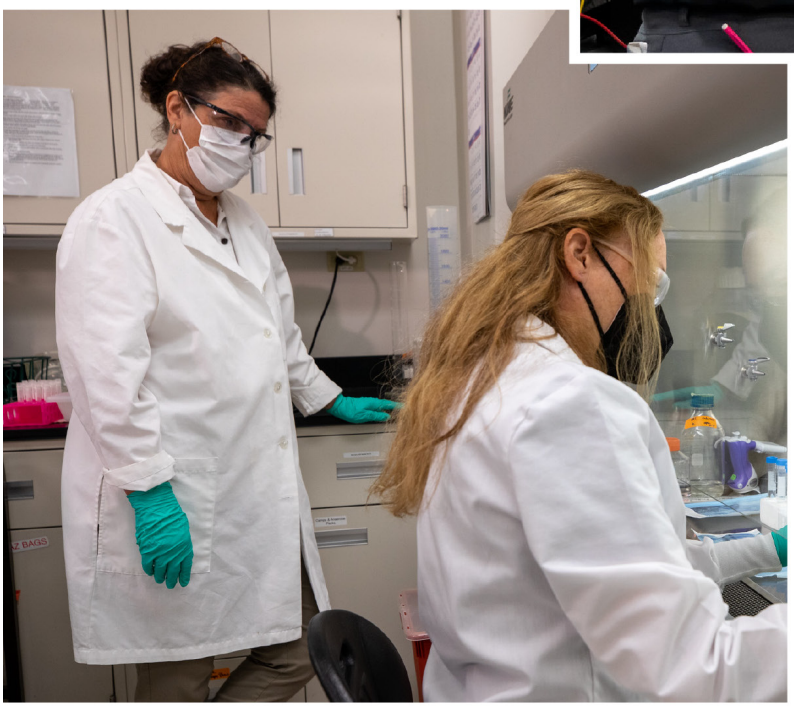
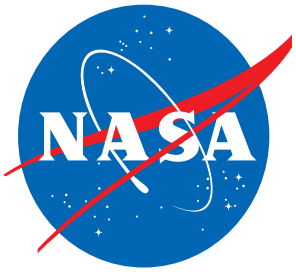
NASA
Office of Inspector General

NASA's Efforts to Increase Diversity in Its Workforce



April 20, 2023

IG-23-011



Office of Inspector General

To report, fraud, waste, abuse, or mismanagement, contact the NASA OIG Hotline at 800-424-9183 or 800-535-8134 (TDD) or visit https://oig.nasa.gov/hotline.html. You can also write to NASA Inspector General, P.O. Box 23089, L'Enfant Plaza Station, Washington, D.C. 20026. The identity of each writer and caller can be kept confidential, upon request, to the extent permitted by law.

To suggest ideas or request future audits, contact the Assistant Inspector General for Audits at https://oig.nasa.gov/aboutAll.html.

RESULTS IN BRIEF

NASA's Efforts to Increase Diversity in Its Workforce

April 20, 2023 IG-23-011 (A-21-017-00)

WHY WE PERFORMED THIS AUDIT

As a world leader in aeronautics, space exploration, science, and technology and for the past 11 years the best place to work in the federal government, much of NASA's success relies on attracting and retaining a highly skilled and diverse workforce. The Agency has identified its core values over the years as safety, integrity, teamwork, excellence, and inclusion. In addition, over the last decade, diversity, equity, inclusion, and accessibility (DEIA) initiatives have been part of the Agency's recruitment and retention efforts.

In fiscal year 2021, NASA's workforce was composed of approximately 35 percent women and 30 percent minorities compared to the overall federal workforce of 45 percent women and 39 percent minorities. Focusing on the science and technical occupations that NASA relies on to meet its mission, its workforce is 25 percent women and 26 percent minority racial and ethnic groups compared to the overall federal government science and technical workforce of 31 percent women and 30 percent minorities.

NASA has engaged in DEIA efforts for more than a decade, developing its first Diversity and Inclusion Strategic Implementation Plan in 2012, adding "inclusion" as a core value in 2020, and pledging to send the first woman and first person of color to the Moon as part of its Artemis campaign. NASA's Office of Diversity and Equal Opportunity (ODEO) leads the Agency's DEIA programs and works in concert with NASA leadership and the Office of the Chief Human Capital Officer (OCHCO), the group responsible for aligning workforce strategies, policies, and processes with the Agency's mission, goals, and performance outcomes.

