporting process that recommends the type of assurance that results from their execution of the SoA Program.

The Management System Working Group (MSWG) performs the first level evaluation of annual results and serves as the primary advisory body for NASA's internal control activities. The MSWG analyzes the annual assessment results and reports issues that may significantly impact the effective operation of internal controls and make recommendations on the design of internal controls to the SAT. Figure 1 depicts the Agency's Annual Statement of Assurance process and organizational components.

### DID YOU KNOW



#### PHOTO CREDIT

NASA/Jordan Salkin, Apr 20, 2023

#### NASA's New 3D-Printed Superalloy Can Take the Heat

NASA has demonstrated a breakthrough in 3D printable high-temperature materials that could lead to stronger, more durable parts for airplanes and spacecraft. A team of innovators from NASA and The Ohio State University detailed the characteristics of the new alloy, GRX-810, in a peer-reviewed paper published in the journal *Nature*.

"This superalloy has the potential to dramatically improve the strength and toughness of components and parts used in aviation and space exploration," said Dr. Tim Smith of NASA's Glenn Research Center in Cleveland, lead author of the *Nature* paper. Smith and his Glenn colleague Christopher Kantzos invented GRX-810. Smith and his team employed time-saving computer modeling, as well as a laser 3D printing process that fused metals together, layer-by-layer, to create the new alloy. They used this process to produce the NASA logo pictured to the left.

GRX-810 is an oxide dispersion strengthened alloy. In other words, tiny particles containing oxygen atoms spread throughout the alloy enhance its strength. Such alloys are excellent candidates to build aerospace parts for high-temperature applications, like those inside aircraft and rocket engines, because they can withstand harsher conditions before reaching their breaking points.

Current state-of-the-art 3D printed superalloys can withstand temperatures up to 2,000 degrees Fahrenheit. Compared to those, GRX-810 is twice as strong, over 1,000 times more durable, and twice as resistant to oxidation.

# ENTERPRISE RISK MANAGEMENT

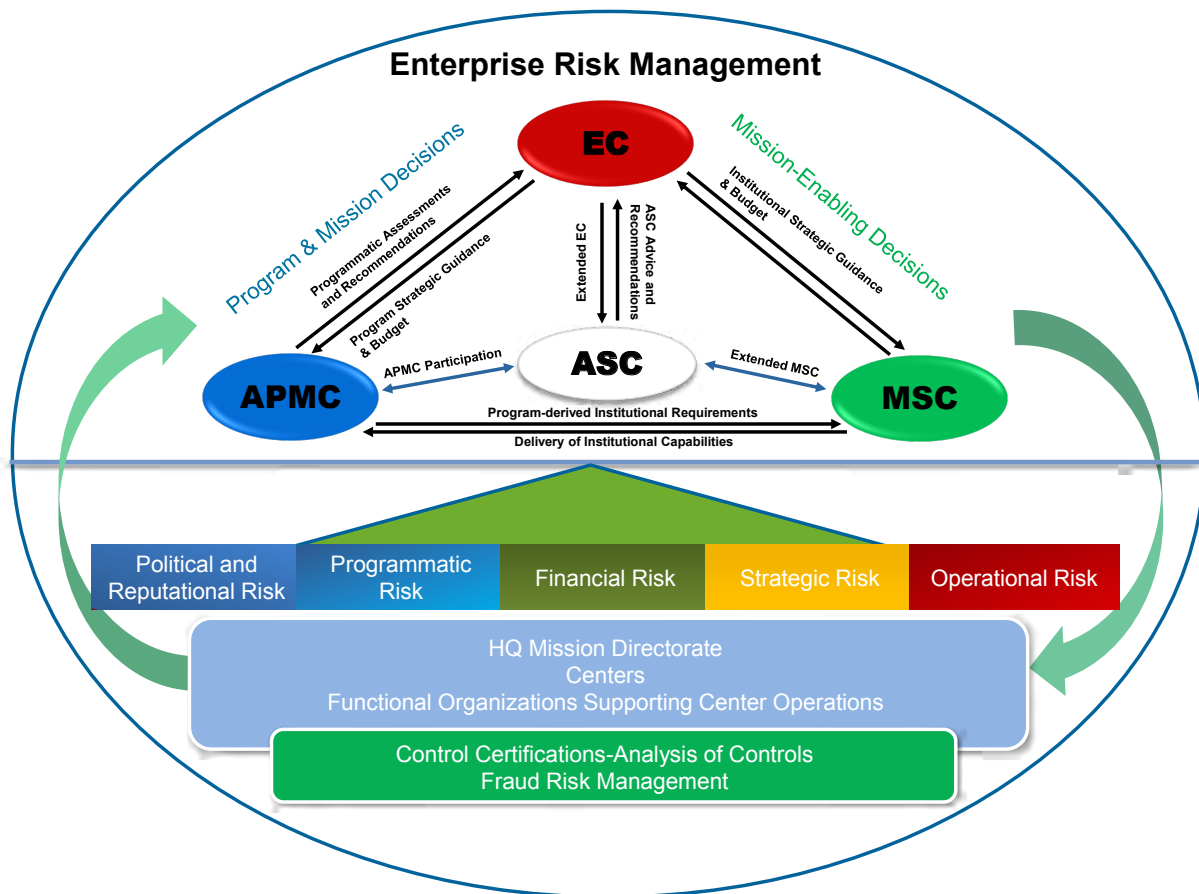
## NASA'S UNICORN

OMB Circular No. A-123, *Management's Responsibility for Enterprise Risk Management and Internal Control*, requires Federal agencies to implement ERM to ensure Federal managers are effectively managing risks that could affect the achievement of Agency strategic objectives.

Risk management continues to be embedded in NASA's culture, and the principles and practices are inherent in everyday operations. NASA's OCFO, Quality Assurance Division leads the Agency's ERM effort. The NASA Unified Comprehensive Operational Risk Network (UNICORN) is the framework for the communication and exchange of risk information between NASA's functional organizations and the Agency leadership (see Figure 2). The UNICORN's foundation is the Agency's risk management activities and decisional councils.

**UNIFIED**  
**COMPREHENSIVE**  
**OPERATIONAL**  
**RISK**  
**NETWORK**

**FIGURE 2**  
**NASA's Unicorn**



● EC - Executive Council    ● APMC - Agency Program Management Council    ○ ASC - Acquisition Strategy Council    ● MSC - Mission Support Council



# ENTERPRISE RISK MANAGEMENT (CONTINUED)

The NASA Enterprise Risk Management Working Group (ERMWG) continues to identify enterprise-level risks and opportunities and collaborates with organizations to address identified enterprise risks. The ERMWG, which is comprised of representatives from each Assessable Unit within the Agency, proposes enterprise-level risks for consideration and concurrence from the body, for integration into the Agency Risk Profile. The Chair of the ERMWG presents the Agency Risk Profile, highlighting the Agency's most significant risks, to Agency senior management for approval, and briefs the Baseline Performance Reviews (BPR) forum, chaired by the Associate Administrator, on the status of risk mitigations three times yearly.

As illustrated in Figure 3, NASA leverages a variety of sources to identify potential enterprise risks and relies upon the Agency governance structure of decisional councils, as well as other bodies such as the Agency Risk Management Working Group (ARMWG) and MSWG to facilitate the integration of risks across the Agency for appropriate consideration as enterprise risks. The ARMWG is distinct from the ERMWG in that it covers the spectrum of risk management activities at the institutional, program, and project level versus the ERMWG which focuses on integrating risks at the enterprise level.

FIGURE 3

## ERM Sources



NASA continues to face new challenges in carrying out essential functions necessary to achieve its core mission. Long standing risk management processes and activities are inherently woven throughout NASA's culture, so the Agency is well positioned to respond to unknown threats or national emergencies that may disrupt operations for an extended period. NASA's leadership has developed Agency-wide guidance that considers guidelines provided by the White House, Office of Personnel Management (OPM), and OMB.

NASA continues to strengthen its risk management and reporting process through comprehensive collaboration with the various risk bodies and stakeholders throughout the Agency, to effectively identify key risks and opportunities, develop effective risk responses, and implement timely mitigation actions.

# MANAGEMENT ASSURANCES



NOVEMBER 15, 2023

## Administrator's Statement of Assurance

The management of the National Aeronautics and Space Administration (NASA) is responsible for establishing and maintaining an effective system of internal control to support reliable financial reporting and effective and efficient programmatic operations. Accordingly, NASA conducted its Fiscal Year (FY) 2023 annual assessment of the effectiveness of management's internal controls for compliance with applicable laws, regulations, and policies; the Federal Managers' Financial Integrity Act (FMFIA); Federal Financial Management Improvement Act (FFMIA); the Office of Management and Budget's (OMB) Circular No. A-123, *Management's Responsibility for Enterprise Risk Management and Internal Control*; the United States (U.S.) Government Accountability Office's *Standards for Internal Controls in the Federal Government*, and NASA policies. Based upon the results of this evaluation, NASA provides reasonable assurance that its system of internal control was operating effectively as of September 30, 2023, to ensure the effectiveness and efficiency of operations and compliance with laws, regulations, and policies.

Further, no material weaknesses were found in the design or implementation of internal controls. In accordance with OMB requirements to integrate Enterprise Risk Management (ERM) and internal control in Federal agencies, NASA's ERM Program conducts enterprise risk and fraud risk activities, evaluates internal control, and provides an overall assurance on the internal control environment. As a result, managers and employees throughout the Agency are actively engaged in assessing risks, identifying and updating key control objectives, implementing controls and other mitigation strategies, conducting reviews, and taking corrective actions as appropriate.

In addition, NASA complies with FMFIA and OMB requirements to evaluate and assure the reliability of its internal controls over its financial management systems, complies with Federal financial management system requirements, and assures reliability of its Digital Accountability and Transparency Act of 2014 (DATA Act) submissions.

FFMIA requires agencies to have financial management systems that substantially comply with Federal financial management system requirements, Federal Accounting Standards, and the U.S. Government Standard General Ledger at the transaction level. NASA conducted its evaluation of financial management systems for compliance with FFMIA in accordance with Appendix D of OMB Circular No. A-123. NASA financial management systems substantially comply with FFMIA as of September 30, 2023.

NASA's Certification of Reasonable Assurance is based upon management's knowledge gained from daily operations, monitoring activities, assessment of risk and internal control, and other internal controls that govern the effectiveness and efficiency of operations. NASA makes an unmodified statement of assurance that its internal controls for FY 2023 were operating effectively. NASA remains committed to ensuring that a sound system of internal control exists over operations, reporting, and financial management systems.

Sincerely,

Bill Nelson

A handwritten signature in black ink that reads "Bill Nelson".

Administrator



# FINANCIAL SYSTEMS STRATEGIES

NASA's Financial Management System Strategy aligns with the Agency's mission for innovation and strategic goals. An overarching core financial systems roadmap is designed to optimize capabilities and operations which promote the technologies of the future. Current financial management systems initiatives seek to enable integrated solutions to modernize business processes, comply with internal and external Federal policies and standards, and OMB requirements while meeting evolving stakeholder needs.

SAP Enterprise Central Component (ECC) serves as NASA's core financial system of record and is the "circulatory system" for the business operations of the Agency. It is the platform for sound financial management across the entire enterprise that leads to efficient business operations and successful audit outcomes. SAP ECC will reach end of life in December 2027. The Chief Information Officer in collaboration with the Chief Financial Officer is evaluating core financial system alternatives which meet Federal requirements offering embedded analytics that will provide flexible real-time reporting, eliminating the need for custom reports, reducing customization through process reengineering using standard enhanced capabilities, achieving integration among system components which will lessen the need for manual processes. Additionally, options such as hosting applications in the cloud with either subscription licensing or NASA on-premises data center are also being considered.

The President's Management Agenda (PMA) defines Government-wide management priorities for all Federal agencies to improve how Government operates and performs. The PMA—grounded in a vision of an equitable, effective, and accountable Government that delivers results for all Americans, and informed by our shared values—will support progress and opportunities beyond the reach of any one Federal agency. NASA is supporting the PMA by currently focusing on implementing two new Federal mandates: G-Invoicing and Lease Accounting.

Treasury has mandated a comprehensive Government-wide solution, known as G-Invoicing, that will enhance Government-wide financial management and improve the quality of Intra-governmental Buy/Sell transactions reporting. G-Invoicing's use by Federal entities for all Intra-governmental Buy/Sell activity has been mandated under the authority of 31 U.S.C. 3512(b) and 3513.

The Statement of Federal Financial Accounting Standards No. 54, *Leases*, changes the financial reporting requirements for Federal lease accounting. The standard now requires lessees to recognize leases on their balance sheet through a lease liability and corresponding lease asset, while lessors recognize a lease receivable and unearned revenue. To facilitate proper integration with the Agency's existing core financial system and allow for efficient management of lease arrangements, the Lease Contract Management component of SAP is being implemented and will be available for use in FY 2024.



## OSIRIS-REx Sample Return

A C-17 Globemaster aircraft with the science canister from NASA's OSIRIS-REx mission aboard takes off from Michael Army Air Field at the Department of Defense's Utah Test and Training Range, Monday, Sept. 25, 2023, en route to NASA's Johnson Space Center in Houston, Texas.

*Photo Credit — NASA/Keegan Barber*



Members of the Kennedy Space Center (KSC) Flight Operations team are seen operating a helicopter as the sample return capsule from NASA's OSIRIS-REx mission is en route to the cleanroom, Sunday, Sept. 24, 2023, shortly after the capsule landed at the Department of Defense's Utah Test and Training Range.

*Photo Credit — NASA/Keegan Barber*

# Forward Looking



More than 500 students from around the world competed in NASA’s Human Exploration Rover Challenge (HERC) Friday, April 21, and Saturday, April 22, at the Aviation Challenge camp of the U.S. Space & Rocket Center, near NASA’s Marshall Space Flight Center in Huntsville, Alabama.

NASA hosted 48 teams from 16 states, the District of Columbia and Puerto Rico, as well as the countries of Bolivia, Brazil, Colombia, Dominican Republic, India, Mexico, Peru, and Singapore.

Throughout the nine-month challenge, each team will attempt to design, build, and test human-powered rovers capable of traversing a challenging half-mile obstacle course that simulates the terrain of the Moon, Mars, or other rocky bodies in our solar system.

PHOTO CREDIT  
NASA

# 2024 AND BEYOND

As NASA enters a new fiscal year and following on the heels of a successful Artemis I launch in November 2022, we look forward to the launch of Artemis II. Where Artemis I was historic in using the Space Launch System (SLS) rocket to launch an uncrewed Orion spacecraft around the Moon, Artemis II will continue the Agency's history of innovation and lunar exploration by incorporating four astronauts in this journey around the Moon, including the first woman and the first person of color. This will be NASA's first crewed mission of the Orion spacecraft.

NASA continues to plan for the future of deep space exploration as we prepare for the launch of Artemis III. The Agency has several key milestones associated with Artemis III planned in FY 2024 and FY 2025, including the Human Landing System (HLS) Option A propellant transfer flight test and the completion of the SLS Launch Vehicle Stage Adapter (LVSA).

As the Earth and its atmosphere continue to experience the effects of climate change, NASA is doing its part to contribute data to enable a sustainable solution by delivering three new observing systems by the end of FY 2025. The Plankton, Aerosol, Cloud, ocean Ecosystem (PACE), Polar Radiant Energy in the Far Infrared Experiment (PREFIRE) #1, and Total and Spectral Solar Irradiance Sensor 2 (TSIS-2) missions will enable new and updated models, observations, research, and applications.

Once each decade, NASA and its partners ask the National Research Council to look 10 or more years into the future and prioritize research areas, observations, and notional missions to make those observations. These findings are published in what is called a Decadal Survey. The next Decadal Survey for Solar and Space Physics (Heliophysics) 2024-2033 will present a prioritized strategy of basic and applied research to advance scientific understanding of the Sun, Sun-Earth connections and the origins of space weather, the Sun's interactions with other bodies in the solar system, the interplanetary medium, and the interstellar medium. This survey, similar to its predecessor "[Thriving on Our Changing Planet: A Decadal Strategy for Earth Observations from Space](#)", is expected to contain recommendations for NASA and a challenge for the entire science community. NASA will incorporate this detailed research into its plan for the future of Heliophysics.

NASA's Space Technology Mission Directorate (STMD) has been charged with ensuring American global leadership in space technology innovations through increased partnering with industry and demonstrating key lunar surface and deep space technologies. Through the Tipping Point Announcement for Partnership proposals, NASA seeks industry-developed space technologies that can foster the development of commercial space capabilities and benefit future NASA missions. The partnerships established through Tipping Point selections combine NASA resources with an industry contribution shepherding the development of critical space technologies/capabilities to stimulate commercial space economy while also saving the Agency, and American taxpayers, money.

Beyond Tipping Point opportunities, NASA has a robust Small Business Innovation Research and Small Business Technology Transfer (SBIR/STTR) program that provides early-stage funding to a diverse community of pioneers who are researching and developing technologies to change the world. This program ensures that technologies developed for missions in exploration and discovery are broadly available to the public, maximizing the benefit to the Nation. NASA has set an ambitious goal of transferring at least three technologies to small businesses by the end of FY 2025.

NASA's Aeronautics Research Mission Directorate (ARMD) is aiming to complete its first flight of the Low Boom Flight Demonstrator aircraft, the X-59, in 2024. This aircraft is years in the making and designed to reduce the perceived loudness of sonic booms and enable future industry innovation in commercial supersonic aircraft. Its gentle supersonic thump, instead of sonic boom, could drastically reduce the noise burden of supersonic travel and have benefits to future generations of travelers.

## 2024 AND BEYOND (CONTINUED)

NASA submitted its inaugural [Equity Action Plan](#) in 2022, in accordance with [Executive Order \(EO\) 13985](#), which outlines and reaffirms our Agency's strategy to successfully mitigate systemic barriers to equity. Specifically, NASA's plan discusses our strategic effort to achieve equity in procurements, grants, cooperative agreements, data accessibility, civil rights compliance, and accessibility to limited-English populations. [EO 14091](#), which was released February 16, 2023, formally annualized the Equity Action Plan process and NASA will publish updates to the Agency's Equity Action Plan to further advance the common goal of reducing barrier and inequities throughout the Nation. NASA also published the Agency's FY 2022-2026 [Diversity Equity Inclusion and Accessibility \(DEIA\) Strategic Plan](#) in FY 2022, outlining the Agency's goals to increase workforce diversity, workforce equity and inclusion, workforce accessibility and inclusion, and integrating DEIA into the NASA mission.

Continuing with the theme of reducing barriers, Hispanics, Asian Americans and Pacific Islanders (AAPI), and Women are underrepresented in executive positions compared to their overall representation in the NASA workforce. Therefore, the Agency is undertaking a barrier analysis in FY 2024-2025 to further explore potential underlying causes of this discrepancy in order to determine the root causes. NASA will utilize the insights obtained through this barrier analysis to formulate equitable workforce policies. More information on this barrier analysis can be found in the [FY 2024 Annual Evaluation Plan \(AEP\)](#) contained within the FY 2024 VIPer.

NASA is building on its 2022 strategy to implement [EO 14005](#), which requires Agencies to increase opportunities for domestic sourcing, aid American businesses' ability to compete in strategic industries, and help America's workers thrive. In 2024, NASA will continue to strengthen its acquisition strategy and develop an electronic dashboard to analyze its non-domestically procured products. Then NASA will partner with the National Institute of Standards and Technology's Manufacturing Extension Partnership Office to identify domestic providers capable of fulfilling NASA's unique product requirements to fortify the domestic supply chain for American made goods.

Addressing NASA's outdated infrastructure and facilities has been a constant challenge with nearly 83% of NASA facilities beyond their original design life. Furthermore, as of September 30, 2023, the Agency's deferred maintenance and repairs backlog is \$3.8 billion ([pages 77-78](#)). To address these concerns, NASA's Office of Strategic Infrastructure will finalize its Master Plan for the Agency's facilities in early FY 2024. This plan will guide NASA's strategy for resource allocation, construction, demolition, and other areas critical to maintaining facilities and assets.

NASA continues to experience higher demand for digital capabilities and an increasing backlog of IT modernization needs. This dynamic IT environment requires continuous attention to address IT infrastructure obsolescence, resourcing, and cybersecurity risks to effectively support NASA's missions. To address these IT concerns, NASA is currently undergoing a collaborative, unified Agency approach to strengthen NASA's cybersecurity posture. The Agency is transitioning to an enterprise IT operating model to facilitate the implementation and adoption of best practice cybersecurity risk management strategies. Strengthened resiliency in NASA's IT systems will be achieved by moving towards a Zero Trust Architecture model. Additionally, NASA will integrate risk-based cybersecurity directly into mission development, leveraging opportunities for collaboration among NASA's missions to mitigate IT vulnerabilities and integrate cybersecurity into the mission project lifecycle.

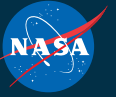
# Financial Section



The Soyuz MS-23 crew ship is docked to the International Space Station's Prichal docking module after undocking and moving earlier from the Poisk module. Aboard the MS-23 during the 37-minute relocation maneuver were, NASA astronaut Frank Rubio with Roscosmos cosmonauts Sergey Prokopyev and Dmitri Petelin.

PHOTO CREDIT  
NASA, Apr 6, 2023

# MESSAGE FROM THE CHIEF FINANCIAL OFFICER



I am honored to join Administrator Nelson in presenting the Fiscal Year (FY) 2023 NASA Agency Financial Report (AFR). The AFR highlights NASA's financial position, results of operations, and use of budgetary resources for FY 2023. Further, this report provides valuable insights into NASA's financial performance as we uphold America's leadership in space and aeronautics; address the climate crisis; foster greater diversity, equity, inclusion, and accessibility; and drive economic growth.

The Office of the Chief Financial Officer (OCFO) ensures reliable, transparent, and timely financial reporting in the AFR, reflecting NASA's commitment to budgetary stewardship and integrity, operating performance, and adequacy of systems and controls. Throughout the past year, the OCFO team has demonstrated continued excellence in surpassing these performance benchmarks. This excellence is once again recognized in our FY 2023 Auditors' report which affirms an unmodified "clean" opinion without any material internal control weaknesses for the 13th consecutive year. This validates that NASA's financial statements are free of material misstatements and have been prepared in accordance with U.S. Generally Accepted Accounting Principles (GAAP), and our system of internal controls is operating efficiently. I want to extend my sincere gratitude to my entire OCFO team and our organizational partners, for their unparalleled diligence and invaluable contributions that made this achievement possible.

## Audit and Compliance Activities

NASA remains committed to prudent financial management, maintaining data integrity, and ensuring the reliability of financial reports. I am proud to report that the Independent Auditors did not identify any material weaknesses or significant deficiencies in the financial audit for FY 2023. NASA's "clean" unmodified audit opinion affirms that our FY 2023 financial statements are presented fairly and adhere to GAAP. Additionally, the auditors disclosed no instances of noncompliance with the applicable provisions of the Federal Financial Management Improvement Act (FFMIA) within NASA's financial management systems.

We acknowledge and value the points highlighted in the AFR and the Independent Auditors' report that require our continued attention and commitment to improvement. We are prepared to manage new compliance requirements effectively and efficiently in our ongoing pursuit of financial and management excellence.

## OCFO Key Accomplishments

In addition to the successful audit, the OCFO team has achieved much over the past year. These successes include strengthening operations and collaborations across our enterprise; enhancing our capabilities and resiliency throughout OCFO; tackling implementation challenges for imminent changes to accounting standards around leases; and reinforcing rigor in our acquisition practices. In addition, the AGA (formerly the Association of Government Accountants) recognized and awarded NASA a ninth consecutive Certificate of Excellence in Accountability Reporting (CEAR) Award for FY 2022, for our Agency's financial reporting, including the prestigious Best-in-Class Award, acknowledging the well-balanced and informative presentation of the Agency's Mission Performance results.

Over the past year, NASA has achieved some incredible milestones: from the successful test flight of Artemis I, to sharing with humanity breathtaking images from the James Webb Space Telescope. We are also growing the next generation of scientists, engineers, and explorers by promoting Science, Technology, Engineering and Mathematics (STEM) skills among students, through a range of challenges and competitions to help foster STEM engagement. NASA continues to advance open-source science to enhance accessibility and inclusivity; address the urgent challenges of climate change; and push the boundaries of aeronautics and space exploration. Within the OCFO, we're proud to support these efforts by ensuring that our financial stewardship practices are prudent; our acquisition practices are



## MESSAGE FROM THE CHIEF FINANCIAL OFFICER (CONTINUED)

rigorous; our reporting is accurate; and our management and controls are effective. This is central to our commitment to the public. I am proud of our workforce and their invaluable expertise, in daily support of NASA's mission: to explore the unknown in air and space; innovate for the benefit of humanity; and inspire the world through discovery.



Sincerely,

A handwritten signature in cursive script that reads "Margaret V. Schaus".

Margaret Vo Schaus

### OCFO'S GOALS

#### I. GOAL 1

Ensure stewardship of the taxpayer's investment entrusted to NASA to advance and achieve the Agency's strategic goals, priorities, and missions.

#### II. GOAL 2

Lead and develop a robust analytical community and capability that supports and empowers the Agency mission.

#### III. GOAL 3

Develop and engage the Enterprise workforce to enable the NASA of the future.