Two Executive Orders issued in 2021 direct federal agencies to advance their DEIA efforts and require agencies to analyze the extent to which policies and programs perpetuate barriers to equal opportunity. This heightened focus on DEIA has provided an additional catalyst for NASA's DEIA efforts. In 2021, the Agency completed a self-assessment evaluating its current state of DEIA and in 2022 issued its DEIA Strategic Plan focusing on workforce diversity, equity and inclusion, accessibility, and ways to integrate these concepts into NASA's mission.

In this audit, we evaluated NASA's efforts to increase diversity in its workforce. Specifically, we assessed NASA's efforts to advance DEIA, determined how the Agency is updating policies and procedures to further diversity and inclusion, and evaluated whether the Agency collected sufficient and appropriate data to monitor its progress. To complete this work, we reviewed federal and NASA criteria, policies, procedures, analyzed a decade of workforce demographic data, and interviewed Agency officials at NASA Headquarters and across NASA Centers.

WHAT WE FOUND

Despite support from Agency leaders and multiple initiatives to increase diversity, we found NASA has made little progress in increasing the representation of women and minorities in its civilian workforce or leadership ranks. Specifically, over the past decade NASA's overall workforce demographics have stayed roughly the same, with small increases (1 or 2 percent) for some groups. Demographics have not varied significantly over the same time period at individual NASA Centers, with only two Centers increasing African American representation and other Centers making small gains in Hispanic, Asian American, and women's representation. We also found NASA has made few gains in the percentages of women and racial and ethnic minorities in its senior levels (General Schedule 14 and 15 positions and

Senior Executive Service) over the decade. At the same time, the proportion of veterans NASA hires has declined over the past 10 years, most significantly from 28 percent in 2015 to 13 percent in 2021.

NASA's lack of progress towards increasing diversity in its workforce is due to the Agency's siloed approach to advancing DEIA. Specifically, ODEO and OCHCO have focused their efforts on meeting federal workforce reporting requirements while also working to integrate DEIA concepts into Agency culture. Moreover, NASA did not hold its leaders fully accountable for advancing DEIA efforts in their annual performance appraisals until 2021. In addition, the Agency has experienced gaps in professional development and training opportunities including programs designed to prepare employees for senior roles. Likewise, while the Agency's DEIA Strategic Plan places a greater focus on formal and informal education programs including mentoring and coaching, the Agency has not established an Agency-wide comprehensive mentoring program and instead relies on Center-based programs. Moving forward, NASA has developed a plan to identify barriers to promoting underrepresented groups to senior levels and improving managers' access to DEIA workforce data, but these efforts are in their infancy have not yet resulted in meaningful change. Additionally, the Agency lacks reliable applicant and demographic data to inform its decision-making. We also noted that the Agency has limited resources for employee recruiting and Centers do not consistently utilize their Employee Resource Groups to assist in recruiting activities.

Lastly, we found that NASA lacks a comprehensive, authoritative, and consolidated source for DEIA data that measures the Agency's demographic representation and trends. NASA currently has numerous sources of employee demographic data distributed across multiple platforms and independently managed domains. These isolated data systems provide incomplete data and can lead to disjointed and duplicative efforts. While a new system known as the Enterprise Data Platform (EDP) is intended to meet the need for a "one-stop shop" for comprehensive workforce data, its implementation has been plagued by inconsistent funding, indecision, and delays. To effectively advance DEIA, the Agency requires current and comprehensive data to enable workforce hiring and retention analysis and measure outcomes.

WHAT WE RECOMMENDED

To assist the Agency's efforts to recruit and retain a skilled and diverse workforce, we made six recommendations to the Associate Administrator for Diversity and Equal Opportunity and Chief Human Capital Officer: 1) ensure hiring and promotion managers receive appropriate training to increase DEIA awareness on topics such as implicit bias and inclusive leadership; 2) ensure leadership-related professional development courses and detail assignments are widely available to prepare a diverse cohort of employees for promotion opportunities; 3) establish a comprehensive Agency-wide mentoring program for both mid-level and senior employees; 4) conduct a barrier analysis to identify obstacles restricting women and minorities from senior management positions and develop a plan to address and eliminate these obstacles; 5) develop a plan that consistently utilizes ERGs to conduct supplemental recruiting activities; and 6) conduct an analysis of all applicant data, including veterans, to better understand hiring trends and outcomes. We also recommended that the Deputy Administrator designate an official or organization to oversee coordination between stakeholders to develop a sustainable operation and funding structure for the EDP.

We provided a draft of this report to NASA management who concurred with six of the recommendations, partially concurred with the seventh, and described planned actions. We consider management's comments responsive; therefore, the recommendations are resolved and will be closed upon completion and verification of the proposed corrective actions.

For more information on the NASA Office of Inspector General and to view this and other reports visit https://oig.nasa.gov/.

TABLE OF CONTENTS

Acronyms

BOBJ	Business Objects
DEIA	diversity, equity, inclusion, and accessibility
DOE	U.S. Department of Energy
EDP	Enterprise Data Platform
EEO	Equal Employment Opportunity
EEOC	Equal Employment Opportunity Commission
EPA	U.S. Environmental Protection Agency
ERG	Employee Resource Group
FY	fiscal year
GAO	Government Accountability Office
GS	General Schedule
HBCU	Historically Black Colleges and Universities
HR	human resources
NOAA	National Oceanic and Atmospheric Administration
OCHCO	Office of the Chief Human Capital Officer
OCIO	Office of the Chief Information Officer
ODEO	Office of Diversity and Equal Opportunity
OIG	Office of Inspector General
OMB	Office of Management and Budget
OPI	Other Pacific Islander
RCLF	Relevant Civilian Labor Force
SES	Senior Executive Service
SL	Senior Level
STEM	Science, Technology, Engineering, and Mathematics

INTRODUCTION

NASA is a world leader in aeronautics, space exploration, science, and technology and for the past 11 years has been voted the best place to work in the federal government.[1] The Agency has identified its core values over the years as safety, integrity, teamwork, excellence, and inclusion, with the last value added in July 2020. The success of NASA's missions, programs, and projects relies on the Agency attracting and retaining a highly skilled and diverse workforce. Over the past decade, NASA leadership decided that diversity, equity, inclusion, and accessibility (DEIA) initiatives would be part of the Agency's long-term effort to attract and retain that workforce—an effort that requires sustained leadership commitment and support from all levels of the Agency.

In June 2021, the Administration stated that as the Nation's largest employer, the federal government can be a model for DEIA and workplaces where all employees are treated with dignity and respect. To help achieve this goal, the President issued two Executive Orders in fiscal year (FY) 2021 that directed federal agencies to remove barriers to employment and take additional steps to expand DEIA efforts.[2] Years before these orders, NASA championed DEIA initiatives while facing staffing, budget, and data constraints that presented challenges to these efforts. In this audit, we evaluated NASA's efforts to increase diversity in its workforce. Specifically, we assessed NASA's current diversity efforts, examined how the Agency is updating and implementing policies and procedures to expand diversity, and evaluated whether the Agency collects sufficient and appropriate data to monitor its progress. See Appendix A for details of the audit's scope and methodology.

Background

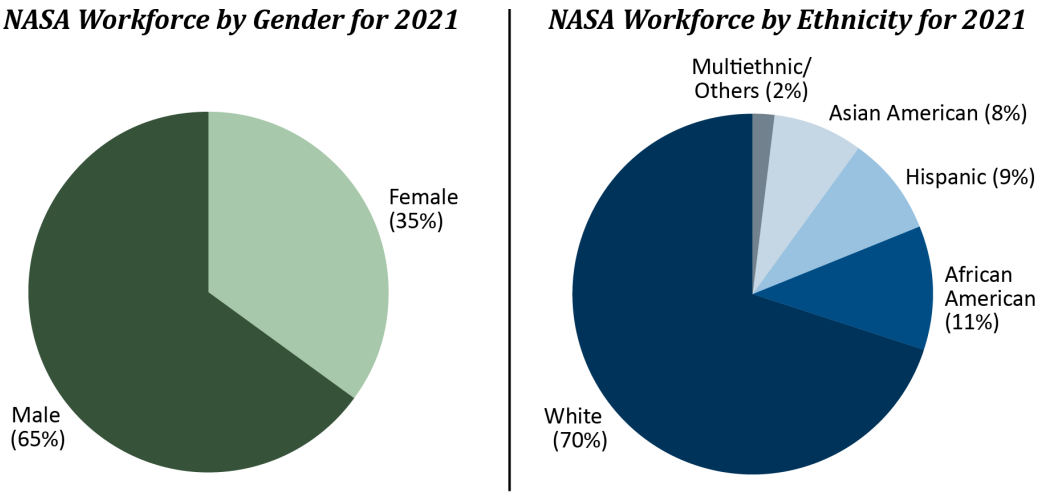
In 2021, NASA employed approximately 18,000 civil service employees at its facilities nationwide. As shown in Figure 1, approximately 35 percent of NASA's civil servant workforce were women while 30 percent were African American, Asian American, Hispanic, or Multiethnic.[3] The average age of NASA's civil service employees was 48 years old with 23 percent of its federal workforce eligible for retirement.