### SPANISH TRANSLATION AVAILABLE

Click [here](#) or view page 113 to read the Spanish version. Haga clic [aquí](#) o vea la página 113 para leer la versión en español.

# INTRODUCTION TO THE PRINCIPAL FINANCIAL STATEMENTS

The principal financial statements are prepared to report the financial position and results of operations of the National Aeronautics and Space Administration, pursuant to the requirements of 31 U.S.C. § 3515(b).



## Consolidated Balance Sheets

provide information on assets, liabilities, and net position as of the end of the reporting periods. Net position is the difference between assets and liabilities. It is a summary measure of the Agency's financial condition at the end of the reporting periods.

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## Consolidated Statements of Net Cost

report net cost of operations during the reporting periods by strategic goal and at the entity level. It is a measure of gross costs of operations less earned revenue, and represents the cost to taxpayers for achieving each strategic goal and Agency Mission at the entity level.

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## Consolidated Statements of Changes in Net Position

report the beginning balances of net position, current financing sources and use of resources, unexpended resources for the reporting periods, and ending net position for the current reporting periods.

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## Combined Statements of Budgetary Resources

report information on the sources and status of budgetary resources for the reporting periods. Information in these statements is reported on the budgetary basis of accounting, which supports compliance with budgetary controls and controlling legislation.



# Financial Statements, Notes, and Required Supplementary Information



Former NASA Administrator Charlie Bolden speaks with local students during an Earth Day event, Thursday, April 20, 2023, at Union Station in Washington. The Agency's Earth Day exhibits are a free, public part of yearly celebrations; visitors can participate in hands-on activities and learn about the many ways NASA conducts Earth science.

PHOTO CREDIT  
NASA/Keegan Barber

## NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

## Consolidated Balance Sheets

### As of September 30, 2023 and 2022

(IN MILLIONS)

	2023	2022
<b>Assets</b>		
Intragovernmental:		
Fund Balance with Treasury (Note 2)	\$17,378	\$17,156
Investments, Net (Note 3)	15	15
Accounts Receivable, Net (Note 4)	67	57
Total Intragovernmental	17,460	17,228
With the Public:		
Accounts Receivable, Net (Note 4)	1	1
Property, Plant and Equipment, Net (Note 5)	8,651	7,643
Advances and Prepayments	23	25
Other Assets (Note 7)	—	4
Total with the Public	8,675	7,673
<b>Total Assets:</b>	<b>\$26,135</b>	<b>\$24,901</b>
<b>Stewardship PP&amp;E (Note 6)</b>		
<b>Liabilities: (Note 8)</b>		
Intragovernmental:		
Accounts Payable	\$36	\$55
Advances from Others and Deferred Revenue	39	50
Other Liabilities (Note 10)	175	138
Total Intragovernmental	250	243
With the Public:		
Accounts Payable	1,730	1,840
Federal Employee Benefits Payable (Note 8)	302	300
Environmental and Disposal Liabilities (Note 9)	2,305	2,130
Advances from Others and Deferred Revenue	199	155
Other Liabilities (Note 10)		
Other Accrued Liabilities	1,793	1,931
Other	140	93
Total with the Public	6,469	6,449
<b>Total Liabilities</b>	<b>\$6,719</b>	<b>\$6,692</b>
<b>Commitments and Contingencies (Note 11)</b>		
<b>Net Position:</b>		
Unexpended Appropriations	\$13,333	\$12,951
Cumulative Results of Operations	6,083	5,258
<b>Total Net Position</b>	<b>\$19,416</b>	<b>\$18,209</b>
<b>Total Liabilities and Net Position</b>	<b>\$26,135</b>	<b>\$24,901</b>

THE ACCOMPANYING NOTES ARE AN INTEGRAL PART OF THESE FINANCIAL STATEMENTS

## NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

## Consolidated Statements of Net Cost For the Fiscal Years Ended September 30, 2023 and 2022

(IN MILLIONS)

	2023	2022
<b>STRATEGIC GOAL 1</b>		
<b>Expand human knowledge through new scientific discoveries:</b>		
Gross Costs	\$9,166	\$8,494
Less: Earned Revenue	904	1,028
Net Costs	8,262	7,466
<b>STRATEGIC GOAL 2</b>		
<b>Extend human presence to the Moon and on towards Mars for sustainable Long-term exploration, development, and utilization:</b>		
Gross Costs	\$11,030	\$9,842
Less: Earned Revenue	354	243
Net Costs	10,676	9,599
<b>STRATEGIC GOAL 3</b>		
<b>Catalyze economic growth and drive innovation to address national challenges:</b>		
Gross Costs	\$3,044	\$3,055
Less: Earned Revenue	161	121
Net Costs	2,883	2,934
<b>STRATEGIC GOAL 4</b>		
<b>Enhance capabilities and operations to catalyze current and future mission success:</b>		
Gross Costs	\$2,993	\$2,820
Less: Earned Revenue	198	180
Net Costs	2,795	2,640
<b>Net Cost of Operations</b>		
Total Gross Costs	\$26,233	\$24,211
Less: Total Earned Revenue	1,617	1,572
<b>Net Costs</b>	<b>\$24,616</b>	<b>\$22,639</b>

THE ACCOMPANYING NOTES ARE AN INTEGRAL PART OF THESE FINANCIAL STATEMENTS

## NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

## Consolidated Statements of Changes in Net Position For the Fiscal Years Ended September 30, 2023 and 2022

(IN MILLIONS)

	2023	2022
<b>Unexpended Appropriations:</b>		
Beginning Balance	\$12,951	\$11,822
Appropriations Received	25,573	24,363
Other Adjustments	(26)	(30)
Appropriations Used	(25,165)	(23,204)
Net Change in Unexpended Appropriations	382	1,129
<b>Total Unexpended Appropriations</b>	<b>\$13,333</b>	<b>\$ 12,951</b>
<b>Cumulative Results from Operations:</b>		
Beginning Balance	\$5,258	\$4,529
Appropriations Used	25,165	23,204
Non-exchange Revenue	1	—
Donations and Forfeitures of Cash and Cash Equivalents	—	2
Transfers In/Out Without Reimbursement	—	(3)
Donations and Forfeitures of Property	44	—
Imputed Financing	231	165
Net Cost of Operations	(24,616)	(22,639)
Net Change in Cumulative Results of Operations	825	729
<b>Total Cumulative Results of Operations</b>	<b>\$6,083</b>	<b>\$5,258</b>
<b>Net Position</b>	<b>\$19,416</b>	<b>\$18,209</b>

THE ACCOMPANYING NOTES ARE AN INTEGRAL PART OF THESE FINANCIAL STATEMENTS

## NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

## Combined Statements of Budgetary Resources For the Fiscal Years Ended September 30, 2023 and 2022

(IN MILLIONS)

	2023	2022
<b>Budgetary Resources:</b>		
Unobligated Balance from Prior Year Budget Authority, Net	\$3,242	\$2,955
Appropriations	25,573	24,365
Spending Authority from Offsetting Collections	2,108	1,879
<b>Total Budgetary Resources</b>	<b>\$30,923</b>	<b>\$29,199</b>
<b>Status of Budgetary Resources:</b>		
New Obligations and Upward Adjustments (total)	\$28,276	\$26,555
Unobligated Balance, End of Year:		
Apportioned, Unexpired Accounts	2,466	2,348
Exempt from Apportionment, Unexpired Accounts	—	3
Unapportioned, Unexpired Accounts	5	145
Unexpired Unobligated Balance, End of Year	2,471	2,496
Expired Unobligated Balance, End of Year	176	148
Unobligated Balance, End of Year (total)	2,647	2,644
<b>Total Budgetary Resources</b>	<b>\$30,923</b>	<b>\$29,199</b>
<b>Outlays, Net:</b>		
Outlays, Net (total)	\$25,326	\$23,082
Distributed Offsetting Receipts (-)	(7)	(3)
<b>Agency Outlays, Net</b>	<b>\$25,319</b>	<b>\$23,079</b>

THE ACCOMPANYING NOTES ARE AN INTEGRAL PART OF THESE FINANCIAL STATEMENTS

## 01

NOTE 1

## Summary of Significant Accounting Policies

### Reporting Entity

The National Aeronautics and Space Administration (NASA) is an independent agency established by Congress on October 1, 1958 by the National Aeronautics and Space Act of 1958. NASA was incorporated from its predecessor agency, the National Advisory Committee for Aeronautics, which provided technical advice to the United States (U.S.) aviation industry and performed aeronautics research. Today, NASA serves as the principal agency of the U.S. Government for initiatives in civil space and aviation.

NASA is organized into five Mission Directorates supported by one Mission Support Directorate (see Organization on page 10):

- **Aeronautics Research:** conducts research which enhances aircraft performance, environmental compatibility, capacity, flexibility, and safety of the future air transportation system;
- **Exploration Systems Development:** defines and manages the systems development for programs critical to the Artemis lunar exploration initiatives and develops technologies and capabilities to support sustainable human deep space exploration;
- **Science:** explores the Earth, Moon, Mars, and beyond; charts the best route of discovery, and obtains the benefits of Earth and space exploration for society;
- **Space Operations:** manages launch services, space communications and navigation, the International Space Station, and commercial space capabilities; and
- **Space Technology:** develops new technologies needed to support current and future NASA missions, other agencies, and the aerospace industry.

The Agency's administrative structure includes the Senior Management Council, Executive Council, Mission Support Council, Agency Program Management Council, Acquisition Strategy Council, and other Committees to integrate strategic, tactical, and operational decisions in support of strategic focus and direction.

Operationally, NASA is organized into nine Centers and other facilities across the country, the Headquarters Office, and the NASA Shared Services Center (NSSC).

The Agency's consolidated financial statements present the accounts of all funds that have been established and maintained to account for the resources under the control of NASA management.

### Disclosure Entities

The Federal Accounting Standards Advisory Board's (FASAB) Statement of Federal Financial Accounting Standards (SFFAS) No. 47, *Reporting Entity*, is intended to guide Federal agencies in recognizing complex, diverse organizations possessing varying legal designations (e.g., government agencies, not-for-profit organizations, and corporations) that are involved in addressing public policy challenges. It provides guidance for determining what organizations should be included in a Federal agency's financial statements (consolidation entities) and footnote disclosures (disclosure entities; and related parties) for financial accountability purposes and is not intended to establish whether an organization is or should be considered a Federal agency for legal or political purposes. [See Note 15, Disclosure Entity](#), for information on NASA's disclosure entity.

### Inter-Entity Costs

Goods and services are received from other Federal entities at no cost or at a cost less than the full cost to the providing Federal entity. Consistent with accounting standards, certain costs of the providing entity that are not fully reimbursed [by the component reporting entity] are recognized as imputed costs and are offset by imputed revenue. Such imputed costs and revenues relate to business-type activities such as employee benefits. However, unreimbursed costs of goods and services other than those identified above are not included in our financial statements.



## 01

NOTE 1

**Summary of Significant Accounting Policies (CONTINUED)****Basis of Accounting and Presentation**

These consolidated financial statements are prepared in accordance with FASAB standards in the format prescribed by the Office of Management and Budget (OMB) Circular No. A-136, *Financial Reporting Requirements*, Revised (May 2023). FASAB's authority to set Federal Government accounting standards is recognized by the American Institute of Certified Public Accountants (AICPA). The financial statements present the financial position, net cost of operations, changes in net position, and budgetary resources of NASA, as required by the Chief Financial Officers Act of 1990, Public Law (P.L.) 101-576, and the Government Management Reform Act, P.L. 103-356.

The accounting structure of Federal agencies is designed to reflect proprietary and budgetary accounting. Proprietary accounting uses the accrual method of accounting. Under the accrual method of accounting, revenues are recognized when earned and expenses are recognized when incurred, without regard to the timing of receipt or payment of cash. Budgetary accounting does not use the accrual method of accounting; it accounts for the sources and status of funds to facilitate compliance with legal controls over the use of Federal funds. Material intra-agency transactions and balances have been eliminated from the principal financial statements for presentation on a consolidated basis, except for the Statement of Budgetary Resources, which is presented on a combined basis in accordance with OMB Circular No. A-136. Accounting standards require all reporting entities to disclose that accounting standards allow certain presentations and disclosures to be modified, if needed, to prevent disclosure of classified information. In FY 2020, NASA implemented the requirements of paragraphs 2, 9, and 10 of SFFAS No. 57, *Omnibus Amendments*. The requirements set forth in paragraphs 3-8, 11 and 12 of the standard are effective in FY 2024 and early adoption is not permitted.

**Budgets and Budgetary Accounting**

NASA complies with Federal budgetary accounting guidelines of OMB Circular No. A-11, *Preparation, Submission and Execution of the Budget*, Revised (August 2023). Congress funds NASA's operations through nine main appropriations: Science; Aeronautics; Exploration; Space Operations; Science, Technology, Engineering and Mathematics Engagement; Safety, Security and Mission Services; Space Technology; Office of Inspector General; and Construction and Environmental Compliance and Restoration. NASA also receives reimbursements from reimbursable service agreements that cover the cost of goods and services NASA provides to other Federal entities or non-Federal entities. The reimbursable agreement price is based on cost principles to reasonably reflect the actual cost for the goods and services provided to the customer.

**Research and Development (R&D), Other Initiatives and Similar Costs**

NASA makes substantial R&D investments for the benefit of the U.S. The R&D programs include activities to extend our knowledge of Earth, its space environment, and the universe; and to invest in new aeronautics and advanced space transportation technologies supporting the development and application of technologies. Following guidance outlined in the FASAB Technical Release No. 7, *Clarification of Standards Relating to the National Aeronautics and Space Administration's Space Exploration Equipment*, NASA applies the Financial Accounting Standards Board's (FASB) Accounting Standards Codification (ASC) 730-10-25, *Research and Development - Recognition*, and FASB ASC 730-10-50 *Research and Development - Disclosure*, to its R&D projects. Consistent with the above guidance, costs to acquire PP&E that is expected to be used only for a specific R&D project are expensed in the period they are incurred.

**Exchange and Non-Exchange Revenue**

NASA classified revenues as either exchange or non-exchange. Exchange revenues are those transactions in which NASA provides goods and services to another party for a price, primarily through reimbursable agreements that are priced based on cost principles to reasonably reflect the actual cost for the goods and services provided to the customer. These revenues are presented on the Statement of Net Cost and serve to offset the costs of these goods and



## 01

NOTE 1

**Summary of Significant Accounting Policies (CONTINUED)**

services. Non-exchange revenues result from donations to the Government and from the Government's right to demand payment, for taxes, fines, and penalties. These revenues are not considered to reduce the cost of NASA's operations and are reported on the Statement of Changes in Net Position.

**Application of Significant Accounting Estimates**

The preparation of financial statements requires management to make assumptions and reasonable estimates affecting the reported amounts of assets, liabilities, and disclosures of contingent liabilities as of the date of the financial statements. Also, the reported amounts of revenues and expenses for the reporting period. Accordingly, actual results may differ from those estimates.

**Fund Balance with Treasury (FBWT)**

The U.S. Department of the Treasury (Treasury) collects and disburses cash on behalf of Federal agencies during the fiscal year. The collections include funds appropriated by Congress to fund the Agency's operations and revenues earned for services that are provided to other Federal agencies or for the public. The disbursements are for goods and services in support of NASA's operations and for other liabilities. FBWT is an asset account that shows the available budget spending authority of Federal agencies.

**Investments, Net**

NASA investments include the following intragovernmental non-marketable securities:

- (1) The Endeavor Teacher Fellowship Trust Fund (Endeavor Trust Fund) was established from public donations in tribute to the crew of the Space Shuttle Challenger. The Endeavor Trust Fund biannual interest earned is reinvested in short-term bills. P.L. 102-195 requires the interest earned from the Endeavor Trust Fund investments be used to create the Endeavor Teacher Fellowship Program.
- (2) The Science, Space and Technology Education Trust Fund (Challenger Trust Fund) was established to advance science and technology education. The Challenger Trust Fund balance is invested in short-term bills and/or a bond when feasible. P.L. 100-404 requires that a quarterly payment of \$250,000 be sent to the Challenger Center from interest earned on the Challenger Trust Fund investments. In order to meet the requirement of providing funds to the Challenger Center, NASA typically invests the biannual interest earned in short-term bills with maturity that coincides with quarterly payments of \$250,000 to beneficiaries. Interest received in excess of the amount needed for quarterly payment to beneficiaries may be reinvested. NASA has not been able to secure favorable returns on investment through securities issued by Treasury's Bureau of the Fiscal Service in recent years that were available for previous long-term bond investments. In anticipation of insufficient interest earnings that will not meet NASA's requirement to make quarterly disbursements, the Committees on Appropriations included a provision in both the FY 2023 and FY 2022 Consolidated Appropriations Act (P.L. 117-328 and P.L. 117-103) enabling NASA to utilize up to \$1 million from the Safety, Security, and Mission Services (SSMS) appropriation for disbursement to the Challenger Center.

**Accounts Receivable, Net**

Most of NASA's Accounts Receivable are for intragovernmental reimbursements for cost of goods and services provided to other Federal agencies; the rest are for debts to NASA by employees and non-Federal vendors. Allowances for delinquent non-Federal accounts receivable are based on factors such as: aging of accounts receivable, debtors' ability to pay, payment history, and other relevant factors. Delinquent non-Federal accounts receivable over 120 days are referred to Treasury for collection, wage garnishment or cross-servicing in accordance with the Debt Collection Improvement Act (DCIA), as amended. An allowance for uncollectible accounts is recorded for Accounts Receivable due from the public and Federal sector in order to reduce Accounts Receivable to its net realizable value in accordance with SFFAS



## 01

NOTE 1

**Summary of Significant Accounting Policies (CONTINUED)**

No. 1, *Accounting for Selected Assets and Liabilities.*

**Property, Plant and Equipment (PP&E)**

NASA reports depreciation and amortization expense using the straight-line method over an asset's estimated useful life, beginning with the month the asset is placed in service. PP&E are capitalized assets with acquisition costs of \$500,000 or more, a useful life of two years or more, and R&D assets that are determined at the time of acquisition to have alternative future use. Assets that do not meet these capitalization criteria are expensed. Capitalized costs include costs incurred by NASA to bring the property to a form and location suitable for its intended use. Certain NASA assets are held by Government contractors. Under provisions of the Federal Acquisition Regulation (FAR), the contractors are responsible for the control and accountability of the assets in their possession. These Government-owned, contractor-held assets are included within the balances reported in NASA's financial statements.

NASA has barter agreements with international entities; the assets and services received under these barter agreements are unique, with limited easement to only a few countries, as these assets are on the International Space Station (ISS). The intergovernmental agreements state that the parties will seek to minimize the exchange of funds in the cooperative program, including the use of barter to provide goods and services. NASA has received some assets from these parties in exchange for future services. The fair value is indeterminable; therefore, no value was ascribed to these transactions in accordance with FASB ASC 845-10-25, *Non-Monetary Transactions – Recognition*, and ASC 845-10-50, *Non-Monetary Transactions – Disclosure*.

SFFAS No. 10, *Accounting for Internal Use Software*, requires the capitalization of internally developed, contractor developed, and commercial off-the-shelf software. Capitalized costs for internally developed software include the full costs (direct and indirect) incurred during the software development stage only. For purchased software, capitalized costs include amounts paid to vendors for the software and other material costs incurred by NASA to implement and make the software ready for use through acceptance testing. NASA capitalizes costs for internal use software when the total projected cost is \$1 million or more, and the expected useful life of the software is two years or more.

**Liabilities Covered by Budgetary Resources**

As a component of a sovereign entity, NASA cannot pay for liabilities unless authorized by law and covered by budgetary resources. Liabilities Covered by Budgetary Resources are those for which appropriated funds are available as of the balance sheet date. Budgetary resources include: new budget authority, unobligated balances of budgetary resources at the beginning of the year or net transfers of prior year balances during the year, spending authority from offsetting collections (credited to an appropriation or fund account), and recoveries of unexpired budget authority through downward adjustments of prior year obligations.

**Liabilities Not Covered by Budgetary Resources**

Liabilities Not Covered by Budgetary Resources include future environmental cleanup liability, legal claims, other retirement benefits, workers' compensation, and annual leave. Liabilities not covered by budgetary resources require future congressional action whereas liabilities covered by budgetary resources reflect prior congressional action. Liabilities that do not require the use of budgetary resources are covered by monetary assets that are not budgetary resources to the entity.

**Federal Employee Benefits Payable**

A liability is recorded for workers' compensation claims related to the Federal Employees' Compensation Act (FECA), administered by the U.S. Department of Labor. FECA provides income and medical cost protection to covered Federal civilian employees injured on the job, employees who have incurred a work-related occupational disease,

## 01

NOTE 1

**Summary of Significant Accounting Policies (CONTINUED)**

and beneficiaries of employees whose death is attributable to a job-related injury or occupational disease. The FECA program initially pays valid claims and subsequently seeks reimbursement from the Federal agencies employing the claimants. The FECA liability includes the actuarial liability for estimated future costs of death benefits, workers' compensation, medical and miscellaneous costs for approved compensation cases.

**Personnel Compensation and Benefits*****Annual, Sick and Other Leave***

Annual leave is accrued as it is earned; the accrual is reduced as leave is taken. Each year, the balance in the accrued annual leave account is adjusted to reflect current pay rates. To the extent current or prior year appropriations are not available to fund annual leave earned but not taken, funding will be obtained from future financing sources. Sick leave and other types of non-vested leave are expensed as taken.

***Retirement Benefits***

NASA employees participate in the Civil Service Retirement System (CSRS), a defined benefit plan, or the Federal Employees Retirement System (FERS), a defined benefit and contribution plan. For CSRS employees, NASA makes contributions of 7.0 percent of gross pay. For FERS employees, NASA makes contributions to the defined benefit plan of 16.0 percent of gross pay. For employees hired January 1, 2013, and after, NASA contributes 18.4 percent of gross pay. The Agency also contributes 1.0 percent to a thrift savings plan (contribution plan) for each employee and matches employee contributions to this plan up to an additional 4.0 percent of gross pay.

***Insurance Benefits***

SFFAS No. 5, *Accounting for Liabilities of the Federal Government*, requires Government agencies to report the full cost of Federal Employee Health Benefits (FEHB) and the Federal Employees' Group Life Insurance (FEGLI) Programs. NASA uses the applicable cost factors and data provided by the Office of Personnel Management (OPM) to value these liabilities.

**Public-Private Partnerships (P3)**

SFFAS No. 49, *Public-Private Partnerships: Disclosure Requirements*, requires agencies to assess and disclose P3s (between Federal and the private sector) involving risk-sharing or limited protections and unequitable long-term benefit/cost characteristics greater than five years. Such arrangements or transactions provide a service or an asset for government and/or general public; use where in addition to the sharing of resources, each party shares in the risks and rewards of said arrangements or transactions.

**Reclassification of FY 2023 Information**

Certain reclassifications have been made to FY 2023 financial statements, notes, and supplemental information to better align with the Agency's policies and procedures effective in FY 2023 and in accordance with the Treasury Financial Manual and OMB Circular No. A-136.

**Subsequent Events**

Subsequent events have been evaluated per guidance in OMB Circular No. A-136 for FY 2023. The auditors' report date is the date the financial statements are available to be issued and management determined that there are no other items to disclose related to NASA's FY 2023 financial statements.

## 02 NOTE 2 Fund Balance with Treasury

The status of the Fund Balance with Treasury (FBWT) represents the total fund balance recorded in the general ledger for unobligated and obligated balances. Unobligated balances — available is the amount remaining in appropriated funds available for obligation. Unobligated balances — unavailable is primarily comprised of amounts remaining in appropriated funds used only for adjustments to previously recorded obligations. Obligated balance not yet disbursed is the cumulative amount of obligations incurred for which outlays have not been made. Non-Budgetary FBWT is comprised of amounts in non-appropriated funds.

(IN MILLIONS)	2023	2022
<b>Status of Fund Balance with Treasury:</b>		
Unobligated Balances		
Available	\$2,466	\$2,351
Unavailable	181	293
Obligated Balance Not Yet Disbursed	14,702	14,482
Non-Budgetary FBWT	29	30
<b>Total</b>	<b>\$17,378</b>	<b>\$17,156</b>

## 03 NOTE 3 Investments, Net

Investments consist of non—marketable par value intragovernmental securities issued by the Treasury's Bureau of the Fiscal Service. Trust fund balances are invested in Treasury securities, which are purchased at either a premium or discount and redeemed at par value exclusively through Treasury's Federal Investment Branch. The effective-interest method is used to amortize the premium on the bond, and the straight-line method is used to amortize discounts on bills.

Interest receivable on investments was zero in FY 2023 and FY 2022. In addition, NASA did not have any unrealized gain/(loss) resulting from the sale of securities prior to maturity or any change in value that was more than temporary.