[1] NASA has been voted the best place to work from 2012 to 2022. The Best Places to Work in the federal government rankings are based on responses to the Office of Personnel Management's annual Federal Employee Viewpoint Survey.

[2] Executive Order 13985, *Advancing Racial Equity and Support for Underserved Communities Through the Federal Government* (January 20, 2021) and Executive Order 14035, *Diversity, Equity, Inclusion, and Accessibility in the Federal Workforce* (June 25, 2021).

[3] We analyzed NASA's demographic data from 2012 to 2021 since 2021 was the most recent data available when we initiated the audit. Terminology used for demographic categories can vary depending on the originating data source.

Figure 1: NASA's Civil Service Workforce by Gender and Ethnicity (2021)



Source: NASA Office of Inspector General (OIG) analysis of NASA Business Objects (BOBJ) data as of February 2022.

NASA's employee demographic profile differs from the overall federal government which in 2022 was 45 percent women (compared to NASA's 35 percent) and 39 percent minority (compared to NASA's 30 percent). The workforces of other federal agencies such as the Defense Logistics Agency, U.S Department of Energy (DOE), and National Oceanic and Atmospheric Administration (NOAA) were composed of approximately 35 percent women, like NASA.[4] In contrast, over half of the U.S. Environmental Protection Agency (EPA) and National Institutes of Health's workforce is female, while women made up a quarter of the U.S. Department of Transportation's workforce. The minority workforce population at DOE, the departments of Justice and Transportation, and EPA was about 30 percent, similar to NASA. The Defense Logistics Agency and National Institutes of Health employ a higher minority workforce at 40 and 46 percent, respectively, while NOAA employed a smaller percentage of minorities than NASA at 22 percent of its workforce.[5]

NASA relies heavily on a scientific and technical workforce to perform critical functions in space exploration, information technology, and scientific research. Of the 2.2 million federal employees as of March 2022, 16 percent, or more than 350,000 were categorized in the Science, Technology, Engineering, and Mathematics (STEM) workforce. Historically, the federal STEM workforce has struggled with diversity. As noted above, while women and minorities constituted about 45 percent and 39 percent of the total federal workforce, respectively, they represented only 31 percent and 30 percent of the STEM workforce.[6] At NASA, approximately 12,000 civilian employees (or 67 percent of the Agency's workforce) worked in STEM occupations, of which 25 percent were women and 26 percent were from minority racial and ethnic groups.

Agencies such as DOE, NOAA, and EPA are similar to NASA in the agencies' science-focused missions. DOE employs approximately 5,200 civil servants in STEM-related occupations, of which 27 percent are

[4] We judgmentally selected seven comparable agencies based on size and mission.

[5] Demographic data for the other federal agencies was queried from the Office of Personnel Management database Fedscope.opm.gov as of June 2022.

[6] Demographic data collected from the Office of Personnel Management database Fedscope.opm.gov as of March 2022. STEM occupations include all science, technology, engineering, and mathematics occupations.

from minority racial and ethnic groups and 27 percent are women; NOAA employs approximately 7,200 people in STEM-related occupations, of which 15 percent are from minority groups and 29 percent are women; and EPA employs approximately 9,000 people in STEM-related fields, of which 29 percent are from minority groups and 47 percent are women (see Table 1).