2023							
(IN MILLIONS)	COST	AMORTIZATION METHOD	AMORTIZED (PREMIUM) DISCOUNT	INTEREST RECEIVABLE	INVESTMENTS, NET	UNREALIZED GAIN/(LOSS)	MARKET VALUE DISCLOSURE
<b>Intragovernmental Securities:</b>		Straight-Line Effective-Interest					
Non-Marketable: Par value	\$15	4.676 - 5.441%	\$—	\$—	\$15	\$—	\$15
<b>Total</b>	<b>\$15</b>		<b>\$—</b>	<b>\$—</b>	<b>\$15</b>	<b>\$—</b>	<b>\$15</b>

2022							
(IN MILLIONS)	COST	AMORTIZATION METHOD	AMORTIZED (PREMIUM) DISCOUNT	INTEREST RECEIVABLE	INVESTMENTS, NET	UNREALIZED GAIN/(LOSS)	MARKET VALUE DISCLOSURE
<b>Intragovernmental Securities:</b>		Straight-Line Effective-Interest					
Non-Marketable: Par value	\$15	0.741 - 3.413%	\$—	\$—	\$15	\$—	\$15
<b>Total</b>	<b>\$15</b>		<b>\$—</b>	<b>\$—</b>	<b>\$15</b>	<b>\$—</b>	<b>\$15</b>

## 04 NOTE 4 Accounts Receivable, Net

The Accounts Receivable balance represents net valid claims by NASA to cash or other assets of other entities. Intragovernmental Accounts Receivable represents reimbursements due from other Federal entities for goods and services provided by NASA on a reimbursable basis. Accounts Receivable due from the public is the total of miscellaneous debts owed to NASA from employees and/or smaller reimbursements from other non-Federal entities. A periodic evaluation of accounts receivable is performed to estimate any uncollectible amounts based on current status, financial and other relevant characteristics of debtors, and the overall relationship with the debtor. An allowance for uncollectible accounts is recorded for Accounts Receivable due from the public and Federal sector to reduce Accounts Receivable to its net realizable value in accordance with SFFAS No. 1, *Accounting for Selected Assets and Liabilities*. The total allowance for uncollectible accounts during FY 2023 and FY 2022 is less than one-half million dollars.

2023				2022			
(IN MILLIONS)	ACCOUNTS RECEIVABLE	ALLOWANCE FOR UNCOLLECTIBLE ACCOUNTS	NET AMOUNT DUE	(IN MILLIONS)	ACCOUNTS RECEIVABLE	ALLOWANCE FOR UNCOLLECTIBLE ACCOUNTS	NET AMOUNT DUE
Intragovernmental	\$67	\$—	\$67	Intragovernmental	\$57	\$—	\$57
Public	1	—	1	Public	1	—	1
<b>Total</b>	<b>\$68</b>	<b>\$—</b>	<b>\$68</b>	<b>Total</b>	<b>\$58</b>	<b>\$—</b>	<b>\$58</b>

## 05 NOTE 5 Property, Plant and Equipment, Net

There are no known restrictions to the use or convertibility of NASA PP&E. The composition of NASA PP&E as of September 30, 2023 and 2022 is presented in the table below. Information concerning deferred maintenance and repairs and estimated land acreage is discussed in unaudited required supplementary information.

2023					
(IN MILLIONS)	DEPRECIATION METHOD	ESTIMATED USEFUL LIFE	COST	ACCUMULATED DEPRECIATION	BOOK VALUE
<b>PP&amp;E</b>					
Structures, Facilities and Leasehold Improvements	Straight-Line	15-40 Years	\$12,393	\$(9,417)	\$2,976
Equipment	Straight-Line	5-20 Years	16,493	(15,427)	1,066
Work In Progress – Personal Property	N/A	N/A	3,527	—	3,527
Construction In Progress – Real Property	N/A	N/A	955	—	955
Internal Use Software	Straight-Line	5 Years	253	(251)	2
Land	N/A	N/A	124	—	124
Internal Use Software In Development	N/A	N/A	1	—	1
<b>Total</b>			<b>\$33,746</b>	<b>\$(25,095)</b>	<b>\$8,651</b>

## 05

NOTE 5

## Property, Plant and Equipment, Net (CONTINUED)

2022					
(IN MILLIONS)	DEPRECIATION METHOD	ESTIMATED USEFUL LIFE	COST	ACCUMULATED DEPRECIATION	BOOK VALUE
<b>PP&amp;E</b>					
Structures, Facilities and Leasehold Improvements	Straight—Line	15—40 Years	\$12,129	\$(9,104)	\$3,025
Equipment	Straight—Line	5—20 Years	16,464	(15,316)	1,148
Work In Progress – Personal Property	N/A	N/A	2,620	—	2,620
Construction In Progress – Real Property	N/A	N/A	722	—	722
Internal Use Software	Straight—Line	5 Years	253	(249)	4
Land	N/A	N/A	124	—	124
Internal Use Software In Development	N/A	N/A	—	—	—
<b>Total</b>			<b>\$32,312</b>	<b>\$(24,669)</b>	<b>\$7,643</b>

The following table presents the changes in total PP&E and accumulated depreciation from October 1, 2022 to September 30, 2023 and October 1, 2021 to September 30, 2022.

Net PP&E		
(IN MILLIONS)	2023	2022
<b>Balance Beginning of Year</b>	<b>\$7,643</b>	<b>\$6,982</b>
Capitalized acquisitions	1,664	1,305
Disposition	(106)	(73)
Transfers in/out w/o reimbursement	—	(3)
Depreciation expense	(594)	(568)
Donations	44	—
<b>Balance End of Year</b>	<b>\$8,651</b>	<b>\$7,643</b>

## 06

NOTE 6

## Stewardship PP&amp;E

Federal agencies are required to classify and report heritage assets, multi-use heritage assets, and stewardship land in accordance with SFFAS No. 29, *Heritage Assets and Stewardship Land*. Stewardship PP&E have physical characteristics similar to those of PP&E, but differ from PP&E because their value is more intrinsic and not easily determinable in dollars. The only type of stewardship PP&E owned by NASA are heritage assets.

Heritage assets are PP&E that possess one or more of the following characteristics:

- Historical or natural significance;
- Cultural, educational, or artistic (e.g., aesthetic importance);
- Significant architectural characteristics.

There is no minimum dollar threshold for designating PP&E as a heritage asset, and depreciation expense is not taken on these assets. For these reasons, heritage assets (other than multi-use heritage assets) are reported in physical units, rather than with assigned dollar values. In accordance with SFFAS No. 29, the cost of acquisition, improvement, reconstruction, or renovation of heritage assets is expensed in the period incurred.

Throughout the history of NASA's operations, the Agency has become an owner of historic buildings, structures, historical artifacts, art, and other cultural resources. The protection and conservation of these heritage assets is an



## 06

NOTE 6

## Stewardship PP&amp;E (CONTINUED)

essential part of the Agency's mission. NASA acquires such assets as a result of donation, or acquires the assets as a result of historically significant items being retired from active service and preserved by the Agency for historic purposes. When capitalized assets are identified as heritage assets and no longer predominately serve NASA's primary operations, their values are removed from the PP&E accounts. Any maintenance costs incurred for the upkeep of the heritage assets are expensed in the period incurred.

Assets that have a heritage function and are used in NASA's day-to-day operations are considered multi-use heritage assets. NASA's multi-use heritage assets consist of items such as launch pads, research labs, and wind tunnels still in operational use. Such assets that meet the capitalization criteria are accounted for as PP&E and depreciated over their estimated useful life in the same manner as other PP&E. Multi-use heritage assets are presented at the individual item level. As of September 30, 2023, and 2022, the total number of NASA's multi-use heritage assets were 502 and 509 respectively.

When a PP&E has no use in operations, but is designated as a heritage asset, its cost and accumulated depreciation are reclassified and removed from the PP&E asset accounts. Such assets remain on the record as heritage assets, except where there is legal authority for transfer or sale at which time they are removed from the heritage asset record. Heritage assets are withdrawn when they are disposed or reclassified as multi-use heritage assets. Heritage assets are generally in fair condition suitable for display.

SFFAS No. 29 provides agencies with considerations for defining individual physical heritage assets units as a collection, or a group of assets, where appropriate. NASA has reviewed and categorized its heritage assets into collection-type and non-collection-type assets. NASA's collection-type heritage assets include Air and Space Displays and Artifacts, and Art as described in the following paragraphs.

- Air and Space Displays and Artifacts collections are classified based on the physical custody of the asset. There are two collections: NASA-held and Contractor-held. Each collection is composed of assorted mementos of historic NASA events. Examples include items from previous missions that have historical significance to NASA and historic mission control artifacts that possess educational value and enhance the public's understanding of NASA's numerous programs.
- Art collection includes artwork inspired by the U.S. Aerospace program, as well as historical books, documents, and other library materials that document NASA's history. This collection is comprised of items created by artists who have contributed their time and talent to record their impressions of the history of the U.S. Aerospace Program through paintings, drawings, written form, and other media. These works of art not only provide a historic record of NASA projects, but they also support NASA's mission by giving the public a new and more comprehensive understanding of advancements in aerospace.

NASA's non-collection-type heritage assets include historic buildings, bunkers, towers, test stands, and properties that are listed or eligible to be listed on the National Register of Historic Places and National Historic Landmarks, and other resources.

- Non-collection-type heritage assets were established by locations for specific reasons and to pursue a variety of goals. Each is home to specific areas of expertise and support different elements of NASA's missions, taking on a unique identity. They provide the public with tangible examples of assets with historical significance or educational importance to NASA programs and missions at each location.

Total physical units, along with the additions and withdrawals for the year ended in September 30, 2022 and 2023 for NASA's heritage assets are displayed in the table to the right:

HERITAGE ASSETS (IN PHYSICAL UNITS)	2022	ADDITIONS	WITHDRAWALS	2023
<b>Collection-type</b>				
Air and Space Displays and Artifacts	2	—	—	2
Art	1	—	—	1
<b>Non-Collection-type</b>				
NASA Locations	9	—	—	9
<b>Total Heritage Assets</b>	<b>12</b>	<b>—</b>	<b>—</b>	<b>12</b>

## 07 NOTE 7 Other Assets

NASA's Other Assets consist of PP&E that NASA determined are no longer needed and are awaiting final disposition or retirement. The PP&E Other Assets are recorded at estimated net realizable value. The value of Other Assets at the end of the period was zero as of September 30, 2023 and \$4 million as of September 30, 2022.

(IN MILLIONS)	2023	2022
<b>With the Public</b>		
PP&E - Removed from Service and Pending Disposal	\$—	\$4
<b>Total Other Assets</b>	<b>\$—</b>	<b>\$4</b>

## 08 NOTE 8 Liabilities Not Covered by Budgetary Resources

Liabilities Not Covered by Budgetary Resources include future environmental cleanup liability, legal claims, other retirement benefits, workers' compensation, and annual leave. Liabilities not covered by budgetary resources require future congressional action whereas liabilities covered by budgetary resources reflect prior congressional action. Liabilities that do not require the use of budgetary resources are covered by monetary assets that are not budgetary resources to the entity.

The present value of the FECA actuarial liability estimate at year-end was calculated by the Department of Labor using a discount rate of 2.33 percent in FY 2023 and 2.12 percent in FY 2022. This liability includes the estimated future costs for claims incurred but not reported (IBNR) or approved as of the end of each year.

(IN MILLIONS)	2023	2022
<b>Intragovernmental Liabilities:</b>		
Other Liabilities	\$58	\$56
<b>Total Intragovernmental</b>	<b>58</b>	<b>56</b>
<b>Federal Employee Benefits Payable</b>	<b>302</b>	<b>300</b>
<b>Environmental and Disposal Liabilities</b>	<b>2,184</b>	<b>2,005</b>
<b>Other</b>	<b>112</b>	<b>67</b>
Total Liabilities Not Covered by Budgetary Resources	<b>\$2,656</b>	<b>\$2,428</b>
Total Liabilities Covered by Budgetary Resources	<b>\$4,035</b>	<b>\$4,238</b>
Total Liabilities Not Requiring Budgetary Resources	<b>\$28</b>	<b>\$26</b>
<b>Total Liabilities</b>	<b>\$6,719</b>	<b>\$6,692</b>

# 09 NOTE 9 Environmental and Disposal Liabilities

In accordance with guidance issued by FASAB, if an agency is required by Federal, state, and local statutes and regulation to clean up hazardous waste resulting from Federal operations, the amount of cleanup cost, if estimable, must be reported and/or disclosed in the financial statements.

The statutes and regulations most applicable to NASA environmental reporting, clean-up, and monitoring liabilities include: the Comprehensive Environmental Response, Compensation and Liability Act; the Resource Conservation and Recovery Act; the Nuclear Waste Policy Act of 1982; and applicable state and local laws.

NASA assesses the likelihood of required cleanup as probable (more likely than not to occur), reasonably possible (more than remote but less than probable), or remote (slight chance of occurring). If the likelihood of required cleanup is probable and the cost can be reasonably estimated, a liability is recorded in the financial statements. If the likelihood of required cleanup is reasonably possible, the estimated cost of cleanup is disclosed in the notes to the financial statements. If the likelihood of required cleanup is remote, no liability or estimate is recorded or disclosed.

## Environmental and Disposal Liabilities Represent Cleanup Costs Resulting From:

- Operations, including facilities obtained from other governmental entities, that have resulted in contamination from waste disposal methods, leaks and spills;
- Other past activity that created a public health or environmental risk, including identifiable costs associated with asbestos abatement; and
- Total cleanup costs associated with the removal, containment, and/or disposal of hazardous wastes or material and/or property at permanent or temporary closure or shutdown of associated PP&E.

Environmental and disposal liabilities as of September 30, 2023 and 2022 were as follows:

(IN MILLIONS)	2023	2022
<b>Environmental Liabilities</b>		
Restoration Projects	\$2,070	\$1,882
Asbestos	176	197
End of Life Disposal of Property, Plant and Equipment	59	51
<b>Total Environmental and Disposal Liabilities</b>	<b>\$2,305</b>	<b>\$2,130</b>
Unfunded Environmental Liabilities (Note 8)	\$2,184	\$2,005
Funded Environmental Liabilities	121	125
<b>Total Environmental and Disposal Liabilities</b>	<b>\$2,305</b>	<b>\$2,130</b>

## Restoration Projects

NASA recorded a total estimated liability for known restoration projects of \$2.070 billion in FY 2023. This was an increase of \$188 million from \$1.882 billion recorded in FY 2022. The increase in this liability is primarily due to the availability of new or updated information on the extent of contamination and refinements to the estimation methodology. The liability for each restoration project is estimated for a duration of no more than 30 years, except where required by state statutes, regulations, or an agreement.



## 09

NOTE 9

**Environmental and Disposal Liabilities** (CONTINUED)

In addition to the probable cleanup costs for known hazardous conditions recognized in the financial statements, there are other remediation sites where the likelihood of required cleanup for known hazardous conditions is reasonably possible. Remediation costs at certain sites classified as reasonably possible were estimated to be \$22 million for FY 2023 and \$11 million for FY 2022.

With respect to environmental remediation that NASA considers probable or reasonably possible but not estimable, NASA concluded that either the likelihood of a NASA liability is less than probable but more than remote, or the regulatory drivers and/or technical data that exist are not reliable enough to calculate an estimate.

**Asbestos**

NASA maintains numerous structures and facilities across each of its Centers that are known to contain asbestos. In accordance with FASAB Technical Bulletin 2006-1, *Recognition and Measurement of Asbestos Related Cleanup Costs*, NASA and other Federal entities are required to recognize a liability for friable and non-friable probable and reasonably estimable asbestos cleanup costs. FASAB Technical Release No. 10, *Implementation Guidance on Asbestos Cleanup Costs Associated with Facilities and Installed Equipment*, allows for an extrapolation of asbestos cleanup cost estimates for similar properties to develop an Agencywide cleanup estimate. NASA uses actual costs incurred to clean up asbestos in NASA structures and facilities that were recently demolished or fully renovated to estimate the asbestos liability. Agencywide asbestos cleanup cost factors were developed for both structures and facilities measured in square feet and for those not measured in square feet. These cost factors were then extrapolated across applicable NASA structures and facilities. The asbestos cleanup cost liability of \$176 million in FY 2023 represents a decrease of \$21 million compared to the \$197 million recorded in FY 2022.

**End of Life Disposal of Property, Plant and Equipment**

Consistent with SFFAS No. 5, *Accounting for Liabilities of the Federal Government* and with SFFAS No. 6, *Accounting for Property, Plant, and Equipment*, NASA estimates the anticipated environmental disposal cleanup costs for PP&E. NASA recognizes and records in its financial statements an environmental cleanup liability for end-of-life disposal of PP&E that is probable and measurable.

NASA recorded a total estimated liability for the end-of-life disposal of PP&E of \$59 million in FY 2023. This was an increase of \$8 million over the \$51 million recorded in FY 2022. This estimate includes both facilities with permits that require cleanup and an estimate for all remaining PP&E. As described in the following paragraphs, this estimate also considers end-of-life disposal costs for assets in space, including the ISS and satellites.

The current proposed decommissioning approach for the ISS is to execute a controlled targeted deorbit to a remote ocean location. This is consistent with the approach used to deorbit other space vehicles (e.g., Russia's Progress, Europe's Automated Transfer Vehicle (ATV) and Japan's H-II Transfer Vehicle (HTV)). The documented target reliability for this decommissioning approach is 99 percent. Prior to decommissioning the ISS, any hazardous materials on board the ISS would be removed or jettisoned. As a result, only residual quantities of hazardous, toxic, and radioactive materials would remain prior to the decommissioning.

Based on past experience with the re-entry of satellites, larger portions or fragments of the ISS would be expected to survive the thermal and aerodynamic stresses of re-entry. However, the historical disposal of satellites and vehicles into broad ocean areas with a controlled deorbit has left little evidence of their re-entry. Any remaining contamination in the ISS debris field would not be expected to have a substantive impact on marine life. Therefore, the probability of NASA incurring environmental cleanup costs related to the ISS is remote and no estimate for such costs has been developed or reported in these financial statements.

# 10

NOTE 10

## Other Liabilities

Intragovernmental Other Liabilities primarily represent accrued cost estimates for goods and services performed by Federal trading partners, and Advances from Others relates to agreements for services between NASA and Federal trading partners for reimbursable services performed.

Other Accrued Liabilities with public entities primarily consist of the accrual of contractor costs with related budgetary obligations for goods and services performed. The period of performance for contractor contracts typically spans the duration of NASA programs, which could be for a number of years prior to final delivery of the product. In such cases, NASA records a cost accrual throughout the fiscal year as the work is performed. Other Accrued Liabilities also include the accrual of incurred but not reported (IBNR) grant program costs incurred without related budgetary obligations in support of NASA's research and development and other related activities.

Other Liabilities with public entities primarily represent other liabilities without related budgetary obligations which include obligations for cost to be funded in the future.

(IN MILLIONS)	2023			2022		
	CURRENT	NON-CURRENT	TOTAL	CURRENT	NON-CURRENT	TOTAL
<b>Intragovernmental</b>						
Employer Contributions and Payroll Taxes Payable	\$53	\$—	\$53	\$50	\$—	\$50
Other Liabilities With Related Budgetary Obligations	117	—	117	82	—	82
Liability for Non-Entity Assets Not Reported on the Statement of Custodial Activity	—	—	—	—	—	—
Other Post-Employment Benefits Due and Payable	5	—	5	5	1	6
<b>Total Intragovernmental</b>	<b>\$175</b>	<b>\$—</b>	<b>\$175</b>	<b>\$137</b>	<b>\$1</b>	<b>\$138</b>
<b>With the Public</b>						
Other Accrued Liabilities	1,793	—	1,793	1,931	—	1,931
Other Liabilities						
Accrued Funded Payroll and Leave	13	—	13	13	—	13
Liability for Non-Fiduciary Deposit Funds and Undeposited Collections	28	—	28	26	—	26
Contingent Liabilities	2	—	2	—	—	—
Other Liabilities Without Related Budgetary Obligations	97	—	97	54	—	54
<b>Total With the Public</b>	<b>\$1,933</b>	<b>\$—</b>	<b>\$1,933</b>	<b>\$2,024</b>	<b>\$—</b>	<b>\$2,024</b>
<b>Total Other Liabilities</b>	<b>\$2,108</b>	<b>\$—</b>	<b>\$2,108</b>	<b>\$2,161</b>	<b>\$1</b>	<b>\$2,162</b>

# 11

## NOTE 11 Commitments and Contingencies

NASA is a party in various administrative proceedings, court actions (including tort suits), and claims. For cases in which management and legal counsel believe it is probable that the outcomes will result in a loss to NASA, contingent liabilities are recorded. There are certain cases where the likelihood of loss is deemed reasonably possible. A contingent liability is not required to be recorded for these cases; however, the estimated range of loss is disclosed below.

Additionally, there are cases reviewed by legal counsel where the likelihood of loss is deemed remote. A contingent liability is not required to be disclosed for these cases.

(IN MILLIONS)	2023			2022		
	ACCRUED LIABILITIES	ESTIMATED RANGE OF LOSS		ACCRUED LIABILITIES	ESTIMATED RANGE OF LOSS	
		LOWER END	UPPER END		LOWER END	UPPER END
<b>Legal Contingencies:</b>						
Probable	\$2	\$—	\$—	\$—	\$—	\$—
Reasonably Possible		\$12	\$13		\$25	\$36

# 12

## NOTE 12 Explanation of Differences Between the SBR and the Budget of the U.S. Government

The FY 2025 Budget of the United States Government (President's Budget), which presents the actual amounts for the year ended September 30, 2023, has not been published as of the issue date of these financial statements. The FY 2025 Budget of the United States Government will be published on a later date at <https://www.whitehouse.gov/omb/budget> (Unaudited).

NASA reconciled the amounts of the FY 2022 column on the Statement of Budgetary Resources (SBR) to the actual amounts for FY 2022 in the FY 2024 President's Budget for budgetary resources, new obligations, upward adjustments (total), distributed offsetting receipts, and net outlays as presented below.

(IN MILLIONS)	BUDGETARY RESOURCES	NEW OBLIGATIONS & UPWARD ADJUSTMENTS (TOTAL)	DISTRIBUTED OFFSETTING RECEIPTS	NET OUTLAYS
<b>Combined Statement of Budgetary Resources</b>	\$29,199	\$26,555	\$(3)	\$23,082
Included on SBR, not in President's Budget				
Expired Accounts	(182)	(34)	—	—
Distributed Offsetting Receipts	—	—	3	—
<b>Budget of the United States Government</b>	<b>\$29,017</b>	<b>\$26,521</b>	<b>\$—</b>	<b>\$23,082</b>

## 13 NOTE 13 Undelivered Orders at the End of the Period

Undelivered Orders represent the amount of goods and/or services ordered to perform NASA's mission objectives, which have not been received. Undelivered Orders at the end of the period totaled \$12.9 billion as of September 30, 2023 and \$12.3 billion as of September 30, 2022.

(IN MILLIONS)	2023	2022
<b>Federal</b>		
Unpaid	\$706	\$690
Paid	101	133
<b>Total</b>	<b>807</b>	<b>823</b>
<b>Nonfederal</b>		
Unpaid	\$12,076	\$11,490
Paid	26	28
<b>Total</b>	<b>12,102</b>	<b>11,518</b>
<b>Total Undelivered Orders</b>	<b>\$12,909</b>	<b>\$12,341</b>

## 14 NOTE 14 Reconciliation of Net Cost to Net Outlays

Budgetary accounting is used for planning and control purposes and relates to both the receipt and use of cash, as well as reporting the Federal deficit. Financial accounting is intended to provide a picture of the Government's financial operations and financial position on an accrual basis. The accrual basis includes information about costs arising from the consumption of assets and the incurrence of liabilities. The reconciliation of net outlays is presented on a budgetary basis, and the net cost is presented on an accrual basis, which provides an explanation of the relationship between budgetary and financial accounting information. The reconciliation serves not only to identify costs in the past and those paid in the future, but also to assure integrity between budgetary and financial accounting. The analysis below illustrates this reconciliation by listing the key differences between net cost and net outlays.