Table 1: Ethnicity and Gender in STEM Occupations for NASA and Other STEM-Focused Federal Agencies (as of March 2022)

	NASA	DOE	NOAA	EPA
Gender				
Female	25.4%	26.8%	28.6%	47.3%
Male	74.6	73.2	71.4	52.7
Total Employees	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Ethnicity				
Minority	25.8%	26.6%	14.6	28.7%
Non-minority	73.7	73.4	85.4	70.7
Unspecified	0.5	0.0	0.0	0.5
Total Employees	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Source: NASA OIG presentation of U.S.-based employment data from Fedscope.opm.gov as of March 2022. Amounts are rounded, and total employee percentages may not equal 100.

Our prior work examining different aspects of NASA's workforce has shown that NASA faces interrelated challenges including an aging civil service workforce and a growing shortfall of employees qualified in technical areas.[7] For example, nearly 40 percent of the Agency's science and engineering workforce fell in the 55 and over age range with many eligible for retirement.[8]

Requirements for Federal Agencies to Expand Diversity and Inclusion Efforts

In 2021, the President issued two Executive Orders directing federal agencies to expand their DEIA efforts. Executive Order 13985, *Advancing Racial Equity and Support for Underserved Communities Through the Federal Governmen*t, and Executive Order 14035, *Diversity, Equity, Inclusion, and Accessibility in the Federal Workforce,* are intended to support underserved communities and cultivate a federal workforce that draws on the full diversity of the Nation.

Executive Order 13985 (January 2021) directed each federal agency to assess whether and to what extent its programs and policies perpetuate systemic barriers to opportunities and benefits for people of color and other underserved groups. Agency heads were also instructed to consult with members of communities that have been historically underrepresented in the federal government and underserved by or subject to discrimination in federal policies and programs. The head of each agency was then to

[7] Our prior work includes *NASA's Management of Its Astronaut Corps* (IG-22-007, January 11, 2022) and *NASA'S Planetary Science Portfolio* (IG-20-023, September 16, 2020).

[8] NASA Office of Inspector General, *2022 Report on NASA's Top Management and Performance Challenges* (MC-2022, November 2022).

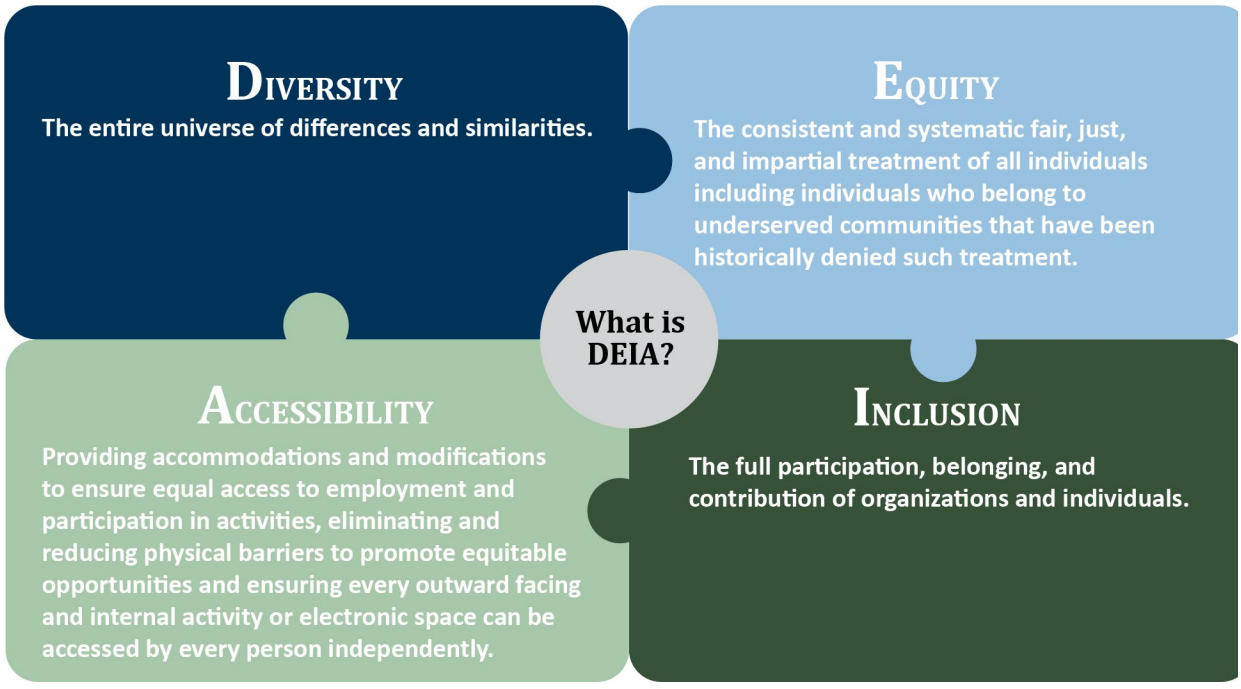
evaluate opportunities to increase coordination, communication, and engagement with community-based organizations and civil rights organizations.