2023			
(IN MILLIONS)	INTRAGOVERNMENTAL	WITH THE PUBLIC	TOTAL
<b>Net Cost</b>	<b>\$640</b>	<b>\$23,976</b>	<b>\$24,616</b>
<b>Components of Net Cost Not Part of the Budgetary Outlays</b>			
Property, plant, and equipment depreciation expense	—	(593)	(593)
Property, plant, and equipment disposals and revaluations	—	(106)	(106)
Applied overhead/cost capitalization offset	—	1,664	1,664
Donations	—	44	44
Gains/Losses on all other investments	—	—	—
<b>Increase/(Decrease) in Assets:</b>			
Accounts receivable, net	11	—	11
Other assets	(32)	(6)	(38)
<b>(Increase)/Decrease in Liabilities:</b>			
Accounts payable	(17)	110	93
Environmental and disposal liabilities	—	(175)	(175)
Federal employee benefits payable	—	(1)	(1)
Other Liabilities	41	46	87
<b>Financing Sources:</b>			
Imputed Cost	(231)	—	(231)
<b>Total Components of Net Cost Not Part of the Budgetary Outlays</b>	<b>(228)</b>	<b>983</b>	<b>755</b>
<b>Components of the Budgetary Outlays Not Part of Net Cost:</b>			
<b>Financing Sources:</b>			
Donated Revenue	—	—	—
Transfers out (in) without reimbursements	—	—	—
<b>Total Components of the Budgetary Outlays Not Part of Net Cost</b>	<b>—</b>	<b>—</b>	<b>—</b>
<b>Misc Items</b>			
Distributed offsetting receipts	(7)	—	(7)
Custodial/Non—exchange revenue	(1)	(44)	(45)
Other Temporary Timing Differences	—	—	—
Appropriated Receipts for Trust/Special Funds	—	—	—
<b>Total Other Reconciling Items</b>	<b>(8)</b>	<b>(44)</b>	<b>(52)</b>
<b>Total Net Outlays (Calculated Total)</b>	<b>\$404</b>	<b>\$24,915</b>	<b>\$25,319</b>
<b>Budgetary Agency Outlays, net</b>			<b>\$25,319</b>

## 14

NOTE 14

## Reconciliation of Net Cost to Net Outlays (CONTINUED)

2022			
(IN MILLIONS)	INTRAGOVERNMENTAL	WITH THE PUBLIC	TOTAL
<b>Net Cost</b>	<b>\$273</b>	<b>\$22,366</b>	<b>\$22,639</b>
<b>Components of Net Cost Not Part of the Budgetary Outlays</b>			
Property, plant, and equipment depreciation expense	—	(568)	(568)
Property, plant, and equipment disposals and revaluations	—	(74)	(74)
Applied overhead/cost capitalization offset	—	1,305	1,305
Donations	—	—	—
Gains/Losses on all other investments	—	(1)	(1)
<b>Increase/(Decrease) in Assets:</b>			
Accounts receivable, net	(34)	—	(34)
Other assets	(58)	9	(49)
<b>(Increase)/Decrease in Liabilities:</b>			
Accounts payable	49	(93)	(44)
Environmental and disposal liabilities	—	(3)	(3)
Federal employee benefits payable	—	20	20
Other Liabilities	38	16	54
<b>Financing Sources:</b>			
Imputed Cost	(165)	—	(165)
<b>Total Components of Net Cost Not Part of the Budgetary Outlays</b>	<b>(170)</b>	<b>611</b>	<b>441</b>
<b>Components of the Budgetary Outlays Not Part of Net Cost:</b>			
<b>Financing Sources:</b>			
Donated Revenue	—	(2)	(2)
Transfers out (in) without reimbursements	3	—	3
<b>Total Components of the Budgetary Outlays Not Part of Net Cost</b>	<b>3</b>	<b>(2)</b>	<b>1</b>
<b>Misc Items</b>			
Distributed offsetting receipts	(3)	—	(3)
Custodial/Non-exchange revenue	—	—	—
Other Temporary Timing Differences	(3)	2	(1)
Appropriated Receipts for Trust/Special Funds	2	—	2
<b>Total Other Reconciling Items</b>	<b>(4)</b>	<b>2</b>	<b>(2)</b>
<b>Total Net Outlays (Calculated Total)</b>	<b>\$102</b>	<b>\$22,977</b>	<b>\$23,079</b>
<b>Budgetary Agency Outlays, net</b>			<b>\$23,079</b>

## 15

NOTE 15

## Disclosure Entity

The Jet Propulsion Laboratory (JPL) is a NASA-owned facility which serves as a Federally Funded Research and Development Center (FFRDC). The facility commenced activities in the mid-1930s and at that time was sponsored by the U.S. Army to develop rocket technology and missile systems.

The California Institute of Technology (Caltech), a private, not-for-profit 501(c)(3) university, manages JPL pursuant to a sole-source, five-year, Federal Acquisition Regulation (FAR)-based contract with NASA. The value of NASA's Caltech contract for FY 2023 was \$3 billion. Under this contract, NASA issues task orders to Caltech for various research programs and projects conducted at JPL. The contract is subject to the usual FAR-based Federal contract oversight and reporting requirements. Caltech has managed JPL as a NASA FFRDC since 1959.

Caltech and NASA's relationship at JPL is governed by the terms and conditions of their contract which does not give NASA responsibility for or insight into Caltech's business objectives or operations at JPL. JPL staff is comprised of Caltech employees and contractors, while NASA has a resident office at the facility staffed by Federal managers who administer the NASA/Caltech contract. The physical plant and equipment used to conduct operations under the

## 15

NOTE 15

**Disclosure Entity (CONTINUED)**

contract are Government furnished property and material, made available to Caltech for the performance of its contract with NASA, and includes contractor-acquired property. The work performed by JPL for NASA is funded by NASA as part of one or more of NASA's major programs and supports NASA's missions and programs. Every year, JPL issues a review of its accomplishments. JPL's Annual Reports are found at [JPL Annual Reports \(nasa.gov\)](#).

NASA has the unilateral authority to establish or amend the fundamental purpose and mission of activities at its JPL FFRDC. NASA's contract with Caltech reflects and incorporates NASA's authority into its terms and conditions. NASA also has the unilateral authority to orderly phase down and close its FFRDC and thus, the NASA contract with Caltech. As such, the contract terms allow NASA to close the FFRDC, transfer sponsorship of the FFRDC to another sponsor (Federal agency), transition the FFRDC to another contractor (e.g., another university), or renew the contract. In the event of a termination of its contract with Caltech for the management of JPL, JPL would only receive costs that NASA deems allowable, allocable, and reasonable under the contract's terms.

## 16

NOTE 16

**Reclassification of Financial Statement Line Items for Financial Report Compilation Process**

To prepare the Financial Report of the U.S. Government (Financial Report), the Department of the Treasury requires agencies to submit an adjusted trial balance, which is a listing of amounts by U.S. Standard General Ledger account that appear in the financial statements. Treasury uses the trial balance information reported in the Government-wide Treasury Account Symbol Adjusted Trial Balance System (GTAS) to develop a Reclassified Statement of Net Cost and a Reclassified Statement of Changes in Net Position. Treasury eliminates intragovernmental balances from the reclassified statements and aggregates lines with the same title to develop the Financial Report statements. This note shows the Agency's financial statements and the Agency's reclassified statements prior to elimination of intragovernmental balances and prior to aggregation of repeated Financial Report line items. A copy of the 2022 Financial Report can be found here: [Bureau of the Fiscal Service - Reports, Statements & Publications \(treasury.gov\)](#) (Unaudited) and a copy of the 2023 Financial Report will be posted to this site as soon as it is released.

The term "intragovernmental" is used in this note to refer to amounts that result from other components of the Federal Government.

The term "non-federal" is used in this note to refer to Federal Government amounts that result from transactions with non-federal entities. These include transactions with individuals, businesses, non-profit entities, and State, local, and foreign governments. The Agency does not have funds from dedicated collections.

## 16

NOTE 16

## Reclassification of Financial Statement Line Items for Financial Report Compilation Process (CONTINUED)

FY 2023 NASA STATEMENT OF NET COST		LINE ITEMS USED TO PREPARE FY 2023 GOVERNMENT-WIDE STATEMENT OF NET COST	
FINANCIAL STATEMENT LINE	AMOUNTS (IN MILLIONS)	AMOUNTS (IN MILLIONS)	RECLASSIFIED FINANCIAL STATEMENT LINE
<b>Gross Costs</b>	26,233		<b>Gross Cost</b>
		24,391	Non-Federal Gross Cost
		<b>24,391</b>	<b>Total Non-Federal Gross Cost</b>
			<b>Federal Gross Cost</b>
		634	Benefit Program Costs
		231	Imputed Costs
		798	Buy/Sell Costs
		179	Other Expenses (without reciprocals)
		<b>1,842</b>	<b>Total Federal Gross Cost</b>
<b>Total Gross Costs</b>	26,233	26,233	<b>Department Total Gross Cost</b>
<b>Earned Revenue</b>	1,617		<b>Earned Revenue</b>
		414	Non-Federal Earned Revenue
			<b>Federal Earned Revenue</b>
		1,203	Buy/Sell Revenue (Exchange)
		<b>1,203</b>	<b>Total Federal Earned Revenue</b>
<b>Total Earned Revenue</b>	1,617	1,617	<b>Department Total Earned Revenue</b>
<b>Net Cost</b>	<b>\$24,616</b>	<b>\$24,616</b>	<b>Net Cost of Operations</b>

FY 2023 NASA STATEMENT OF CHANGES IN NET POSITION		LINE ITEMS USED TO PREPARE FY 2023 GOVERNMENT-WIDE STATEMENT OF CHANGES IN NET POSITION	
FINANCIAL STATEMENT LINE	AMOUNTS (IN MILLIONS)	AMOUNTS (IN MILLIONS)	RECLASSIFIED FINANCIAL STATEMENT LINE
<b>Unexpended Appropriations</b>			
Beginning Balance	12,951	12,951	Net Position, Beginning of Period
Appropriations Received	25,573	25,547	Appropriations Received as Adjusted
Other Adjustments	(26)		
Appropriations Used	(25,165)	(25,165)	Appropriations Used
Net Change in Unexpended Appropriations	382	382	
<b>Total Unexpended Appropriations</b>	<b>13,333</b>	<b>13,333</b>	
<b>Cumulative Results from Operations</b>			
Beginning Balance	5,258	5,258	Net Position, Beginning of Period
Appropriations Used	25,165	25,165	Appropriations Expended
Non-exchange Revenue	1	1	Non-exchange Revenue
		51	Other Taxes and Receipts
Donations and Forfeitures of Property	44	(7)	Non-Entity Collections Transferred to the General Fund of the U.S. Government
Imputed Financing	231	231	Imputed Financing Sources
Net Cost of Operations	(24,616)	(24,616)	Net Cost of Operations
Net Change in Cumulative Results of Operations	825	825	
<b>Total Cumulative Results of Operations</b>	<b>6,083</b>	<b>6,083</b>	
<b>Net Position</b>	<b>\$19,416</b>	<b>\$19,416</b>	<b>Net Position, End of Period</b>



# 17

## NOTE 17 Public-Private Partnerships

NASA engages in various relationships with private entities in furtherance of NASA's Mission and Strategic Goals and describes many of these relationships as "public-private partnerships." The terminology is used informally to describe working relationships between NASA, its contractors, and industry partners rather than used to describe a financial benefit or risk sharing relationship as set forth in the criteria and characteristics of SFFAS No. 49, *Public-Private Partnerships (P3): Disclosure Requirements*. Many of these relationships cover Science, Technology, Engineering, and Mathematics (STEM) activities; research and development; technology transfer; commercialization of space capabilities and operations; and other mission projects, but do not otherwise meet SFFAS No. 49 requirements.

While these relationships support education, innovation, research, and economic growth to further the Nation's space program and other missions, NASA also collaborates with private entities for commercial space capabilities in accordance with the National Space Policy of the United States (the latest iteration of which was issued December 9, 2020)<sup>1</sup>. The National Space Policy establishes principles and goals for the Nation's Space Programs. One such principle provides for "A robust, innovative, and competitive commercial space sector is the source of continued progress and sustained United States leadership in space" and states that "The United States remains committed to encouraging and facilitating the continued growth of a domestic commercial space sector that is globally competitive, supports national interests, and advances United States leadership in the generation of new markets and innovation driven entrepreneurship." Under this principle and related goal to "promote and incentivize private industry to facilitate the creation of new global and domestic markets for United States space goods and services, and strengthen and preserve the position of the United States as the global partner of choice for international space commerce," NASA has pursued collaborations for commercial space capabilities for human and cargo transportation providers, commercialization of other low Earth orbit activities, and for sustainability of the International Space Station (ISS) National Lab, to name a few.

NASA utilizes its organic authorization, 51 U.S.C. § 20101 et seq., and other authorities, along with its procurement contract authority (as promulgated in regulation via the Federal Acquisition Regulation (FAR) and NASA FAR Supplement (NFS) requirements) to execute agreement instruments with its partners. These relationships may be initiated and established through various outreach methods, such as a NASA announcement of collaboration opportunity (ACO), request for proposal (RFP), request for information (RFI), other competitive announcement, or direct contact by a partner. For the initial partnership arrangements, NASA provides expertise and funding to enable the development and advancement of integrated space capabilities. After the initial arrangement milestones are verified and certified, NASA awards FAR based service contracts with FAR/NFS clauses, such as, limitation of funds, liability, and termination, to protect NASA. Pursuant to the terms and conditions set forth in these contracts, the contractor's liability for loss or damage to Government property during performance of contract activities is limited for commercial space. NASA continues to use these arrangements, and by way of these, NASA has established safe, reliable, and cost-effective access to space with the commercial space sector. NASA does not consider these types of arrangements to meet the criteria and characteristics for P3 disclosure as there is no demonstrated shared risk and reward nor a NASA commitment to guarantee success.

Leveraging this model, NASA has also awarded FAR based firm fixed price (FFP) contracts under a competitive broad area announcement (BAA) procurement entitled "Next Space Technologies for Exploration Partnerships" (NextSTEP). NextSTEP is a competitive acquisition that seeks to meet NASA needs via commercial development of deep space exploration capabilities to support more extensive human spaceflight missions in and beyond cislunar space—the space, near Earth, that extends just beyond the Moon. The capabilities developed under these contracts include components in support of the Human Landing Systems (HLS), Gateway, and development of other deep space

<sup>1</sup><https://trumpwhitehouse.archives.gov/wp-content/uploads/2020/12/National-Space-Policy.pdf>



exploration technologies to support extensive human spaceflight missions. In the Offeror's proposals, they identified corporate contributions that were evaluated as part of the awarded contracts. NASA does not have a requirement to repay the corporate contributions and does not guarantee contractor financing under the terms and conditions in the contracts. NASA has also made Government resources available under these contracts to support contract development activities through Government task agreements (GTAs), but this activity is optional. Although contractors may elect to use a GTA, fulfillment of the contract is not predicated on government resources being provided. The contracts contain FAR clauses to protect NASA's interests including limitation of funds, termination, and liability. Similar to the above arrangements, NASA does not consider these to meet the criteria and characteristics for P3 disclosure.

Although the prior discussed arrangements do not warrant disclosure, NASA has determined two other categories as meeting the P3 disclosure requirements: energy savings performance/utility energy service contracts and leases. NASA has awarded energy savings performance contracts (ESPCs) and utility energy service contracts (UESCs) under National Energy Conservation Policy Act (42 U.S.C. § 8287), as amended, and Energy Policy Act of 1992, P.L. 102-486 (codified as 42 U.S.C. § 8256) to reduce energy, water and/or related operating costs and to assist agencies with upgrading aging infrastructure, systems, and equipment. These contracts do not require up-front capital costs or special appropriations from Congress and are repaid over time to the provider. Further information and detail are provided below in item A.

NASA has executed real estate arrangements as part of commercialization of space initiatives and research and development. Solicitations are used to identify a potential partner's interest for NASA facilities or land that are non-excess but underutilized by the Agency, which may be used to further NASA's mission. These facilities or land use arrangements outline responsibilities, terms, and conditions and are generally executed under our enhanced use lease (51 U.S.C. § 20145) or the National Historic Preservation Act (54 U.S.C. § 306121).

#### **A. Energy Savings Performance Contracts (ESPCs) and Utility Energy Service Contracts (UESCs):**

NASA has entered into ESPCs and UESCs to procure energy savings and facility improvements. These contracts do not require up-front capital costs or special appropriations from Congress and by statute, cannot exceed 25 years. Under these contracts, NASA retains the additional cost savings and receives title to installed goods, equipment, and improvements.

Federal agencies are authorized to enter into ESPCs under the National Energy Conservation Policy Act (42 U.S.C. § 8287), as amended. An ESPC is a partnership between an agency and an energy service company (ESCO) to reduce energy, water and/or related operating costs and to assist agencies with upgrading aging infrastructure, systems, and equipment. Upon conducting a comprehensive audit, the ESCO designs and constructs a project that meets the Agency's needs and arranges financing to pay for the project. The ESCO guarantees that the improvements will generate sufficient energy cost savings to pay for the project over the term of the contract. NASA currently has ESPCs with an expected life based on contract terms of 16 to 24 years expected life and payment period. NASA funds the contract and pays the contractor directly, except in two instances where payment is made to a third-party who has been designated responsibility for contract administration over the contract term.

Authorized by the Energy Policy Act of 1992, P.L. 102-486 (codified as 42 U.S.C. § 8256), UESC is a limited-source contract between a Federal agency and its serving utility for energy and water-efficiency improvements and demand-reduction services, allowing Federal agencies to pay for the services over time, either on their utility bill or through a separate agreement. NASA currently has UESCs with an expected life based on contract terms of 14 to 17 years expected life and payment period. NASA funds the contracts and pays the contractor directly.

Under OMB Memorandum M-98-13 and M-12-21, ESPC and UESC repayments can be funded on an annual basis.

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## Public-Private Partnerships (CONTINUED)

ESPCs and UESCs can be terminated for convenience in part or in full. In the event of termination, NASA may be responsible for outstanding loan balances and early termination or payment fees. Measurement and verification of energy savings is required under ESPCs and UESCs. The benefits of ESPCs and UESCs include:

- Infrastructure improvements that pay for themselves over time; and,
- Ability to install longer payback energy and water conservation measures by bundling savings.

PUBLIC-PRIVATE PARTNERSHIPS AGREEMENTS/ CONTRACTS (IN MILLIONS)	2023			2022		
	ACTUAL AMOUNT PAID IN FY	ESTIMATED AMOUNT TO BE PAID IN FUTURE YEARS	ESTIMATED CUMULATIVE AMOUNT TO BE PAID OVER EXPECTED LIFE OF ARRANGEMENT	ACTUAL AMOUNT PAID IN FY	ESTIMATED AMOUNT TO BE PAID IN FUTURE YEARS	ESTIMATED CUMULATIVE AMOUNT TO BE PAID OVER EXPECTED LIFE OF ARRANGEMENT
ESPC	\$14	\$204	\$302	\$13	\$218	\$302
UESC	6	46	87	6	51	87
<b>Estimated Total</b>	<b>\$20</b>	<b>\$250</b>	<b>\$389</b>	<b>\$19</b>	<b>\$269</b>	<b>\$389</b>

## B. Leases

NASA's Enhanced Use Lease (EUL) and National Historic Preservation Act (NHPA) program allows NASA to manage non-excess, underutilized property through leasing arrangements to private sector organizations. Title 51 U.S.C. § 20145, Lease of Non-Excess Property, authorizes NASA to lease real property under NASA's control or jurisdiction to other public and private entities on a long-term basis in return for cash consideration at fair market value. NASA's previous EUL authority expired on December 31, 2021, and was extended until December 31, 2022, through passage of the Omnibus Bill under H.R. 2471-1065, and was most recently extended until December 31, 2032, under P.L. 117-80, effective August 9, 2022. NASA's previous EUL authority under 42 U.S.C. § 2459j (2007) permitted in-kind consideration. A few of NASA's leases executed under the previous EUL authority included in-kind consideration that was negotiated as part of the terms and conditions of the arrangements. Title 54 U.S.C. § 306121 (P.L. 89-665 October 15, 1966), Lease or Exchange (NHPA), authorizes Federal agencies to lease historic property owned by the agency to any person or organization or exchange its property with comparable historic property, if determined that the lease or exchange will adequately ensure the preservation of the historic property.

NASA's EUL and NHPA leases serve to provide space to third parties on NASA land or within a NASA Facility. NASA's EUL and NHPA leases range from 5 to 72 years expected life, i.e., base term of the lease and amendments plus extensions that can be reasonably anticipated and represent the period in which receipts are expected to be received directly from the partner. NASA's EUL and NHPA leases include waivers of liability, tenant insurance requirements, and tenant environmental responsibilities to protect NASA's interest and mitigate potential risk of loss.

Benefits to NASA from the EUL and NHPA program include:

- Revenue in the form of lease payments; and
- Cost savings, (i.e., operations and maintenance associated with the leased assets that would normally be paid by NASA under normal operations).

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## Public-Private Partnerships (CONTINUED)

Under the EUL and NHPA program, NASA does not:

- Allow its underlying interest in the land or properties to be used as security for financing a project;
- Provide any kind of guarantee for the purpose of private-party financing; or,
- Allow for payment from NASA to the partner.

NASA will only pursue termination of an EUL or NHPA prior to the end of the lease term in the event of default, noncompliance, nonperformance by the lessee, or for reasons of force majeure or act of Congress. When termination does occur, NASA does not owe or pay any fees, costs, expenses or penalties, and the lessee bears all risk. Upon termination, NASA would assume responsibility for operations and maintenance of the leasehold or divestment through normal program and budget planning processes. In most cases, the tenants are required to remove any additions or improvements and return the leasehold to its original state unless otherwise agreed to under the terms of the arrangement. A few of NASA's long-term leases provide for transfer of constructed assets to NASA or a third-party entity upon termination. Under these leases NASA would assume responsibility for operations and maintenance, divestment, or establishment of a new lease based on the current need of the assets at the time of termination. Based on the current state of these arrangements, NASA does not anticipate that this would be likely in the near future and does not consider this to be any more than a remote risk of loss.

NASA's leases that include in-kind consideration provided by the tenant were negotiated into the terms and conditions of the lease. In accordance with the specified lease terms, NASA may assume responsibility for operations of infrastructure improvements provided by the tenant under normal program and budget planning processes, may seek an alternative tenant, or may request the leased property be returned to its original state.

NASA has identified a limited number of leases where development by the tenant on the leasehold could impact Center infrastructure and operations such as water, sewer, maintenance, or security operations based on increased capacity. NASA would negotiate any potential impacts with the tenant. NASA currently has a lease that requires additional Center infrastructure capacity based on the original terms of the lease; however, the lease is in transition phase and tenant development on the leasehold has not started. NASA is researching alternative options to mitigate potential risk.

PUBLIC-PRIVATE PARTNERSHIPS AGREEMENTS/ CONTRACTS	2023			
	ACTUAL AMOUNT RECEIVED IN FY	ESTIMATED AMOUNT TO BE RECEIVED IN FUTURE YEARS	ESTIMATED CUMULATIVE AMOUNT TO BE RECEIVED OVER EXPECTED LIFE OF ARRANGEMENT	ESTIMATED CUMULATIVE IN KIND CONSIDERATION
EUL	\$12	\$935	\$1,020	\$27
NHPA	16	1,044	1,160	—
<b>Estimated Total</b>	<b>\$28</b>	<b>\$1,979</b>	<b>\$2,180</b>	<b>\$27</b>

PUBLIC-PRIVATE PARTNERSHIPS AGREEMENTS/ CONTRACTS	2022			
	ACTUAL AMOUNT RECEIVED IN FY	ESTIMATED AMOUNT TO BE RECEIVED IN FUTURE YEARS	ESTIMATED CUMULATIVE AMOUNT TO BE RECEIVED OVER EXPECTED LIFE OF ARRANGEMENT	ESTIMATED CUMULATIVE IN KIND CONSIDERATION
EUL	\$11	\$754	\$841	\$27
NHPA	16	1,059	1,160	—
<b>Estimated Total</b>	<b>\$27</b>	<b>\$1,813</b>	<b>\$2,001</b>	<b>\$27</b>

## REQUIRED SUPPLEMENTARY INFORMATION

## Combining Statements of Budgetary Resources For the Fiscal Year Ended September 30, 2023

(IN MILLIONS)	SPACE OPERATIONS MISSION	SCIENCE MISSION	EXPLORATION MISSION	AERONAUTICS MISSION	SAFETY, SECURITY AND MISSION SERVICES	STEM ENGAGEMENT MISSION
<b>Budgetary Resources:</b>						
Unobligated Balance from Prior Year Budget Authority, Net	\$521	\$883	\$301	\$45	\$967	\$18
Appropriations	4,267	7,791	7,447	935	3,128	144
Spending Authority from Offsetting Collections	—	—	—	—	1,761	—
<b>Total Budgetary Resources</b>	<b>\$4,788</b>	<b>\$8,674</b>	<b>\$7,748</b>	<b>\$980</b>	<b>\$5,856</b>	<b>\$162</b>
<b>Status of Budgetary Resources:</b>						
New Obligations and Upward Adjustments (Total)	\$4,546	\$7,925	\$7,623	\$944	\$4,933	\$154
Unobligated Balance, End of Year:						
Apportioned, Unexpired Accounts	167	703	108	33	918	4
Exempt from Apportionment, Unexpired Accounts	—	—	—	—	—	—
Unapportioned, Unexpired Accounts	1	—	—	—	—	—
Unexpired Unobligated Balance, End of Year	168	703	108	33	918	4
Expired Unobligated Balance, End of Year	74	46	17	3	5	4
Unobligated Balance, End of Year (Total)	242	749	125	36	923	8
<b>Total Budgetary Resources</b>	<b>\$4,788</b>	<b>\$8,674</b>	<b>\$7,748</b>	<b>\$980</b>	<b>\$5,856</b>	<b>\$162</b>
<b>Outlays, Net:</b>						
Outlays, Net (Total)	\$4,170	\$7,871	\$7,447	\$859	\$3,135	\$147
Distributed Offsetting Receipts (-)	—	—	—	—	—	—
<b>Agency Outlays, Net</b>	<b>\$4,170</b>	<b>\$7,871</b>	<b>\$7,447</b>	<b>\$859</b>	<b>\$3,135</b>	<b>\$147</b>

(IN MILLIONS)	OFFICE OF INSPECTOR GENERAL	SPACE TECHNOLOGY MISSION	CONSTRUCTION AND ENVIRONMENTAL COMPLIANCE AND RESTORATION	OTHER	TOTAL
<b>Budgetary Resources:</b>					
Unobligated Balance from Prior Year Budget Authority, Net	\$5	\$53	\$383	\$66	3,242
Appropriations	48	1,193	612	8	25,573
Spending Authority from Offsetting Collections	1	—	23	323	2,108
<b>Total Budgetary Resources</b>	<b>\$54</b>	<b>\$1,246</b>	<b>\$1,018</b>	<b>\$397</b>	<b>\$30,923</b>
<b>Status of Budgetary Resources:</b>					
New Obligations and Upward Adjustments (Total)	\$48	\$1,199	\$561	\$343	\$28,276
Unobligated Balance, End of Year:					
Apportioned, Unexpired Accounts	1	39	449	44	2,466
Exempt from Apportionment, Unexpired Accounts	—	—	—	—	—
Unapportioned, Unexpired Accounts	—	—	4	—	5
Unexpired Unobligated Balance, End of Year	1	39	453	44	2,471
Expired Unobligated Balance, End of Year	5	8	4	10	176
Unobligated Balance, End of Year (Total)	6	47	457	54	2,647
<b>Total Budgetary Resources</b>	<b>\$54</b>	<b>\$1,246</b>	<b>\$1,018</b>	<b>\$397</b>	<b>\$30,923</b>
<b>Outlays, Net:</b>					
Outlays, Net (Total)	\$46	\$1,064	\$547	\$40	\$25,326
Distributed Offsetting Receipts (-)	—	—	—	(7)	(7)
<b>Agency Outlays, Net</b>	<b>\$46</b>	<b>\$1,064</b>	<b>\$547</b>	<b>\$33</b>	<b>\$25,319</b>

(CONTINUED)



## REQUIRED SUPPLEMENTARY INFORMATION

## Combining Statements of Budgetary Resources For the Fiscal Year Ended September 30, 2022

(IN MILLIONS)	SPACE OPERATIONS MISSION	SCIENCE MISSION	EXPLORATION MISSION	AERONAUTICS MISSION	SAFETY, SECURITY AND MISSION SERVICES	STEM ENGAGEMENT MISSION
<b>Budgetary Resources:</b>						
Unobligated Balance from Prior Year Budget Authority, Net	\$426	\$957	\$216	\$27	\$813	\$12
Appropriations	3,975	7,611	6,903	881	3,021	137
Spending Authority from Offsetting Collections	—	—	—	—	1,457	—
<b>Total Budgetary Resources</b>	<b>\$4,401</b>	<b>\$8,568</b>	<b>\$7,119</b>	<b>\$908</b>	<b>\$5,291</b>	<b>\$149</b>
<b>Status of Budgetary Resources:</b>						
New Obligations and Upward Adjustments (Total)	\$4,158	\$7,811	\$6,883	\$874	\$4,388	\$132
Unobligated Balance, End of Year:						
Apportioned, Unexpired Accounts	161	718	136	31	898	12
Exempt from Apportionment, Unexpired Accounts	—	—	—	—	—	—
Unapportioned, Unexpired Accounts	21	—	87	—	—	—
Unexpired Unobligated Balance, End of Year	182	718	223	31	898	12
Expired Unobligated Balance, End of Year	60	38	12	3	6	4
Unobligated Balance, End of Year (Total)	242	757	235	34	903	16
<b>Total Budgetary Resources</b>	<b>\$4,400</b>	<b>\$8,568</b>	<b>\$7,118</b>	<b>\$908</b>	<b>\$5,291</b>	<b>\$148</b>
<b>Outlays, Net:</b>						
Outlays, Net (Total)	\$3,858	\$7,173	\$6,488	\$882	\$2,885	\$122
Distributed Offsetting Receipts (—)	—	—	—	—	—	—
<b>Agency Outlays, Net</b>	<b>\$3,858</b>	<b>\$7,173</b>	<b>\$6,488</b>	<b>\$882</b>	<b>\$2,885</b>	<b>\$122</b>

(IN MILLIONS)	OFFICE OF INSPECTOR GENERAL	SPACE TECHNOLOGY MISSION	CONSTRUCTION AND ENVIRONMENTAL COMPLIANCE AND RESTORATION	OTHER	TOTAL
<b>Budgetary Resources:</b>					
Unobligated Balance from Prior Year Budget Authority, Net	\$4	\$42	\$378	\$80	\$2,955
Appropriations	45	1,100	690	2	24,365
Spending Authority from Offsetting Collections	1	—	20	401	1,879
<b>Total Budgetary Resources</b>	<b>\$50</b>	<b>\$1,142</b>	<b>\$1,088</b>	<b>\$483</b>	<b>\$29,199</b>
<b>Status of Budgetary Resources:</b>					
New Obligations and Upward Adjustments (Total)	\$45	\$1,111	\$725	\$428	\$26,555
Unobligated Balance, End of Year:					
Apportioned, Unexpired Accounts	2	24	324	42	2,348
Exempt from Apportionment, Unexpired Accounts	—	—	—	3	3
Unapportioned, Unexpired Accounts	—	—	36	1	145
Unexpired Unobligated Balance, End of Year	2	24	360	46	2,496
Expired Unobligated Balance, End of Year	4	7	4	10	148
Unobligated Balance, End of Year (Total)	6	31	364	56	2,644
<b>Total Budgetary Resources</b>	<b>\$51</b>	<b>\$1,142</b>	<b>\$1,089</b>	<b>\$484</b>	<b>\$29,199</b>
<b>Outlays, Net:</b>					
Outlays, Net (Total)	\$46	\$1,144	\$425	\$59	\$23,082
Distributed Offsetting Receipts (—)	—	—	—	(3)	(3)
<b>Agency Outlays, Net</b>	<b>\$46</b>	<b>\$1,144</b>	<b>\$425</b>	<b>\$56</b>	<b>\$23,079</b>

(CONTINUED)

## REQUIRED SUPPLEMENTARY INFORMATION

**Deferred Maintenance and Repairs for FY 2023**

Federal agencies are required to report information related to the estimated cost to remedy deferred maintenance of property, plant and equipment as required supplementary information in accordance with SFFAS No. 42, *Deferred Maintenance and Repairs*.

Maintenance and repairs (M&R) are activities directed toward keeping fixed assets in an acceptable condition. Activities include preventive maintenance; replacement of parts, systems, or components; and other activities needed to preserve or maintain the asset. M&R, as distinguished from capital improvements, excludes activities directed toward expanding the capacity of an asset or otherwise upgrading it to serve needs different from, or significantly greater than, its current use. Deferred maintenance and repairs (DM&R) are M&R activities that were not performed when they should have been or were scheduled to be and which, therefore, are put off or delayed for a future period. DM&R reporting enables NASA to be accountable to citizens for the proper administration and stewardship of its assets. Specifically, DM&R reporting assists users by providing an entity's realistic estimate of DM&R amounts and the effectiveness of asset maintenance practices the entities employ in fulfilling their missions.

**Maintenance and Repairs (M&R) Policies****Facilities, Buildings, and Other Structures**

It is NASA's policy to ensure that NASA-owned and operated assets are properly aligned with the NASA mission and are safe, environmentally sound, affordable, the right type and size, and in acceptable operating condition. NASA's facilities are maintained in the most cost-effective fashion to minimize risk to processes and products, protect the safety and health of personnel and the environment, protect and preserve capabilities and capital investments, provide quality work places for NASA employees, and enable the Agency's mission. Estimates reported herein include DM&R for all facilities on-site or off-site that are owned, leased, occupied, or used by NASA (NASA Programs or Contractors) including heritage assets without regard to capitalization thresholds or depreciation status. NASA does not assess DM&R on general land parcels.

NASA uses a Deferred Maintenance parametric estimating method (DM method) to conduct a consistent condition assessment of its facilities, buildings and other structures (including heritage assets). This method measures NASA's current real property asset condition and documents the extent of real property deterioration. The DM method produces both a cost estimate of DM&R, and a Facility Condition Index (FCI). Both measures are indicators of the overall condition of NASA's facilities. The facilities condition assessment methodology involves an independent, rapid visual assessment of nine different systems within each facility to include: structure, roof, exterior, interior finishes, heating, ventilating and air conditioning (HVAC) systems, electrical, plumbing, conveyance, and program support equipment (PSE). The DM method is designed for application to a large population of facilities; results are not necessarily applicable for individual facilities or small populations of facilities.

**Equipment**

NASA has established the deferred maintenance and repair tracking process to encompass assets that meet or exceed the Agency capital equipment threshold. Equipment that doesn't meet the capital threshold will not be tracked in this process due to the consumable aspect of those assets. Maintenance requirements for equipment are developed during the annual budget process and updated based on work completion, equipment condition and additional requirements. Not all unfunded maintenance requirements are deferred. In support of the planning, programming, budgeting, and execution process, each program, project, and activity managing equipment has a methodical process for determining their maintenance requirements. During the maintenance analysis process and as equipment is utilized, maintenance strategies are adjusted, refined and the amount of funding is determined, based on mission needs and assessments of risk within each activity.

Maintenance requirements and funding amounts are included in project, program, or activity baseline budgets. In the year of execution, the equipment managing activity takes steps to either mitigate or increase the levels of deferred

## REQUIRED SUPPLEMENTARY INFORMATION

**Deferred Maintenance and Repairs for FY 2023 (CONTINUED)**

maintenance based on the availability of resources and mission priorities. Each NASA activity managing equipment may take steps to reduce the amount of deferred maintenance through the reallocation of resources from lesser priority areas, or supplemental funding received from shifting project schedules.

**Ranking and Prioritizing M&R Activities**

NASA typically prioritizes the M&R activities based on mission need, health, safety, fire detection and protection, and environmental requirements. NASA also prioritizes the M&R projects with an emphasis on mission critical facilities, followed by mission support, then Center support. Managing activities also maintain agile strategies to react to emerging requirements and real-world events to review and reprioritize M&R requirements. The evaluation of the facility conditions by building type indicates that NASA continues to focus M&R activities on direct mission-related facilities and infrastructure.

**Factors Considered in Determining Acceptable Condition Standards**

NASA applies industry accepted codes and standards or equipment manufacturer's recommendations to all facilities related work. The standard of condition depends on the intended use, the mission criticality, utilization or health and safety aspects of that use. The Agency employs risk-based methodologies in determining acceptable levels of equipment operational risk.

**Changes from Prior Year**

As of September 30, 2023, \$3,772 million of DM&R was estimated to be required to return real property assets to an acceptable operating condition. This is an overall increase of \$759 million from \$3,013 million as of September 30, 2022. The increase in the DM&R estimate can be attributed to various reasons; including changes to deterioration of facilities due to natural disasters, damage from testing to PSE in high-value assets (HVA), normal inflation increases in Current Replacement Value (CRV) of assets and high-value infrastructure assets as upgrades progress, and demolition of assets and the reduction of their DM&R.

NASA has adjusted the methodology of performing facility assessments and DM&R calculations to introduce a higher level of accuracy into our DM&R reporting. NASA's methodology has introduced detailed facility condition assessments in combination with the current parametric estimating methodology to calculate the asset portfolio DM&R. In the past, NASA performed DM assessment on Real Property Assets in a two-year cycle. This assessment was performed in a week for all Centers except Kennedy Space Center, which required two weeks. The new methodology aligns NASA with industry standards in that a full Facility Condition Assessment (FCA) is being performed every five-years for assets with CRV greater than \$500,000 that will provide a more accurate DM&R value and will provide a redefined FCI and CRV based on current construction/renovation/repair rates. This adjusted methodology is now performed on a five-year cycle, and FY 2022 was the first year of the initial transitional five-year cycle. The balance of Agency assets not surveyed in that particular cycle year will be parametrically escalated and adjusted based on the findings of the next FCA on that site.

The table to the right shows Real Property DM&R as of September 30, 2023 and 2022.

(IN MILLIONS)	2023	2022
<b>Asset Category</b>		
PP&E – Real Property	\$3,710	\$2,956
Heritage Assets – Real Property	62	57
<b>Total Deferred Maintenance and Repairs</b>	<b>\$3,772</b>	<b>\$3,013</b>

NASA has one major category for Equipment DM&R, Project and Mission Support Equipment which was immaterial as of September 30, 2023.

## REQUIRED SUPPLEMENTARY INFORMATION

## Government Land

NASA reports information regarding PP&E land and permanent land rights as required supplemental information in accordance with SFFAS No. 59: *Accounting and Reporting of Government Land*.

NASA owns and manages various land, aiding in the Agency's mission of exploration and continued innovation for advancing space-, air-, and Earth-based activities. NASA categorizes land it owns into three main use categories:

- **Operational:** Land predominantly used for general, administrative, day-to-day operations and mission support purposes. Assets such as NASA office buildings, manufacturing plants, and research and development labs are located on operational land.
- **Conservation and Preservation:** Land predominantly used to support conservation or preservation purposes, including conservation of natural resources and preserving significant cultural and historical resources associated with NASA's mission. Assets such as monuments, parks, watershed and water resources, and educational and visitor information centers are located on such land.
- **Commercial:** Land predominantly used to generate income from commercial arrangements with the public sector. These include NASA land leased to commercial entities participating in co-location and other arrangements designed to support the NASA mission at reasonable market rates.

NASA's land held for disposal includes land no longer needed for current or future NASA operations. The various methods of disposition include donation, sale, exchange, abandonment, or any combination thereof. NASA disposes of land in these instances in a prompt manner that minimizes continued care and handling costs while optimizing appropriate returns.

The Agency's estimated land acreage identified by predominant use subcategory as of September 30, 2023, is as follows:

(IN ACRES)	COMMERCIAL	CONSERVATION AND PRESERVATION	OPERATIONAL	2023 TOTAL ESTIMATED ACREAGE
<b>PP&amp;E Land</b>				
End of Prior Year/Start of Current Year	4,042	100,747	29,898	134,687
End of Current Year	4,042	101,198	29,900	135,140
<b>Held for Disposal or Exchange</b>				
End of Prior Year	175	451	—	626
End of Current Year	175	—	—	175
<b>End of Current Year Total</b>	<b>4,217</b>	<b>101,198</b>	<b>29,900</b>	<b>135,315</b>



# Audit Reports



Teams install the heat shield on the Artemis II Orion spacecraft at NASA's Kennedy Space Center in Florida on June 22, 2023. The 16.5-foot-wide shield will ensure the safe return of the astronauts on board as the spacecraft travels at speeds of about 25,000 miles per hour and experiences outside temperatures of nearly 5,000 degrees Fahrenheit.

[See progress on Artemis II](#), the first crewed mission on NASA's path to establishing a long-term presence at the Moon for science and exploration.

PHOTO CREDIT  
NASA/Cory Huston

## LETTER FROM THE INSPECTOR GENERAL ON AUDIT

**NASA OFFICE OF INSPECTOR GENERAL****OFFICE OF AUDITS**

SUITE 8U71, 300 E ST SW  
WASHINGTON, D.C. 20546-0001

November 15, 2023

TO: Bill Nelson  
Administrator

Margaret Vo Schaus  
Chief Financial Officer

SUBJECT: *Audit of NASA's Fiscal Year 2023 Financial Statements*  
(Report No. IG-24-004; Assignment No. A-23-06-00-FMD)

The Office of Inspector General contracted with the independent public accounting firm Ernst & Young LLP (EY) to audit NASA's fiscal year (FY) 2023 financial statements. EY performed the audit in accordance with the Government Accountability Office's *Government Auditing Standards* and the Office of Management and Budget's Bulletin No. 24-01, *Audit Requirements for Federal Financial Statements*.

This audit resulted in a "clean" or unmodified opinion on NASA's FY 2023 financial statements (see Enclosure 1). An unmodified opinion means the financial statements present fairly, in all material respects, the financial position and results of NASA's operations in conformity with U.S. generally accepted accounting principles.

EY also reported on NASA's internal control over financial reporting and compliance with laws and regulations for FY 2023 (see Enclosure 2). EY reported no material weaknesses or significant deficiencies in internal control and identified no instances of significant noncompliance with applicable laws and regulations.

EY is responsible for their enclosed reports dated November 15, 2023, and the conclusions expressed therein. We do not express an opinion on NASA's financial statements, conclusions about the effectiveness of internal control over financial reporting, or conclusions on compliance with certain laws and regulations, including but not limited to the Federal Financial Management Improvement Act of 1996.

We appreciate the courtesies extended to our team during the audit. Please contact Brian Mullins, Acting Assistant Inspector General for Audits, at 202-358-3725 or [brian.mullins@nasa.gov](mailto:brian.mullins@nasa.gov) if you have any questions about the enclosed reports.



Paul K. Martin  
Inspector General

**Enclosures – 2**

# INDEPENDENT AUDITORS' REPORT



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## Report of Independent Auditors

The Administrator and the Inspector General of the  
National Aeronautics and Space Administration

### Report on the Financial Statements

#### *Opinion*

We have audited the financial statements of the National Aeronautics and Space Administration (NASA), which comprise the consolidated balance sheets as of September 30, 2023 and 2022, and the related consolidated statements of net cost and changes in net position and combined statements of budgetary resources for the years then ended, and the related notes (collectively referred to as the “financial statements”).

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of NASA at September 30, 2023 and 2022, and the results of its net cost of operations, its changes in net position and its budgetary resources for the years then ended in accordance with accounting principles generally accepted in the United States of America.

#### *Basis for Opinion*

We conducted our audits in accordance with auditing standards generally accepted in the United States of America (GAAS), in accordance with the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States (*Government Auditing Standards*), and in accordance with the provisions of Office of Management and Budget (OMB) Bulletin No. 24-01, *Audit Requirements for Federal Financial Statements*. Our responsibilities under those standards and the provisions of OMB Bulletin No. 24-01 are further described in the Auditor’s Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of NASA and to meet our other ethical responsibilities in accordance with the relevant ethical requirements relating to our audits. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.



### ***Responsibilities of Management for the Financial Statements***

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free of material misstatement, whether due to fraud or error.

### ***Auditor's Responsibilities for the Audit of the Financial Statements***

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free of material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS and *Government Auditing Standards* and the provisions of OMB Bulletin No. 24-01 will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS and *Government Auditing Standards* and the provisions of OMB Bulletin No. 24-01, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of NASA's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.



We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

#### ***Required Supplementary Information***

Accounting principles generally accepted in the United States of America require that Management's Discussion and Analysis and Required Supplementary Information within NASA's Agency Financial Report, be presented to supplement the financial statements. Such information is the responsibility of management and, although not a part of the financial statements, is required by the Federal Accounting Standards Advisory Board who considers it to be an essential part of financial reporting for placing the financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the financial statements, and other knowledge we obtained during our audit of the financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

#### ***Other Information***

Management is responsible for the other information included in the annual report. The other information comprises the Introduction, Message from the Chief Financial Officer, Introduction to the Principal Financial Statements, Letter from the Inspector General on Audit, Other Information, and Appendices as identified on NASA's Agency Financial Report's Table of Contents. Other Information does not include the Financial Statements, Notes to the Financial Statements, and our Independent Auditor's Report thereon. Our opinion on the financial statements does not cover the other information, and we do not express an opinion or any form of assurance thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and consider whether a material inconsistency exists between the other information and the financial statements, or the other information otherwise appears to be materially misstated. If, based on the work performed, we conclude that an uncorrected material misstatement of the other information exists, we are required to describe it in our report.



#### **Other Reporting Required by *Government Auditing Standards***

In accordance with *Government Auditing Standards*, we have also issued our report dated November 15, 2023, on our consideration of NASA's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements, and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of NASA's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering NASA's internal control over financial reporting and compliance.

*Ernst & Young LLP*

November 15, 2023

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## Report of Independent Auditors on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with *Government Auditing Standards*

The Administrator and the Inspector General of the  
National Aeronautics and Space Administration

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States (*Government Auditing Standards*) and Office of Management and Budget (OMB) Bulletin No. 24-01 *Audit Requirements for Federal Financial Statements*, the financial statements of the National Aeronautics and Space Administration (NASA), which comprise the consolidated balance sheet as of September 30, 2023, and the related consolidated statements of net cost and changes in net position, and combined statement of budgetary resources for the fiscal year then ended, and the related notes (collectively referred to as the “financial statements”), and our report dated November 15, 2023, expressed an unmodified opinion thereon.

### Report on Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered NASA’s internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of NASA’s internal control. Accordingly, we do not express an opinion on the effectiveness of NASA’s internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct misstatements, on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity’s financial statements will not be prevented, or detected and corrected, on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

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Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses or significant deficiencies may exist that were not identified.

#### **Report on Compliance and Other Matters**

As part of obtaining reasonable assurance about whether NASA's financial statements are free of material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements, noncompliance with which could have a direct and material effect on the financial statements, as well as the requirements referred to in the Federal Financial Management Improvement Act of 1996 (FFMIA). However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards* and OMB Bulletin No. 24-01.

Under FFMIA, we are required to report whether the Agency's financial management systems substantially comply with federal financial management system requirements, applicable federal accounting standards, and the *United States Standard General Ledger* at the transaction level. To meet this requirement, we performed tests of compliance with FFMIA Section 803(a). The results of our tests disclosed no instances in which the Agency's financial management systems did not comply with the requirements of FFMIA Section 803(a).

#### **Purpose of this Report**

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

*Ernst & Young LLP*

November 15, 2023

# Other Information



NASA IT Cybersecurity Specialist, Sarah Adewumi, introduces NASA Deputy Associate Administrator for STEM, Kris Brown just before a panel discussion with Brown, NASA Goddard's Deputy Director for Technology and Research Investments, Dr. Christyl Johnson, NASA Headquarters Deputy Director for the Astrophysics Division, Sandra Cauffman, and NASA Associate Chief Scientist for Exploration and Applied Research, Dr. Mamta Patel Nagaraja during an event for Women's History Month, "Celebrating Women Who Tell Our Stories," Wednesday, March 22, 2023 at NASA's Goddard Space Flight Center in Greenbelt, Maryland.

PHOTO CREDIT

NASA/Aubrey Gemignani

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# SUMMARY OF FINANCIAL STATEMENT AUDIT AND MANAGEMENT ASSURANCES

The following tables summarize the Agency's FY 2023 Financial Statement Audit and Management Assurances. Table 1 summarizes the status of prior year—FY 2022 material weaknesses identified, if any by the Financial Statement Auditor. Table 2 summarizes the status of prior year material weaknesses, if any identified by NASA Management.

TABLE 1

## Summary of Financial Statement Audit

Audit Opinion	Unmodified				
Restatement	No				
<b>Material Weaknesses</b>	<b>Beginning Balance</b>	<b>New</b>	<b>Resolved</b>	<b>Consolidated</b>	<b>Ending Balance</b>
	0	0	0	0	0
<b>Total Material Weaknesses</b>	0	0	0	0	0

TABLE 2

## Summary of Management Assurances

### EFFECTIVENESS OF INTERNAL CONTROL OVER FINANCIAL REPORTING (FMFIA 2)

Statement of Assurance	Unmodified					
<b>Material Weaknesses</b>	<b>Beginning Balance</b>	<b>New</b>	<b>Resolved</b>	<b>Consolidated</b>	<b>Reassessed</b>	<b>Ending Balance</b>
None	0	0	0	0	0	0
<b>Total Material Weaknesses</b>	0	0	0	0	0	0

### EFFECTIVENESS OF INTERNAL CONTROL OVER OPERATIONS (FMFIA 2)

Statement of Assurance	Unmodified					
<b>Material Weaknesses</b>	<b>Beginning Balance</b>	<b>New</b>	<b>Resolved</b>	<b>Consolidated</b>	<b>Reassessed</b>	<b>Ending Balance</b>
None	0	0	0	0	0	0
<b>Total Material Weaknesses</b>	0	0	0	0	0	0

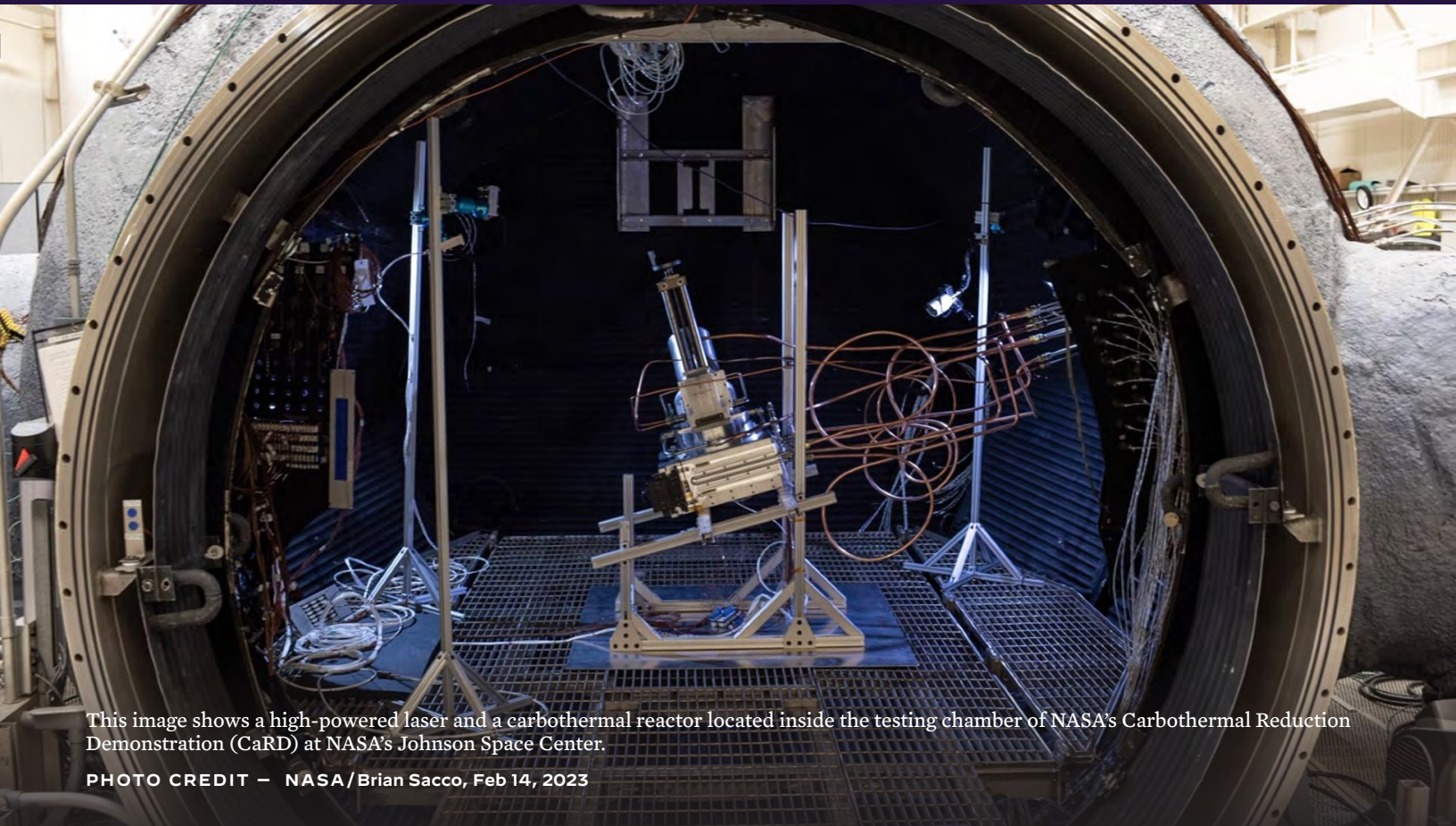
### CONFORMANCE WITH FINANCIAL MANAGEMENT SYSTEM REQUIREMENTS (FMFIA 4)

Statement of Assurance	Federal Systems conform to financial management system requirements.					
<b>Non-Conformances</b>	<b>Beginning Balance</b>	<b>New</b>	<b>Resolved</b>	<b>Consolidated</b>	<b>Reassessed</b>	<b>Ending Balance</b>
None	0	0	0	0	0	0
<b>Total Non-Conformances</b>	0	0	0	0	0	0

### COMPLIANCE WITH FEDERAL FINANCIAL MANAGEMENT IMPROVEMENT ACT (FFMIA)

	Agency	Auditor
Federal Financial Management System Requirements	No lack of compliance noted	No lack of compliance noted
Applicable Federal Accounting Standards	No lack of compliance noted	No lack of compliance noted
USSGL at Transaction Level	No lack of compliance noted	No lack of compliance noted

# SUMMARY OF REPORTS



This image shows a high-powered laser and a carbothermal reactor located inside the testing chamber of NASA's Carbothermal Reduction Demonstration (CaRD) at NASA's Johnson Space Center.

PHOTO CREDIT — NASA/Brian Sacco, Feb 14, 2023

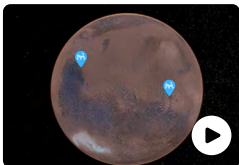
## Payment Integrity Information Act (PIIA) Reporting

Per OMB requirements each Executive Branch agency must complete an Annual Data Call. The Annual Data Call fulfills reporting requirements under the Payment Integrity Information Act of 2019 (Public Law (P.L.) 116-117) (PIIA) and provides the public with comprehensive improper payment data and information. NASA's response to the OMB Annual Data Call accomplishing PIIA reporting requirements can be found on [www.PaymentAccuracy.gov](http://www.PaymentAccuracy.gov).

## NASA's Annual OIG Audit Follow-up Activity Report

Pursuant to the Inspector General Act of 1978 (P.L. 95-452), as amended, and codified at 5 U.S.C. Section 405(c), the FY 2022 NASA's Annual OIG Audit Follow-up Activity Report is available online at: [www.nasa.gov/audit-liaison-resolution-alr-and-follow-up-program/](http://www.nasa.gov/audit-liaison-resolution-alr-and-follow-up-program/). The FY 2023 NASA's Annual OIG Audit Follow-up Activity Report will be posted to this site as soon as it is released.

### DID YOU KNOW



#### How Does NASA Name Things on Mars? (Mars Report - June 2023)

NASA's Perseverance and Curiosity rovers are exploring new terrain on Mars every day, adding thousands of names to the Red Planet over the last few years. Set in the Perseverance rover operations area at NASA's Jet Propulsion Laboratory, this edition of the Mars Report features geologist Tina Seeger of Caltech explaining the process for naming Mars rocks, drill targets, and other locations as the teams explore. (June 8, 2023)



SCAN ME

# OIG REPORT ON NASA'S TOP MANAGEMENT AND PERFORMANCE CHALLENGES

## Message from the Inspector General

As required by the Reports Consolidation Act of 2000, this annual report presents the Office of Inspector General's independent assessment of the top management and performance challenges facing NASA. For 2023, we identified the following seven challenges.



**Challenge 1: Returning Humans to the Moon**



**Challenge 2: Improving Management of Major Programs and Projects**



**Challenge 3: Sustaining a Human Presence in Low Earth Orbit**



**Challenge 4: Maturing Information Technology Management and Security**



**Challenge 5: Improving Oversight and Management of Contracts, Grants, and Cooperative Agreements**



**Challenge 6: Attracting and Retaining a Highly Skilled and Diverse Workforce**



**Challenge 7: Addressing NASA's Outdated Infrastructure and Facilities**

NASA stands at the forefront of aeronautics, science, and space exploration and is responsible for numerous scientific discoveries and technological innovations. Since its creation in 1958, NASA has made extraordinary achievements in human space flight with missions such as Apollo, the Space Shuttle Program, and the International Space Station. Likewise, science and aeronautics research, such as the images captured by the James Webb Space Telescope, and evolving technologies for sustainable aviation demonstrate NASA's position as a global leader in these fields. The Agency also continues to maintain world renowned testing and launch facilities and, for the past 11 years, has been ranked as the best place to work in the Federal government among large agencies.

Despite these important achievements, substantial cost growth and lengthy schedule delays continue to impact not only human space flight programs like the Space Launch System and Orion Multi-Purpose Crew Vehicle, but also other

<sup>1</sup>The Reports Consolidation Act of 2000 (Pub. L. No. 106-531) requires NASA to include in its performance and accountability report a statement by the Inspector General summarizing the most significant management and performance challenges facing the Agency and the progress made in addressing them

# OIG REPORT ON NASA'S TOP MANAGEMENT AND PERFORMANCE CHALLENGES (CONTINUED)

major science and exploratory programs, projects, and missions. In addition, the International Space Station's planned retirement at the end of the decade poses a challenge for the Agency as it seeks to maintain an active human presence in low Earth orbit.

The Agency also faces long-standing challenges managing its information technology; overseeing contracts, grants, and cooperative agreements; ensuring it attracts and retains a highly technical and diverse workforce; and managing outdated infrastructure and facilities.

In deciding whether to identify an issue as a "top challenge," we consider its significance in relation to NASA's overall mission; whether its underlying causes are systemic in nature; and its susceptibility to fraud, waste, and abuse. These seven highlighted challenges are not the only significant issues that confront NASA, and identification of an issue as a top challenge does not denote lack of attention on the Agency's part. Rather, most of these issues are long-standing, difficult challenges central to NASA's core missions and likely will remain top challenges for years to come. Consequently, they require consistent, focused attention from NASA leadership and ongoing engagement with Congress and other stakeholders.

In this report, we explain why each of the seven issues are characterized as top challenges, identify NASA's progress in addressing the challenge, and highlight additional efforts needed to continue the forward momentum.

The Office of Inspector General is committed to providing independent, objective, and comprehensive oversight of NASA programs, projects, and personnel with the singular goal of improving Agency outcomes. To that end, we plan to conduct audits and investigations in the coming year that focus on NASA's continuing efforts to address these and other top challenges. The Office of Inspector General's 2023 report on the Agency's top management and performance challenges is available on our website at <https://oig.nasa.gov/challenges.html>.



Handwritten signature of Paul K. Martin in black ink.

Paul K. Martin  
Inspector General

# AGENCY RESPONSE TO OIG REPORT ON NASA'S TOP MANAGEMENT AND PERFORMANCE CHALLENGES

National Aeronautics and Space Administration

**Office of the Administrator**  
Mary W. Jackson NASA Headquarters  
Washington, DC 20546-0001



October 13, 2023

TO: Inspector General

FROM: Administrator

SUBJECT: Agency Response to Office of Inspector General Report, "2023 Report on NASA's Top Management and Performance Challenges"

The National Aeronautics and Space Administration (NASA) appreciates the opportunity to review and comment on the Office of Inspector General (OIG) report entitled, "2023 Report on NASA's Top Management and Performance Challenges" (Q-23-04-00-AOQA), issued September 11, 2023.

The audits and investigations conducted by your office provide NASA's leadership and management with valuable contributions to the collective effort to provide oversight and gain insight into NASA's broad portfolio of programs, projects, and mission support activities with which it is entrusted. The efforts expended by your office during this past year have furthered the cause of providing the taxpayer with maximum value for each dollar invested in NASA's wide-ranging, ambitious, and challenging portfolio. As an Agency, we continue to aggressively pursue the mitigation and remediation of findings related to the audit recommendations issued by your office, including those which form the underpinnings of your observations as cited in your 2023 Report on NASA's Top Management and Performance Challenges.

While we fundamentally agree that the seven areas outlined in your 2023 report constitute significant challenges for the Agency, we would like to highlight the following mitigation and remediation efforts relative to each challenge outlined in your report that have either been taken or are currently underway. We believe these efforts substantively demonstrate NASA's commitment to addressing its most significant management and performance challenges faced by the Agency:

## **Challenge 1: Returning Humans to the Moon**

NASA continues to make significant progress towards returning humans to the Moon through the Artemis campaign. NASA's uncrewed 25.5-day Artemis I flight test proved the Space Launch System (SLS) rocket, Orion spacecraft, and the Exploration Ground Systems (EGS) needed for launch and recovery are ready to fly astronauts on missions to the Moon. Engineers conducted analysis of flight data during the mission from November 16 – December 11, 2022, and, afterwards, have continued to assess data and hardware to validate system performance ahead of Artemis II. On the debut flight of SLS, the rocket flew as designed and with precision, with all systems meeting, and in many cases exceeding, performance expectations. Following a near-perfect trans-lunar injection burn, the rocket's



interim cryogenic propulsion stage and Orion successfully separated, delivering Orion to its initial target orbit and then on a trajectory toward the Moon. Meanwhile, engineers with the EGS program completed detailed assessments of Mobile Launcher (ML-1) shortly after launch and determined ML-1 sustained more damage than initially expected from the 8.8 million pounds of thrust generated at liftoff by SLS on Artemis. NASA repaired damaged components and completed modifications for the first crewed mission on Artemis II, including verification and validation of the Crew Access Arm and fabrication, installation, and commissioning of the emergency egress system. Teams also are extensively reviewing more than 155 gigabytes of Orion data to confirm the spacecraft's successful performance during its journey nearly 270,000 miles beyond the Moon. Orion accomplished 161 test objectives to fully demonstrate every aspect of the spacecraft, including 20 objectives added mid-flight. Data shows the European-built service module generated 20 percent more power than initial expectations and consumed about 25 percent less power than predicted. All the spacecraft's dynamic separation events were completed without issue and splashdown occurred 2.4 miles from the target landing spot, well within requirements. Upon return to Kennedy Space Center (KSC) in Florida, avionics components earmarked for reuse on Artemis II have been removed, refurbished, and integrated into the Artemis II crew module. NASA also continues to review data from reentry and post-flight inspections to understand differences between the demonstrated performance of Orion's Avcoat heatshield on this test flight compared to predictions made before the flight.

NASA has also made steady progress towards Artemis II. In April 2023, NASA named the Artemis II crew of Americans Christina Hammock Koch, Reid Wiseman, and Victor Glover, and Canadian Space Agency astronaut Jeremy Hansen. The five SLS core stage elements for Artemis II are mated, and the stage is going through final integration and testing at the Michoud Assembly Facility in Louisiana. The SLS solid boosters and interim cryogenic propulsion stage have been delivered to the KSC in preparation for vehicle stacking. ML-1 repairs are ongoing, Crew Access Arm functional testing completed, and launch pad 39B upgrades (including a new 1.4 million gallon liquid hydrogen sphere that will increase launch availability and support the tanking needs of SLS Block 1B) at KSC are progressing. Orion Crew Module (CM) and Service Module (SM) are preparing for mate.

NASA will follow the Artemis II crewed test flight with the first human lunar return mission on Artemis III. NASA convened a lunar surface science workshop in April 2022 to gather data and points of interest within thirteen potential landing sights at the Moon's south pole. Manufacturing is underway on all SLS Artemis II hardware with a new core stage production flow planned to balance integration tasks between the Michoud Assembly Facility and the KSC. Orion Artemis III hardware is also in production, the first crew module being built under the Orion Production and Operations Contract (OPOC) and European service module integration in progress in Bremen, Germany. SpaceX, on contract with NASA to provide the Human Landing System for Artemis III, attempted a flight test of the integrated Starship/Super Heavy in April 2023 that ended prematurely approximately four minutes into the flight; a SpaceX-led investigation has completed with Federal Aviation Administration (FAA) oversight and NASA participation ahead of a second planned test. NASA is organized to ensure the success of the lunar return mission, a sustainable program of lunar exploration, and preparations for human missions to Mars. On March 23, 2023, NASA announced the establishment of the Moon to Mars Program Office within the

Exploration Systems Development Mission Directorate (ESDMD). As directed by the NASA Authorization Act of 2022, the Moon to Mars Program Office focuses on hardware development, mission integration, and risk management functions for programs critical to the Agency's exploration approach. The Moon to Mars Program Office consolidates the management of programs (including the Space Launch System rocket; the Orion spacecraft; exploration ground systems; the lunar Human Landing System; spacesuits, rovers, and lunar surface habitats; and the lunar orbiting Gateway platform) and cross-program integration functions (including systems engineering, program planning and control, safety, and exploration operations) into a single organization with clear responsibility and authority for conducting Artemis missions. The office also leads planning and analysis for long-lead developments to support human Mars missions.

The Moon to Mars Program Office has streamlined governance through such measures as consolidating decision-making through a single Moon to Mars control board. NASA manages the Artemis manifest and the associated integrated mission schedules at the enterprise level ensuring a single effort towards schedule management. This integrated mission schedule approach increases program and contractor accountability and risk mitigation for elements along and near the critical path. Top technical concerns and issues, tracked by mission, are continuously monitored and progress is reported through a series of Moon to Mars, ESDMD, and Agency quarterly reviews, management councils, and baseline performance reviews.

NASA is working closely with the Artemis contractors to ensure their performance and mission success. NASA is increasing prime contractor participation in Quarterly Program Status Reviews, control boards, and other integrated forums with the Moon to Mars programs. This also includes contractors actively participating in flight readiness assessments, sharing of integration tasks where applicable, and exchanging lessons learned. With an acquisition approach aligned to risk management, NASA utilizes a wide variety of contract mechanisms tailored to the specific technical and programmatic conditions for each program. NASA's exploration program, for example, leverages a mix of cost-plus contracts as well as utilization of firm-fixed price contracts that reflect the growing maturity, innovation, and diversity of the United States (U.S.) space industry.

## **Challenge 2: Improving Management of Major Programs and Projects**

NASA recognizes the inherent challenges of managing large, complex, often first-of-their-kind space flight and aeronautics programs and has worked over many years to improve policies and processes that control cost and schedule while ensuring mission success. These efforts coincide with NASA's continued observance of sound financial practices and programmatic rigor as good stewards of taxpayer dollars.

The Agency has pursued improvements in acquisition and project management to further strengthen program formulation, approval, implementation, and ongoing evaluation. We appreciate that this report highlighted the Government Accountability Office's (GAO) recognition of NASA's continued improvement in acquisition management and its assessment that NASA has fully met four out of five criteria to be removed from GAO's Acquisition High Risk List and is partially met on the final criterion. Further, in August 2021, the NASA Deputy Administrator initiated a Tiger Team whose recommendations

created a more robust structure for acquisition planning. A key initiative was the elevation of the Chief Acquisition Officer (CAO) role to the NASA Deputy Administrator, raising acquisition planning to the attention of the Agency's most senior officials. In December 2022, the CAO released a memorandum of intent to Agency leaders detailing acquisition priorities to enhance Agency insight, oversight, and project performance. The CAO later hosted a series of town hall meetings across NASA Headquarters and its nine Centers to communicate the Agency's commitment to improved acquisition outcomes. These CAO actions emphasized the importance of ensuring rigorous acquisition approaches are aligned with best practices and the value of an acquisition workforce to advancing these objectives.

NASA leadership also leveraged the Tiger Team findings by establishing a Chief Program Management Officer (CPMO) to enact measurable, enduring improvement in program and project performance through cross-enterprise coordination. Among the CPMO's responsibilities is providing executive guidance as NASA works to mitigate high-risk areas identified through its Corrective Action Plan (CAP). As OIG recognizes in the report, the Agency has made substantial progress in the implementation of its CAP, including the improvements highlighted in the most recent update approved by NASA leadership in summer 2022. Additional initiatives from the Tiger Team included the promotion of early discussions on acquisition strategies and plans; requiring an Analysis of Alternatives for Acquisition Strategy Meetings to address acquisition options measured against an established set of key drivers such as performance, cost, schedule, ownership, policy, and workforce; and initiating in-depth reviews of major programs at a monthly assessment to ensure senior leadership maintains situational awareness of program performance.

These efforts are reinforced by NASA's sustained commitment to providing transparent and accountable communication in accordance with our statutory obligations. NASA is fully compliant with Title 51 by having all major development activities subject to congressional reporting and performance thresholds. For programs and projects with an unspecified Phase E scope and duration, the initial capability cost estimate and other parameters become the Agency Baseline Commitment (ABC). In addition, NASA establishes ABCs for all future major upgrade development activities and communicates an annually updated five-year operations cost estimate starting prior to Phase E. This approach complies with Title 51 and ensures the Agency consistently and effectively communicates estimates of Phase E operations as the mission cadence matures.

Regarding the report's comments about the Agency's application of the Joint Cost and Schedule Confidence Level (JCL) and consideration of external risks as part of the analysis, it is important to note that NASA appropriately applies the JCL in alignment with the established Agency commitments pursuant to Title 51. Commitments at the mission level are not required by Title 51 since missions consist of multiple elements, and these costs are captured in their individual element Phase E costs, which may be five-year estimates for systems with unspecified operational scope and duration, as mentioned above. Therefore, even though the Agency actively manages technical and operational requirements and risks across Artemis missions, NASA does not plan to make formal commitments at the mission level—as such, confidence-level analysis is not provided by mission. While the Agency does not have a formalized requirement to perform risk analysis by mission specifically, it does

have formal processes to inform management of global and interdependency risks across major programs and projects as it relates to their commitments.

Major programs are already required to address potential externality risks by identifying and estimating the cost and schedule impacts. For projects and single-project programs, a JCL analysis is required to support the ABC in accordance with NASA Procedural Requirements (NPR) 7120.5F. The JCL calculation includes consideration of the risk associated with all elements. JCL analysis derived from a probabilistic cost and loaded probabilistic schedule approach typically includes content only through the completion of Phase D, which, by definition, is not representational of the total life-cycle cost or operational life of a project. While NPR 7120.5F does not require tightly coupled, loosely coupled, and uncoupled programs to develop program cost and schedule confidence levels, they must provide analysis of the program's risk posture as each new project reaches KDP-B and C, or when a project is re-baselined. NASA continues to promote consistency as well as identify opportunities to improve how management policies are applied across mission areas while also implementing performance metrics informed by proven analytical techniques.

Specific to the report's encouragement for enhanced visibility into the investments of the Artemis campaign, costs of newly developed capabilities will be provided in addition to production and operation cost estimates for any hardware in the mission that has been previously produced and operated.

NASA is at a historic inflection point, poised to advance the most significant series of science and human exploration missions in over a generation. The Agency continues to optimize the use of available resources in the pursuit of effective and efficient solutions that improve project management and support the advancement of ingenuity and innovation in space science, human exploration, and aerospace technology.

### **Challenge 3: Sustaining a Human Presence in Low Earth Orbit**

NASA recognizes that forward work remains to avoid a gap between the initial operations of commercial LEO destinations (CLDs) and the retirement of the International Space Station (ISS) by 2030. NASA's Commercial LEO Development Program (CLDP), Commercial Crew Program (CCP), and International Space Station (ISS) Program work together as parts of a LEO ecosystem. NASA has aligned the activities of these programs to ensure that the U.S. continues to provide leadership in developing the LEO economy while continuing the uninterrupted human presence in LEO. NASA also agrees that the Agency will need to continue balancing multiple priorities including maintaining ISS operations, stimulating a commercial LEO economy, ensuring sufficient crew and cargo capabilities, managing orbital debris, and planning for ISS deorbit.

#### **Stimulating a LEO economy**

NASA is continuing to safely maintain operations aboard the ISS while also enabling the development of the LEO economy. During FY23, NASA successfully executed Expeditions 68 and 69 which supported over 17 US Orbital Segment (USOS) crewmembers, conducted over 265 investigations, of which over 180 were NASA-led. In May 2023, the ISS also hosted the second private astronaut mission, Axiom Space's Ax-2. These private astronaut missions represent both a culmination of NASA's efforts to foster a commercial market in

LEO and the beginning of a new era of space exploration. NASA also announced the selection of Axiom Space for private astronaut missions, Ax-3 and Ax-4, respectively. Ax-3 is set to launch no earlier than January 2024 and Ax-4 no earlier than August 2024 from KSC. These additional missions are opening access to LEO and the ISS to more international partners, people, science, and commercial opportunities.

In October 2023, Nanoracks, part of Voyager Space's Exploration Segment, and Northrop Grumman announced that they are teaming up to support Nanoracks' development of the Starlab commercial space station. Rather than developing its own destination as planned under a separate Space Act Agreement (SAA) with NASA, the Agency and Northrop Grumman agreed to withdraw from its agreement so the company can join Voyager Space and Nanoracks in providing cargo logistics services and engineering services to support the Starlab station. This was a positive development for the commercial low Earth orbit destinations effort. Refining strategies and evolving partnerships are part of the process as NASA enables the development of a robust low Earth orbit economy where NASA is one of many customers. NASA plans to take the remaining funding associated with Northrop Grumman's withdrawal and other program funding to add milestones to the Agency's existing agreements with the other funded destination partners including Voyager Space/Nanoracks, Blue Origin, and Axiom Space, assuming NASA and the companies can agree on the additional milestones and value. This opportunity will provide NASA the ability to reduce risk and have additional insight into the partners' technical designs. NASA has quarterly meetings with industry partners to assess their progress and gain insight into their development schedule. The CLD partners are strongly incentivized to be first-to-market, particularly for their commercial customers. NASA continues to refine its acquisition strategy for the eventual certification and services purchases for CLDs.

In June 2023, NASA partnered with seven U.S. companies to meet future commercial and Government needs through the second Collaborations for Commercial Space Capabilities-2 (CCSC-2) initiative. Using unfunded Space Act Agreements (SAAs), CCSC-2 is designed to advance commercial space-related efforts through NASA contributions of technical expertise, assessments, lessons learned, technologies, and data. Sharing of NASA expertise utilizes minimal Government resources but fosters development of capabilities that can be crucial to development of a robust LEO economy.

#### **Ensuring crew/cargo transportation**

CCP is continuing to provide crew transportation services to the ISS from U.S. Commercial Space Transportation service providers. SpaceX successfully launched Crew-6 and Crew-7 to the ISS and is targeting to launch Crew-8 in February 2024. Boeing's latest crewed flight, Crewed Flight Test (CFT), was scheduled for July 2023 but was deferred due to emerging parachute issues. Boeing has made significant progress on CFT hardware processing and product closure and is continuing to work through spacecraft issues. Ninety-eight percent of the certification products required for the CFT are complete. The CFT launch date is currently under review with a spacecraft readiness date of no earlier than March 2024.

NASA issued a sole source modification to SpaceX to acquire up to three additional crew flights to the ISS, as part of its Commercial Crew Transportation Capabilities (CCtCap) contract, which will allow NASA to maintain an uninterrupted U.S. capability for human access to space. Currently, the SpaceX crew transportation system is the only one certified to

meet NASA's safety requirements to transport crew to the space station, and the additional award maintains the Agency's obligation to its international partners.

NASA also ordered 12 additional missions under the Commercial Resupply Services-2 (CRS-2) contracts. The 12 additional missions ordered – six each to Northrop Grumman and SpaceX – will provide resupply services to the station through 2026. NASA continues to work with Sierra Space on their Dream Chaser spacecraft which could be certified as another cargo resupply vehicle.

### **Orbital debris mitigation**

NASA is highly aware that orbital debris created by objects, such as abandoned vehicle stages, non-functional satellites, and fragments of launched materials, impedes our ability to use space by increasing the cost of space operations (maneuvering around debris), threatening the safety of astronauts and satellites, limiting the ability to launch spacecraft, and potentially rendering entire orbits unusable for a generation or more. Small debris are the most likely source of collisions with spacecraft due to the overall amount and current inability to track and avoid them.

Currently, NASA's Space Technology Mission Directorate (STMD) has multiple investments in low technology readiness level (TRL) orbital debris mitigation, detection, and remediation technologies across several programs, including the Small Spacecraft Technology (SST) and the Early-Stage Innovations and Partnerships (ESIP) portfolio through various mechanisms such as: Space Technology Research Grants (STRGs); Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR); and Prizes, Challenges, and Crowdsourcing (PCC).

In August 2023, as a part of STMD's SBIR Ignite initiative, a pilot solicitation which aims to increase participation from product-driven small business, startup, and entrepreneur companies that are *not* looking at NASA as their primary customer, NASA awarded 2 Phase II awards to companies for concepts dealing with orbital debris. These are:

- *Trans Astronautica Corporation, Los Angeles: Mini Bee Capture Bag for Active Debris Remediation.*
- *Turion Space Corp., Irvine, California: Low-Cost CubeSat for Active Removal of Sizable Space Debris Utilizing a Mothership Architecture.*

In FY23, NASA developed and initiated a small orbital debris challenge through its ESIP with the objective of identifying, tracking, and remediating small debris by honing concepts already proposed and generating additional ideas. The challenge will also provide NASA with insight into how such technologies could be deployed, the scalability and costs of various remediation approaches, the pool of innovators from known and adjacent areas of expertise who are capable and/or willing to work on small debris mitigation, and technology gaps that could be addressed by other funded efforts.

### **Deorbit planning**

During FY23, NASA developed requirements for a commercial U.S. Deorbit Vehicle (USDV) based on industry responses and released a request for U.S. industry proposals for a

USDV that safely deorbits the ISS as part of its planned retirement after 2030. Proposals are due in November 2023, with a subsequent award expected in 2024.

#### **Challenge 4: Managing and Mitigating Cybersecurity Risk**

In 2023, the Office of the Chief Information Officer (OCIO) participated in a months-long National Security Council (NSC) directed effort to improve Agency use of multi-factor authentication (MFA) and encryption of data-in-transit (DIT) and data-at-rest (DAR). Although NASA has not reached the numeric goals set by the NSC, OCIO is working on a detailed plan of action to improve these results. To achieve Executive Order (EO) 14028 goals, NASA assembled a Cybersecurity Improvement Portfolio (CIP) with a near-term focus of achieving Zero Trust Architecture within three years on the corporate network.

The OCIO Software Licensing and Asset Management (SLAM) team is working the seven recommendations from the recent audit, including implementation of enhanced policy, training, and software management tools.

NASA's responsible Artificial Intelligence (AI) officials have approved NASA adoption of the definition of AI from the 2019 National Defense Authorization Act. The responsible AI team has begun promulgation of the use of this definition, and it will be used in future AI inventories and responsible AI governance work.

As noted in the closure of the NASA OIG audit, "NASA's Cybersecurity Readiness," OCIO has established an Agency-level office led by the NASA Chief Enterprise Architect with direct oversight of the Enterprise Cybersecurity Architect, with all requisite organizational structure, roles and responsibilities, supporting governance, Agency-level strategic direction, and metrics that evaluate the effectiveness and success of the overall Environmental Assessment program.

#### **Challenge 5: Improving Oversight of Contracts, Grants, and Cooperative Agreements**

NASA continues to make meaningful progress in addressing contracts, grants, and cooperative agreement oversight challenges and continues to strengthen its overall procurement processes and policy.

NASA Office of Procurement (OP) collaborated closely via regular weekly engagements with technical, program, legal, and financial stakeholders to enhance transparency, accountability, and oversight of Category 1 contracts to ensure quality, timeliness of delivery, and cost control.

NASA OP procurement analysts advised and assisted Centers through Procurement Strategy Meetings (PSMs) to conduct risk analyses to best determine appropriate contract type. NASA OP advised and assisted on six major programs/activities (SEWP VI Governmentwide Acquisition Contract (GWAC) for Commercial IT Products and Services; Lunar Terrain Vehicle Services; GeoXO Spacecraft; SLS, Pre-SLS Exploration Production and Operations Contract (Pre-EPOC); LaRC Center Maintenance Operations and Engineering (CMOE III) Contract; and U.S. ISS Deorbit Vehicle (USDV)) to ensure the

contract type determination was justified and supported by historic data, market research, and appropriately considered performance risk.

Additionally, NASA OP added increased rigor to its review of contractor performance to ensure assigned ratings accurately reflected past performance and were well documented. Similar enhanced reviews were conducted for award-term and award-fee determinations to more appropriately incentivize contractor performance. OP procurement analysts and leadership were included in meaningful deliberations with Centers to finalize ratings and fee determinations to ensure consistent standards across the NASA enterprise with particular attention given to cost and schedule concerns.

With respect to grants and cooperative agreements, this monitoring plan includes:

- **Pre-award risk assessment:** Determines the level of risk associated with the recipient managing an award, as well as the award type. Assessment results determine the level of required monitoring to mitigate areas of high risks.
- **Routine monitoring:** An observation of award compliance through the review of recipient drawdowns and costs charged to an award. Recipient drawdowns are monitored quarterly through an analysis of the Federal Cash Transaction Report in accordance with 2 CFR § 200.328, Financial Reporting. In addition to Federal Cash Transaction Report, Grant Officers are charged with performing a systematic test of grantee expenditures from a selected quarter to identify potential unallowable, or unreasonable costs to assess the likelihood that recipients' errors would result in a material effect on Federal awards.
- **Advanced monitoring:** Focuses on an inclusion of award-specific terms and conditions, including more frequent reporting, to provide reasonable assurance that recipient entities managing the higher-risk awards have increased awareness of project goals and potential shortfalls.

#### **Challenge 6: Attracting and Retaining a Highly Skilled and Diverse Workforce**

The Agency remains committed to tackling workforce issues and to building an even stronger talent pipeline to accomplish NASA missions. NASA's Office of the Chief Human Capital Officer modernized the recruiting process and developed a coordinated recruitment strategy using a standardized approach and leveraging digital platforms to engage with prospective candidates. A critical piece of the recruitment strategy focuses on increasing workforce diversity by reaching new talent communities and establishing NASA as an employer that celebrates diversity and inclusion as keys to success. NASA has received multiple awards in 2022 and 2023 in recognition for our outreach and employment of under-represented groups: Ranked #1 Most Prestigious Internships (Vault/Firsthand, 2023), Top 20 Government Employers (Woman Engineer Magazine, 2023), Top 20 Government Employers (STEM Workforce Diversity Magazine, 2023), America's Best Employer for Veterans (Forbes, 2022), and America's Best Employers For Women (Forbes, 2022, 2023). NASA continually measures efforts and iterates on its recruitment strategy to ensure success. Multiple hiring authorities are utilized to quickly fill positions as well as pay incentives to recruit the right skills into the Agency.



NASA's workforce planning includes all NASA Mission Directorates, NASA Centers, and Mission Support Enterprise Organizations (MSEOs). NASA Mission Directorates develop guidance that provides clarity on future work content engaging with Centers and MSEOs in demand-driven workforce planning activities to ensure the workforce is sufficiently agile in size and mix. This process positions NASA to continue global leadership in space science, human exploration, aerospace innovation, and technology development and effectively respond to both known and uncertain mission demands. Annual workforce plans for both Centers and MSEOs include projections of workforce size over a five-year time horizon, future composition of the workforce and expected hiring patterns, strategies for shaping and managing the workforce, and risk assessment. This strategic planning process helps NASA to shape the future by defining clear and challenging workforce roles needed to enable long-term goals in science, exploration, aerospace, technology, and innovation.

NASA 2040 was launched in June 2023 to bring a new focus to aligning our institutional operations to our priority mission needs. This initiative aims to drive meaningful changes that ensure NASA in the year 2040 remains the global leader in aerospace and science. A specific area of focus includes shaping an Agency workforce strategy.

#### **Challenge 7: Managing NASA's Outdated Infrastructure and Facilities**

To address the challenges with aging infrastructure and facilities, NASA is implementing a top-down, mission-driven Agency Master Plan (AMP). This plan ensures that the required infrastructure is available and affordable, guides Agency investments to prioritize mission critical assets, reduces the risk of unplanned failures, and guides divestment of assets not needed for the Agency's missions. The AMP will establish a 20-year vision for physical infrastructure and real property assets that aligns with current, evolving, and future mission requirements. NASA will use this process to identify critical capabilities and areas for asset sustainment, investment, repurposing/out granting, or divestment of infrastructure.

To alleviate the maintenance burden, NASA's Office of Strategic Infrastructure (OSI) will continue to strongly advocate to increase its funding for demolition of unneeded facilities. NASA released NPR 8820.2 Revision H, "Facility Project Requirements," on September 27, 2022. This revision includes parameters for the assignment and use of institutional and programmatic Construction of Facilities (CoF) funds, the ability to identify cost-sharing as a funding method, a requirement for energy savings projects to conduct life-cycle cost analyses, requirements to reduce and consolidate the Agency's footprint, tools to assist in the development of project requirements, and definition of new Headquarters roles that will improve oversight of the implementation of CoF projects.

In 2019, OSI began to conduct an analysis on the Agency's leasing policies, procedures, and practices. As a result of this analysis, in 2020, NASA decided to centralize real estate functions across all Centers to OSI-FRED (OSI-Facilities and Real Estate Division). Additionally, OSI-FRED is in the process of updating the NPR 8800.15, "Real Estate Management Program" and is conducting a complete analysis of the Agency's Enhanced Use Lease Program to ensure that internal controls are established, real estate agreements are properly coordinated with all stakeholders, and are compliant with all rules, regulations, and laws. NASA has also identified investment strategies using Reliability Centered Maintenance (RCM) principles to stave off the increasing deferred maintenance liability

within the Agency. OSI-FRED is implementing a Tiered Maintenance approach with foundations of Condition-Based Maintenance principles for relevant and critical assets. These efforts will lead to optimized maintenance programs and prioritization of available operations and maintenance resources.

OSI leadership continues to inform and carry forward advocacy for additional investments necessary to improve the condition of important building systems and facilities across the Agency. Ultimately, this will increase the availability and reliability of these critical assets to meet current, emerging, and future mission needs. Implementation of these RCM principles ensures that the right type of maintenance is performed on the most critical assets, at the right time, and for the right reasons. RCM, paired with immediate investments in the replacement of obsolete items associated with the Agency's higher-criticality assets, can provide near-term corrective mitigation for known risks and avoid mission/schedule impacts. These maintenance strategies focus on increasing equipment availability and avoiding disruptive failures and unplanned repair costs. These initiatives will mitigate the Agency's ongoing challenge of aging and outdated infrastructure and facilities.

Through the implementation of the AMP and the ongoing investments in maintenance, demolition, repair, recapitalization, and out-granting, NASA continually strives to right-size the Agency's infrastructure toward more modern and efficient facilities that will continue to provide a robust real property asset portfolio for NASA mission objectives.

If you have any questions regarding NASA's response to the 2023 Top Management and Performance Challenges, please contact Anthony Mitchell, Audit Liaison Project Manager, at (202) 358-1758.



cc:

Chief Financial Officer/Ms. Vo Shaus

Chief Information Officer/Mr. Seaton

Associate Administrator Space Operations Mission Directorate/Mr. Bowersox

Assistant Administrator for Procurement/Ms. Smith Jackson

Assistant Administrator for Strategic Infrastructure/Mr. Carney

Chief Human Capital Officer/Ms. Elliott (Acting)

# CIVIL MONETARY PENALTY ADJUSTMENT FOR INFLATION

## For The Fiscal Year Ended September 30, 2023

The Federal Civil Penalties Inflation Adjustment Act Improvements Act of 2015 (P.L. 114-74), requires agencies to make annual inflation adjustments to civil monetary penalties and report on these adjustments in their AFR.

Agencies must include, as Other Information, information about civil monetary penalties within their jurisdiction and the annual inflation adjustments made under the Act and are encouraged to include a table providing this information.

NASA reviewed each of the penalty amounts under its statutes and penalty amounts for inflation when required under law. The following table reflects the authorities imposing the penalties, the civil penalties, the adjustment years, the current penalty amounts and location for penalty updates.

AUTHORITY (STATUTE)	PENALTY (NAME OR DESCRIPTION)	YEAR ENACTED	LATEST YEAR ADJUSTMENT	PENALTY LEVEL (\$ AMOUNT)	LOCATION
Program Fraud Civil Remedies Act of 1986	Penalty for False Claims	1986	2023	Maximum \$13,508	Federal Register Vol. 88, No. 79 (25 April 2023) <a href="#">RULES AND REGULATIONS</a> <a href="http://www.federalregister.gov">www.federalregister.gov</a>
Department of the Interior and Related Agencies <a href="#">APPROPRIATIONS ACT OF 1989</a> , Public Law 101-121, sec. 319	Penalty for use of appropriated funds to lobby or influence certain contracts.	1989	2023	Minimum \$23,727	Federal Register Vol. 88, No. 79 (25 April 2023) <a href="#">RULES AND REGULATIONS</a> <a href="http://www.federalregister.gov">www.federalregister.gov</a>
Department of the Interior and Related Agencies <a href="#">APPROPRIATIONS ACT OF 1989</a> , Public Law 101-121, sec. 319	Penalty for use of appropriated funds to lobby or influence certain contracts.	1989	2023	Maximum \$237,268	Federal Register Vol. 88, No. 79 (25 April 2023) <a href="#">RULES AND REGULATIONS</a> <a href="http://www.federalregister.gov">www.federalregister.gov</a>
Department of the Interior and Related Agencies <a href="#">APPROPRIATIONS ACT OF 1989</a> , Public Law 101-121, sec. 319	Penalty for failure to report certain lobbying transactions.	1989	2023	Minimum \$23,727	Federal Register Vol. 88, No. 79 (25 April 2023) <a href="#">RULES AND REGULATIONS</a> <a href="http://www.federalregister.gov">www.federalregister.gov</a>
Department of the Interior and Related Agencies <a href="#">APPROPRIATIONS ACT OF 1989</a> , Public Law 101-121, sec. 319	Penalty for failure to report certain lobbying transactions.	1989	2023	Maximum \$237,268	Federal Register Vol. 88, No. 79 (25 April 2023) <a href="#">RULES AND REGULATIONS</a> <a href="http://www.federalregister.gov">www.federalregister.gov</a>

# UNDISBURSED BALANCES IN EXPIRED GRANT ACCOUNTS

In December 2015, Congress passed the Commerce, Justice, Science, and Related Agencies Appropriations Act, 2016 (Division B of the Consolidated Appropriations Act, 2016, P.L. 114-113), which required NASA to report undisbursed balances in expired grant accounts. OMB Memorandum M-16-18, *Financial and Performance Reporting on Undisbursed Balances in Expired Grant Accounts*, requires this information to be included each year until instructed, otherwise if the requirement is included in subsequent fiscal year's appropriations acts. NASA monitors and tracks grants' undisbursed balances in expired accounts through a monthly review of internal control activities designed to identify undisbursed balances in expired accounts.

NASA generates financial management reports to aid in the tracking and monitoring of undisbursed amounts. An aging report of open obligations is generated monthly to determine the last day activity occurred. For open obligations in which no activity has occurred in a six-month period and/or there is no supporting documentation, further review is performed to determine the validity of obligation balances and the existence of valid source documentation. Additionally, further analysis is performed to determine if funds can be de-obligated. If obligations are valid, the aging reports are updated to reflect that obligations have been confirmed with procurement as valid.

NASA will continue to track undisbursed balances in expired grant accounts through its monthly review of internal control activities designed to identify funds for de-obligation. This involves the continuous monitoring of undisbursed balances, identifying balances that should be de-obligated, and performing timely closeout of grants and other activities. Additionally, NASA's financial management and procurement offices will continue to collaborate in monitoring and tracking undisbursed balances.

Currently, NASA does not have undisbursed balances in expired accounts that may be returned to the Treasury of the United States. The following chart reflects the total number and dollar amount of undisbursed grants in expired appropriations. All amounts have been obligated to a specific project.

FISCAL YEAR	TOTAL NUMBER OF EXPIRED GRANTS WITH UNDISBURSED BALANCES	TOTAL AMOUNT OF UNDISBURSED BALANCES FOR EXPIRED GRANTS (IN DOLLARS)
2023	576	\$10,993,100
2022	35	\$422,081
2021	23	\$432,864

# GRANTS PROGRAMS INFORMATION

The Grants Oversight and New Efficiency (GONE) Act (P.L. 114-117) reporting requirements have expired. Nevertheless, to promote the efficient administration of grants programs, all reporting entities with Federal grants programs must submit a brief high-level summary of expired, but not closed, Federal grants and cooperative agreements (awards). NASA continues to ensure its grants programs operate efficiently with the timely processing of expired, but not closed, Federal grants and cooperative agreements (awards) for closeout.

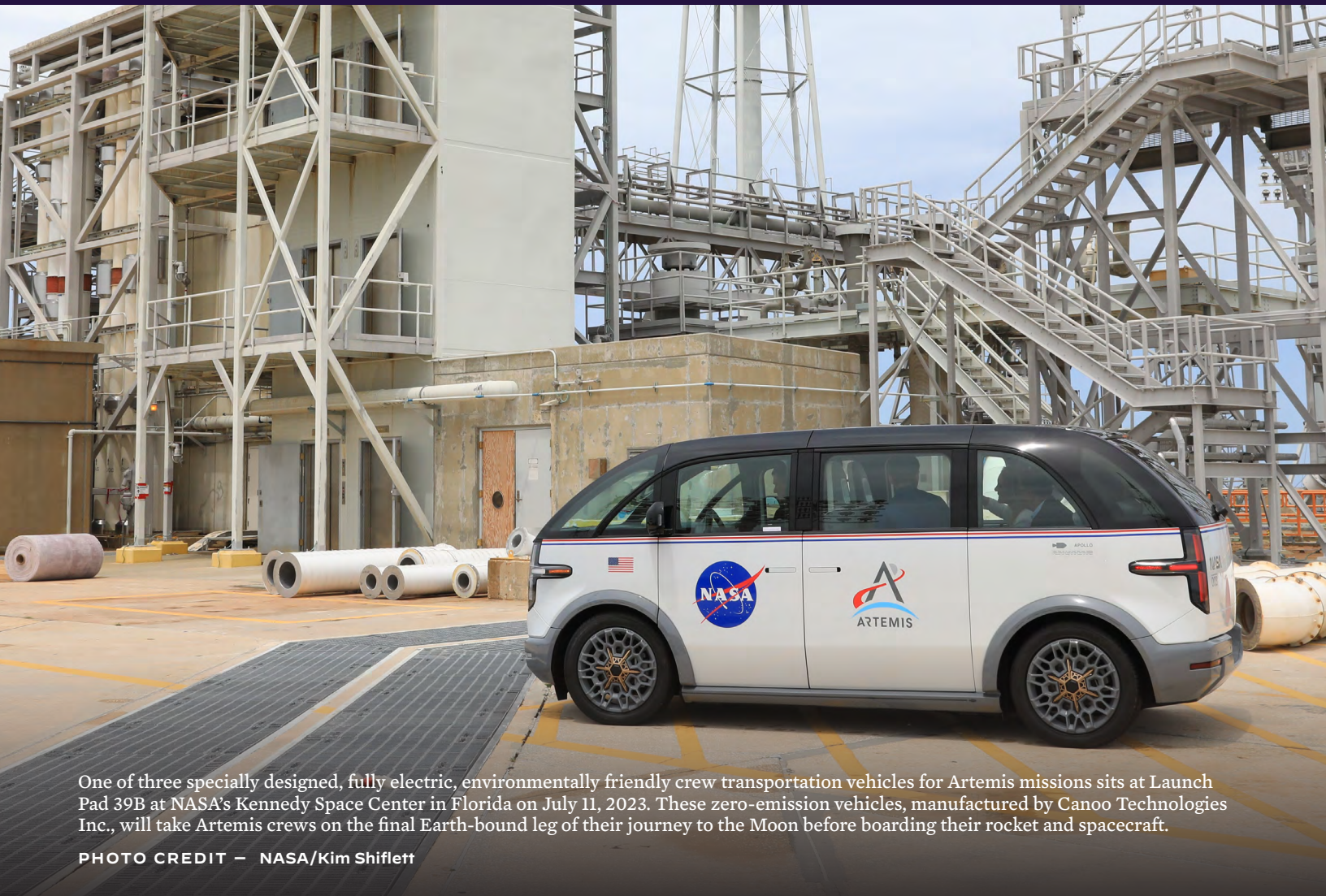
The Continuing Monitoring Program ensures ongoing review and validation of financial data and the effectiveness of internal controls over the entire financial management process, including grants. When grants undisbursed balances in expired accounts are identified, appropriate action is taken to ensure optimum use of grant resources.

In FY 2023 the number of grants expired 2 or more years was reduced from 16 to 14. The total amount of undisbursed balances in this population increased from \$2,187 to \$7,169. The NASA Shared Services Center (NSSC) closeout team fully implemented unilateral closeout procedures outlined in the NASA Grant and Cooperative Agreement Manual (GCAM) 9.1.4. The closeout team began work with other NASA Centers to encourage implementation of these procedures and strive to fully eliminate aged grants and undisbursed balances in FY 2024.

The NSSC has implemented an automated process which sends expired grants to closeout on a weekly basis. This process improvement will continue to ensure that the Agency operates with efficiency when managing and monitoring the grant close out process. This enhancement will also assist to make certain that there is no challenge of awards being transferred to close out within a timely manner.

CATEGORY	2-3 YEARS	3-5 YEARS	MORE THAN 5 YEARS
Number of Grants/Cooperative Agreements with Zero Dollar Balances	7	2	1
Number of Grants/Cooperative Agreements with Undisbursed Balances	3	1	0
Total Amount of Undisbursed Balances	\$5,094	\$2,075	\$ —

# CLIMATE-RELATED FINANCIAL RISK



One of three specially designed, fully electric, environmentally friendly crew transportation vehicles for Artemis missions sits at Launch Pad 39B at NASA's Kennedy Space Center in Florida on July 11, 2023. These zero-emission vehicles, manufactured by Canoo Technologies Inc., will take Artemis crews on the final Earth-bound leg of their journey to the Moon before boarding their rocket and spacecraft.

PHOTO CREDIT – NASA/Kim Shiflett

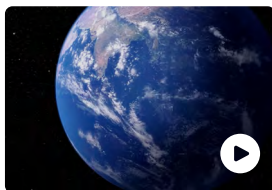
## Climate Action Plan and Sustainability Report and Implementation Plan

FY 2022 NASA Climate Action Plan Progress Report [www.sustainability.gov/pdfs/nasa-2022-cap.pdf](http://www.sustainability.gov/pdfs/nasa-2022-cap.pdf)

FY 2021 NASA Climate Action Plan [www.sustainability.gov/pdfs/nasa-2021-cap.pdf](http://www.sustainability.gov/pdfs/nasa-2021-cap.pdf)

FY 2022 NASA Sustainability Plan [www.sustainability.gov/pdfs/nasa-2022-sustainability-plan.pdf](http://www.sustainability.gov/pdfs/nasa-2022-sustainability-plan.pdf)

### DID YOU KNOW



#### Explore Our Changing Planet

Understanding the Earth gives us the means to better protect it. Join NASA, as we monitor, study, and observe our planet 24 hours a day, 7 days a week, 365 days a year— to learn more and to protect and improve life on Earth. (June 23, 2023)

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# Appendix



NASA and the Canadian Space Agency (CSA) announced the four astronauts who will venture around the Moon on Artemis II, the first crewed mission on NASA's path to establishing a long-term presence at the Moon for science and exploration through Artemis. The crew of NASA's Artemis II mission are as follows (left to right): NASA astronauts Christina Hammock Koch, Reid Wiseman (seated), Victor Glover, and Canadian Space Agency astronaut Jeremy Hansen.

PHOTO CREDIT  
NASA

# MENSAJE DEL ADMINISTRADOR



Me complace presentar el Informe Financiero de la Agencia (AFR) para el Año Fiscal (FY) 2023 de la Administración Nacional de Aeronáutica y el Espacio (NASA, por sus siglas en inglés). Este informe demuestra cómo estamos invirtiendo los recursos que se nos han encomendado y ofrece una imagen completa de nuestros resultados financieros, de acuerdo con los Principios de Contabilidad Generalmente Aceptados. Bajo la dirección de la Oficina del Director de Finanzas, la NASA ha recibido una vez más, y por decimotercer año consecutivo, una opinión de auditoría “limpia” sin salvedades sobre sus estados financieros, y sin que se haya informado de deficiencias materiales.

La NASA está comprometida a entregar datos financieros confiables, precisos y completos, con transparencia con respecto a las operaciones fiscales de la agencia. Seguimos los procedimientos para la presentación de informes financieros de alta calidad, garantizando los controles adecuados con una administración eficiente y eficaz de los fondos asignados y reembolsables de la Agencia. Los datos financieros y de desempeño presentados en este informe son completos y confiables.

La NASA apoya la oferta de empleos bien remunerados para los estadounidenses, inspira a la humanidad y cuenta con la participación de la nueva generación de científicos, ingenieros y exploradores. En el año fiscal 2023, la NASA logró avances notables en la exploración de nuevos destinos cósmicos, el avance de la exploración espacial, la mejora de la seguridad y la eficiencia de los viajes aéreos mediante la innovación, y la protección de nuestro planeta a través del monitoreo y el progreso científico.

La exitosa prueba de vuelo de Artemis I demostró las capacidades del cohete Sistema de Lanzamiento Espacial (SLS, por sus siglas en inglés), y sentó las bases para futuras misiones, con el viaje récord de la nave espacial Orion de la NASA alrededor de la Luna y su regreso a la Tierra. Estamos aprovechando el impulso y las lecciones aprendidas mientras continuamos con los históricos preparativos para la misión tripulada de Artemis II, como parte del plan de la NASA para explorar el polo sur de la Luna con seres humanos, con el fin de establecer una presencia lunar sostenible y a largo plazo. La tripulación de Artemis II representa a miles de personas que trabajan incansablemente para llevarnos a las estrellas. Esta gente representa nuestro credo: *E pluribus unum*, o “de muchos, uno”. Con las misiones del programa Artemis, la NASA utilizará tecnologías innovadoras para explorar la superficie lunar como nunca antes y lograr un progreso histórico al llevar a la primera mujer y a la primera persona no blanca a la Luna. Iremos en asociación con una amplia coalición de socios comerciales e internacionales. Más adelante, usaremos lo que aprendamos en la Luna y sus alrededores para dar nuestro próximo gran salto: enviar a los primeros astronautas a Marte.

Durante más de 60 años, la NASA ha expandido los límites de la exploración humana en beneficio de todos: estamos aprovechando esa experiencia para impulsar el desarrollo comercial de Estados Unidos en la órbita terrestre baja. Nuestra visión es crear una economía robusta en la órbita terrestre baja, con un enfoque tanto en la oferta de servicios en la órbita terrestre baja como en la demanda sostenible de dichos servicios. En el último año, hemos visto la exitosa culminación de la segunda misión de astronautas privada a la Estación Espacial Internacional. La NASA también se ha comprometido recientemente a asociarse con siete empresas estadounidenses en diversos proyectos espaciales comerciales, incluyendo destinos y colaboraciones de transporte adicionales a la estación espacial. Nuestros socios comerciales están haciendo progresos constantes, demostrando exitosos desarrollos de objetivos y diseños de ingeniería para nuevas estaciones espaciales comerciales en la órbita terrestre baja.

En la NASA, nuestra vista no solo está fija en las estrellas, sino también en el cielo. La NASA tiene el compromiso de dar forma al futuro de la aviación, marcando el comienzo de una nueva era en la que los aviones sean más ecológicos, más limpios y más silenciosos, creando nuevas posibilidades para el público viajero y la industria estadounidense por igual. En las próximas décadas, nuestro objetivo es reducir el uso de energía y las emisiones de la aviación hacia una meta para





## MENSAJE DEL ADMINISTRADOR (CONTINUACIÓN)

la comunidad de la aviación de cero emisiones netas de carbono para 2050. A principios de este año, anunciamos un Acuerdo de Financiamiento de la Ley Espacial con Boeing para el proyecto Demostrador de Vuelo Sostenible —en el que invertiremos 425 millones de dólares, junto con más de 725 millones de dólares aportados por Boeing y sus socios— para construir, realizar pruebas y poner a volar un avión de demostración a escala real y ratificar tecnologías destinadas a reducir las emisiones. Este proyecto ya ha producido un avión experimental que recibió oficialmente la designación “X” por parte de la Fuerza Aérea de Estados Unidos: el X-66A. Este es el primer avión X cuyo desarrollo está centrado específicamente en lograr cero emisiones netas de gases de efecto invernadero en la aviación, y que tiene el potencial de orientar a una nueva generación de aviones de pasillo único más sostenibles: el caballo de batalla de las aerolíneas de pasajeros de todo el mundo.

Los primeros seres humanos que caminarán en Marte y los innovadores que ayudarán a la humanidad a llegar al planeta rojo son los estudiantes que actualmente están en las aulas de Estados Unidos. Necesitamos a toda esta Generación Artemis, procedente de todas partes del país y de todos los ámbitos de la vida, para lograr nuestros objetivos, superar los desafíos e inspirar al mundo. La NASA tiene el compromiso de promover la participación de estudiantes de diversos orígenes en las áreas de ciencia, tecnología, ingeniería y matemáticas (STEM, por sus siglas en inglés) para su dedicación a los intereses y las carreras en STEM y las industrias espaciales. Nuestros programas dirigidos a instituciones de investigación y de servicio a las minorías han mejorado la infraestructura de la investigación científica y han aumentado las capacidades y oportunidades para los estudiantes que anteriormente no habían participado de manera equitativa en las actividades aeroespaciales. Asimismo, la NASA patrocina una multitud de retos y competencias para que los estudiantes desarrollen sus habilidades en STEM, y proporciona experiencias de trabajo auténticas en las que los estudiantes contribuyen a la misión de la NASA mediante pasantías y becas.

La NASA está trabajando para comprender mejor nuestro planeta natal desde el extraordinario punto de observación del espacio, y para compartir ese conocimiento con el mundo. Con más de dos docenas de satélites e instrumentos de observación de la Tierra, la NASA es la agencia líder mundial para la observación y comprensión de los cambios en el sistema de la Tierra. Estamos viendo con mayor claridad que nunca la interconexión de los sistemas y los impactos del cambio climático a nivel mundial. Son necesarias acciones audaces para proteger nuestro planeta y la NASA continúa asumiendo el papel de liderazgo en asuntos climáticos. Este verano boreal, la NASA abrió el Centro de Información de la Tierra en la sede de la NASA, donde los visitantes pueden ver cómo nuestro planeta está cambiando en áreas que afectan la vida y los medios de subsistencia: desde las temperaturas en nuestras ciudades hasta el aumento del nivel del mar, las emisiones de gases de efecto invernadero y la productividad agrícola. Este año también lanzamos un plan estratégico para asuntos climáticos que describe nuestro compromiso continuo y la manera como pretendemos lograr nuestros ambiciosos objetivos climáticos.

A diario me siento inspirado por la fuerza laboral de la NASA, quien continúa encontrando soluciones que antes eran inimaginables a algunos de los problemas más desafiantes de nuestro mundo. Persistimos en derribar las barreras que obstaculizan la equidad, garantizando el acceso a las oportunidades para que las comunidades desatendidas participen en las importantes y diversas perspectivas que son necesarias para llevarnos a la Luna, Marte y más allá. Estoy entusiasmado con los avances que se avecinan y con la celebración de los históricos éxitos de nuestra nación mientras continuamos explorando lo desconocido en el aire y en el espacio, innovando en beneficio de la humanidad e inspirando al mundo a través del descubrimiento.



Atentamente,

Bill Nelson

# MENSAJE DEL DIRECTOR FINANCIERO



Tengo el honor de acompañar al Administrador Nelson en la presentación del Informe Financiero de la Agencia NASA (AFR) para el Año Fiscal (FY) 2023. Este AFR destaca la posición financiera de la NASA, los resultados de las operaciones y el uso de los recursos presupuestarios para el año fiscal 2023. Asimismo, este informe ofrece información valiosa sobre el desempeño financiero de la NASA a medida que mantenemos el liderazgo de Estados Unidos en el espacio y la aeronáutica; abordamos la crisis climática; fomentamos una mayor diversidad, equidad, inclusión y accesibilidad; e impulsamos el crecimiento económico.

La Oficina del Director de Finanzas (OCFO, por sus siglas en inglés) garantiza en este AFR un informe financiero confiable, transparente y oportuno, lo que refleja el compromiso de la NASA con la administración e integridad presupuestaria, el desempeño operativo y la adecuación de los sistemas y controles. Durante el año pasado, el equipo de OCFO ha demostrado continuamente su excelencia en la superación de esta evaluación de indicadores de desempeño. Esta excelencia ha sido reconocida una vez más en nuestro informe de los auditores para el año fiscal 2023, lo cual ratifica por decimotercer año consecutivo una opinión “limpia” sin salvedades y sin deficiencias materiales de los controles internos. Esto corrobora que los estados financieros de la NASA carecen de errores materiales y han sido preparados de acuerdo con los Principios de Contabilidad Generalmente Aceptados (PCGA, por sus siglas en inglés) de Estados Unidos, y que nuestro sistema de controles internos funciona de manera eficaz. Quiero expresar mi sincero agradecimiento a todo mi equipo de OCFO y a nuestros socios de la organización, por su incomparable diligencia y sus valiosas contribuciones que han hecho posible este logro.

## Actividades de auditoría y cumplimiento de normas

La NASA sigue comprometida con una gestión financiera prudente, manteniendo la integridad de los datos y garantizando la fiabilidad de los informes financieros. Me enorgullece informar que los Auditores Independientes no identificaron inconsistencias materiales ni deficiencias significativas de ningún tipo en la auditoría financiera para el año fiscal 2023. El dictamen de auditoría de la NASA “limpia” y sin modificaciones ratifica que nuestros estados financieros para el año fiscal 2023 han sido presentados de manera justa y conforme a los PCGA. Asimismo, los auditores no revelaron ningún caso de incumplimiento de las disposiciones aplicables de la Ley Federal de Mejora de la Gestión Financiera (FFMIA, por sus siglas en inglés) dentro de los sistemas de gestión financiera de la NASA.

Reconocemos y valoramos los puntos destacados en el AFR y en el informe de los Auditores Independientes que requieren nuestra atención continua y nuestro compromiso para mejorar. Estamos preparados para gestionar los nuevos requisitos de cumplimiento de las normas de manera efectiva y eficaz en nuestra búsqueda continua de la excelencia financiera y administrativa.

## Logros clave de OCFO

Además del éxito de la auditoría, el equipo de OCFO ha alcanzado muchos éxitos durante el año pasado. Entre estos logros se incluye el fortalecimiento de las operaciones y colaboraciones en cada una de nuestras iniciativas; el mejoramiento de nuestras capacidades y nuestra resiliencia en todos los departamentos de OCFO; el abordaje de los desafíos para la implementación de los cambios inminentes en las normas contables relativas a los arrendamientos; y el reforzamiento del rigor en nuestras prácticas de adquisición. Además, la AGA (antes llamada Asociación de Contadores Gubernamentales) reconoció y, por noveno año consecutivo, otorgó a la NASA un Certificado de Excelencia en Informes de Contabilidad (CEAR, por sus siglas en inglés) para el año fiscal 2022, por los informes financieros de nuestra Agencia, incluyendo el prestigioso Premio Best-in-Class (al Mejor en su Categoría), reconociendo la presentación bien equilibrada e informativa de los resultados del Desempeño de la Misión de la Agencia.



## MENSAJE DEL DIRECTOR FINANCIERO (CONTINUACIÓN)

En el transcurso del año pasado, la NASA ha alcanzado algunos hitos increíbles: desde el exitoso vuelo de prueba de Artemis I, hasta compartir con la humanidad impresionantes imágenes del telescopio espacial James Webb. También estamos cultivando a la nueva generación de científicos, ingenieros y exploradores con la promoción de las habilidades en las áreas de Ciencia, Tecnología, Ingeniería y Matemáticas (STEM, por sus siglas en inglés) entre los estudiantes, mediante una serie de retos y competencias para fomentar la participación en STEM. La NASA continúa el avance de la ciencia con sistemas de código abierto para mejorar la accesibilidad y la inclusión, abordar los desafíos urgentes del cambio climático y ampliar los límites de la aeronáutica y la exploración espacial. Dentro de OCFO, nos enorgullece apoyar estos esfuerzos garantizando que nuestras prácticas de administración financiera sean prudentes, que nuestras prácticas de adquisición sean rigurosas, que nuestros informes sean precisos y que nuestra gestión y controles sean efectivos. Esto es fundamental para nuestro compromiso con el público. Estoy orgulloso de nuestra fuerza laboral y de su inestimable experiencia en apoyo diario de la misión de la NASA: explorar lo desconocido en el aire y el espacio, innovar en beneficio de la humanidad e inspirar al mundo a través del descubrimiento.



Atentamente,

**Margaret Vo Schaus**

# CERTIFICATE OF EXCELLENCE IN ACCOUNTABILITY REPORTING AWARD



“ Stunning photographs and their captions, throughout, which encourage the reader to learn more about NASA and to read the AFR. These pictures also bring to life the narratives described, demonstrate the importance of NASA’s mission, and allow the reader to conceptualize some of the more technical information. ”



# GLOSSARY OF ACRONYMS

## A

<b>AAPI</b>	Asian Americans and Pacific Islanders
<b>ABC</b>	Agency Baseline Commitment
<b>ACO</b>	Announcement of Collaboration Opportunity
<b>ACR</b>	Architecture Concept Review
<b>AEP</b>	Annual Evaluation Plan
<b>AFR</b>	Agency Financial Report
<b>AFRC</b>	Armstrong Flight Research Center
<b>AI</b>	Artificial Intelligence
<b>AICPA</b>	American Institute of Certified Public Accountants
<b>AMP</b>	Agency Master Plan
<b>AOS</b>	Atmospheric Observing System
<b>APMC</b>	Agency Program Management Council
<b>ARC</b>	Ames Research Center
<b>ARMD</b>	Aeronautics Research Mission Directorate
<b>ARMWG</b>	Agency Risk Management Working Group
<b>ASAP</b>	Aerospace Safety Advisory Panel
<b>ASC</b>	Accounting Standards Codification
<b>ASC</b>	Acquisition Strategy Council
<b>ATV</b>	Automated Transfer Vehicle
<b>AURA</b>	Association of Universities for Research in Astronomy, Inc.

## B

<b>BAA</b>	Broad Area Announcement
<b>BPR</b>	Baseline Performance Reviews

## C

<b>Caltech</b>	California Institute of Technology
<b>CAO</b>	Chief Acquisition Officer
<b>CAP</b>	Corrective Action Plan
<b>CAPSTONE</b>	Cislunar Autonomous Positioning System Technology Operations and Navigation Experiment
<b>CaRD</b>	Carbothermal Reduction Demonstration
<b>CARES</b>	Coronavirus Aid, Relief, and Economic Security
<b>CCP</b>	Commercial Crew Program
<b>CCSC-2</b>	Collaborations for Commercial Space Capabilities-2
<b>CCtCap</b>	Commercial Crew Transportation Capabilities
<b>CEAR</b>	Certificate of Excellence in Accountability Reporting
<b>CFO</b>	Chief Financial Officer
<b>CFR</b>	Code of Federal Regulation
<b>CIP</b>	Cybersecurity Improvement Portfolio
<b>CLDP</b>	Commercial LEO Development Program

<b>CLD</b>	Commercial LEO Destinations
<b>CM</b>	Crew Module
<b>CMOE</b>	Center Maintenance Operations and Engineering
<b>CNES</b>	Centre National D'Etudes Spatiales
<b>CoF</b>	Construction of Facilities
<b>COVID-19</b>	Coronavirus Disease 2019
<b>CPMO</b>	Chief Program Management Officer
<b>CRS-2</b>	Commercial Resupply Services-2
<b>CRV</b>	Current Replacement Value
<b>CSA</b>	Canadian Space Agency
<b>CSRS</b>	Civil Service Retirement System

## D

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<b>DAR</b>	Data-At-Rest
<b>DART</b>	Double Asteroid Redirection Test
<b>DATA</b>	Digital Accountability and Transparency Act of 2014
<b>DCIA</b>	Debt Collection Improvement Act
<b>DEIA</b>	Diversity, Equity, Inclusion, and Accessibility
<b>DIT</b>	Data-In-Transit
<b>DM&amp;R</b>	Deferred Maintenance and Repairs

## E

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<b>EC</b>	Executive Council
<b>ECC</b>	Enterprise Central Component
<b>EGS</b>	Exploration Ground Systems
<b>EIC</b>	Earth Information Center
<b>EO</b>	Executive Order
<b>EPOC</b>	Exploration Production and Operations Contract
<b>ERM</b>	Enterprise Risk Management
<b>ERMWG</b>	Enterprise Risk Management Working Group
<b>ESA</b>	European Space Agency
<b>ESCO</b>	Energy Service Company
<b>ESDMD</b>	Exploration Systems Development Mission Directorate
<b>ESIP</b>	Early-Stage Innovations and Partnerships
<b>ESO</b>	Earth System Observatory
<b>ESPC</b>	Energy Savings Performance Contract
<b>EUL</b>	Enhanced Use Lease
<b>EY</b>	Ernst & Young LLP

## F

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<b>FAA</b>	Federal Aviation Administration
<b>FAR</b>	Federal Acquisition Regulation
<b>FASAB</b>	Federal Accounting Standards Advisory Board
<b>FASB</b>	Financial Accounting Standards Board

<b>FBWT</b>	Fund Balance with Treasury
<b>FCA</b>	Facility Condition Assessment
<b>FCI</b>	Facility Condition Index
<b>FDC</b>	Flight Demonstrations and Capabilities
<b>FECA</b>	Federal Employees' Compensation Act
<b>FEGLI</b>	Federal Employees' Group Life Insurance
<b>FEHB</b>	Federal Employee Health Benefits
<b>FERS</b>	Federal Employees Retirement System
<b>FFMIA</b>	Federal Financial Management Improvement Act
<b>FFP</b>	Firm Fixed Price
<b>FFRDC</b>	Federally Funded Research and Development Center
<b>FMFIA</b>	Federal Managers' Financial Integrity Act
<b>FPS</b>	Focal Plane System
<b>FY</b>	Fiscal Year

## G

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<b>GAAP</b>	Generally Accepted Accounting Principles
<b>GAAS</b>	Generally Accepted Auditing Standards
<b>GAO</b>	Government Accountability Office
<b>GCAM</b>	Grant and Cooperative Agreement Manual
<b>GISS</b>	Goddard Institute for Space Studies
<b>GONE</b>	Grants Oversight and New Efficiency
<b>GPRAMA</b>	Government Performance and Results Act Modernization Act of 2010
<b>GRC</b>	Glenn Research Center
<b>GSFC</b>	Goddard Space Flight Center
<b>GTA</b>	Government Task Agreement
<b>GTAS</b>	Government-wide Treasury Account Symbol Adjusted Trial Balance System
<b>GWAC</b>	Governmentwide Acquisition Contract

## H

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<b>HERC</b>	Human Exploration Rover Challenge
<b>HLS</b>	Human Landing System
<b>HQ</b>	NASA Headquarters
<b>HR</b>	House of Representatives
<b>HTV</b>	H-II Transfer Vehicle
<b>HVA</b>	High-Value Asset
<b>HVAC</b>	Heating, Ventilating, and Air Conditioning

## I

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<b>IAU</b>	International Astronomical Union
<b>IBNR</b>	Incurred But Not Reported
<b>ISRO</b>	Indian Space Research Organization
<b>ISS</b>	International Space Station
<b>IT</b>	Information Technology

**J**

JAXA	Japan Aerospace Exploration Agency
JCL	Joint Cost and Schedule Confidence Level
JHU	John Hopkins University
JPL	Jet Propulsion Laboratory
JSC	Johnson Space Center

**K**

KDP	Key Decision Point
KSC	Kennedy Space Center

**L**

LaRC	Langley Research Center
LBFD	Low Boom Flight Demonstration
LCRD	Laser Communications Relay Demonstration
LEO	Low Earth Orbit
LLP	Limited Liability Partnership
LOFTID	Low Earth Orbit Flight Test Inflatable Decelerator
LVSA	Launch Vehicle Stage Adapter

**M**

M&R	Maintenance and Repairs
M2M	Moon to Mars
MC	Mass Change
MFA	Multi-Factor Authentication
ML	Mobile Launcher
MOU	Memorandum of Understanding
MSC	Mission Support Council
MSEO	Mission Support Enterprise Organizations
MSFC	Marshall Space Flight Center
MSWG	Management System Working Group

**N**

N/A	Not Applicable
NAC	NASA Advisory Council
NASA	National Aeronautics and Space Administration
NextSTEP	Next Space Technologies for Exploration Partnerships
NFS	NASA FAR Supplement
NHPA	National Historic Preservation Act
NIRCam	Near Infrared Camera
NISAR	NASA-ISRO Synthetic Aperture Radar
NPR	NASA Procedural Requirements
NSC	National Security Council
NSSC	NASA Shared Services Center



**O**

<b>OCFO</b>	Office of the Chief Financial Officer
<b>OCHCO</b>	Office of the Chief Human Capital Officer
<b>OCIO</b>	Office of the Chief Information Officer
<b>OIG</b>	Office of Inspector General
<b>OMB</b>	Office of Management and Budget
<b>OP</b>	Office of Procurement
<b>OPM</b>	Office of Personnel Management
<b>OPOC</b>	Orion Production and Operations Contract
<b>OSI</b>	Office of Strategic Infrastructure
<b>OSI-FRED</b>	OSI-Facilities and Real Estate Division
<b>OSIRIS-REx</b>	Origins, Spectral Interpretation, Resource Identification, and Security-Regolith Explorer

**P**

<b>P.L.</b>	Public Law
<b>P3</b>	Public-Private Partnerships
<b>PACE</b>	Plankton, Aerosol, Cloud, ocean Ecosystem
<b>PAM</b>	Private Astronaut Missions
<b>PCC</b>	Prizes, Challenges, and Crowdsourcing
<b>PIIA</b>	Payment Integrity Information Act
<b>PMA</b>	President's Management Agenda
<b>PP&amp;E</b>	Property, Plant and Equipment
<b>PREFIRE</b>	Polar Radiant Energy in the Far Infrared Experiment
<b>PSE</b>	Program Support Equipment
<b>PSM</b>	Procurement Strategy Meetings

**Q**

<b>QueSST</b>	Quiet SuperSonic Technology
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**R**

<b>R&amp;D</b>	Research and Development
<b>RCM</b>	Reliability Centered Maintenance
<b>RFI</b>	Request for Information
<b>RFP</b>	Request for Proposal

**S**

<b>SAA</b>	Space Act Agreement
<b>SAT</b>	Senior Assessment Team
<b>SBG</b>	Surface Biology and Geology
<b>SBIR</b>	Small Business Innovative Research
<b>SBR</b>	Statement of Budgetary Resources
<b>SEP</b>	Solar Electric Propulsion

<b>SES</b>	Senior Executive Service
<b>SEWP</b>	Solutions for Enterprise-Wide Procurement
<b>SFFAS</b>	Statement of Federal Financial Accounting Standards
<b>SLAM</b>	Software Licensing and Asset Management
<b>SLS</b>	Space Launch System
<b>SM</b>	Service Module
<b>SNC</b>	Statement of Net Cost
<b>SoA</b>	Statement of Assurance
<b>SSC</b>	Stennis Space Center
<b>SSMS</b>	Safety, Security, and Mission Services
<b>SST</b>	Small Spacecraft Technology
<b>STEM</b>	Science, Technology, Engineering, and Mathematics
<b>STMD</b>	Space Technology Mission Directorate
<b>STRG</b>	Space Technology Research Grants
<b>STScI</b>	Space Telescope Science Institute
<b>STTR</b>	Small Business Technology Transfer
<b>SWOT</b>	Surface Water and Ocean Topography

## T

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<b>TEMPO</b>	Tropospheric Emissions: Monitoring of Pollution
<b>TRL</b>	Technology Readiness Level
<b>TROPICS</b>	Time-Resolved Observations of Precipitation structure and storm Intensity with a Constellation of Smallsats
<b>TSIS-2</b>	Total and Spectral Solar Irradiance Sensor 2
<b>TTBW</b>	Transonic Truss Braced Wing

## U

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<b>U.S.</b>	United States
<b>U.S.C.</b>	United States Code
<b>UAM</b>	Urban Air Mobility
<b>UESC</b>	Utility Energy Service Contract
<b>UMD</b>	University of Maryland
<b>UNICORN</b>	Unified Comprehensive Operational Risk Network
<b>USDV</b>	U.S. Deorbit Vehicle
<b>USOS</b>	US Orbital Segment
<b>USSGL</b>	United States Standard General Ledger

## V

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<b>VIPer</b>	Volume of Integrated Performance
<b>VIPER</b>	Volatiles Investigating Polar Exploration Rover

## W

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<b>WFI</b>	Wide Field Instrument
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# THANK YOU

The AFR was produced with the energies, time, and talents of the National Aeronautics and Space Administration employees in Washington, D.C. We offer our sincerest thanks and acknowledgments. In particular, we recognize the following individuals and organizations.

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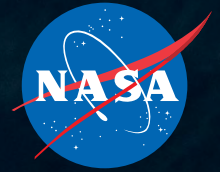
We offer special thanks to our graphic designer, **Darren Fuller**.



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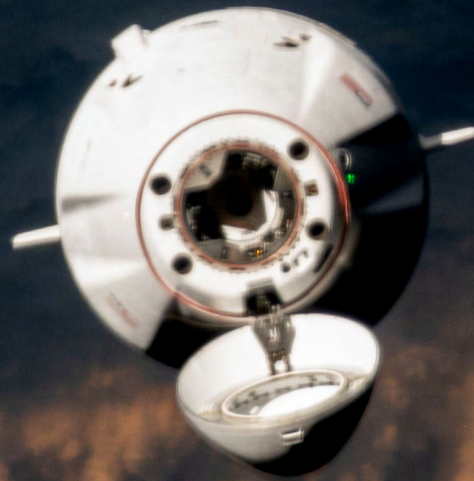


**BACK COVER IMAGE**

**Caption and credits**

The SpaceX Dragon cargo craft approaches the International Space Station for an automated docking less than a day after launching from NASA's Kennedy Space Center loaded with over 7,000 pounds of science experiments, station hardware, and crew supplies. The last rays of an orbital sunset illuminate the cloud tops as both spacecraft were orbiting 259 miles above the Pacific Ocean off the coast of Japan. (June 6, 2023)

**PHOTO CREDIT – NASA**



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