Executive Order 14035 (June 2021) requires agencies to assess whether their human resources (HR) and employment policies and procedures are equitable. The order charges all agencies with assessing the current state of DEIA across their workforce by analyzing data to assess whether employees, including employees from underserved communities, may face barriers in accessing employment opportunities. By August 2021, each agency head was required to submit a preliminary assessment of the current state of DEIA in the agency's HR practices and workforce composition. In October 2021, agencies were required to submit a self-assessment that analyzed their current DEIA practices and policies.

NASA's DEIA Structure

NASA routinely expresses its commitment to attracting and retaining a highly skilled, technical, and diverse workforce to accomplish its mission. This commitment was highlighted by NASA's recent pledge to send the first person of color and first woman to the Moon as part of the Artemis campaign.[9] In July 2020, the Agency added "Inclusion" as one of its five core values, and in 2021 the Agency formally defined DEIA modeled after the definitions in Executive Order 14035. See Figure 2.

Figure 2: NASA's Definition of DEIA



Source: NASA OIG presentation of Agency information.

Note: The underserved communities referenced in the "Equity" box include Black and African American; Hispanic and Latino; Indigenous, Native American, and Native Alaskan persons; Asian Americans, Native Hawaiians, and Other Pacific Islanders; other persons of color; members of religious minorities; lesbian, gay, bisexual, transgender, queer/questioning, intersex, and asexual (LGBTQIA+) persons; persons with disabilities; persons who live in rural areas; and people otherwise adversely affected by persistent poverty or inequality.

[9] The Artemis campaign seeks to return humans to the Moon as a precursor to human exploration of Mars.

NASA's Office of Diversity and Equal Opportunity (ODEO) leads DEIA programs and services for the Agency. ODEO is led by an Associate Administrator who reports directly to NASA's Deputy Administrator and serves as the Agency's Chief Diversity Officer. ODEO consists of three divisions: (1) Complaints Management Division responsible for Equal Employment Opportunity (EEO) complaint management; (2) Equal Opportunity Programs Division responsible for the Agency's Anti-Harassment Program, conflict management and alternative dispute resolution, and external civil rights compliance; and (3) Diversity & Analytics/Data Division responsible for DEIA policy and strategy, workforce data and analytics, and other employment programs. In addition, each of NASA's 10 Centers has a Center-based ODEO that reports to Headquarters to make up the ODEO enterprise.[10]

For FY 2021, ODEO had a budget of $14.8 million and 74 full-time employees at Headquarters and the Centers. ODEO is targeted to reduce its full-time employees to 68 by FY 2025 through an Agency-wide effort to consolidate and centralize business functions such as information technology and human capital. In 2021, NASA established the DEIA Partnership Committee chaired by the ODEO Assistant Administrator to drive Agency-wide implementation of the Executive Orders and develop and implement a new DEIA strategic plan for NASA.[11] NASA received an additional $2 million in funding for ODEO in FY 2022 to improve DEIA data analytics capabilities and implement the Agency's response to Executive Order 14035.

Working in concert with ODEO, NASA's Office of the Chief Human Capital Officer (OCHCO) is responsible for developing and aligning NASA civil service workforce strategies, programs, policies, and processes with the Agency's mission, strategic goals, and desired performance outcomes. In FY 2021, OCHCO had a budget of $82.6 million and 402 employees. The Chief Human Capital Officer reports to the Associate Administrator for Mission Support Directorate and represents NASA on the Chief Human Capital Officers Council, chaired by the Director of the Office of Personnel Management.

NASA's Employee Resource Groups (ERG), also called advisory groups or affinity groups, have existed for several decades at NASA Headquarters and all NASA Centers. Most ERGs are organized around traditional affinities or employees joined by personal characteristics such as race, gender, ethnicity, disability, or sexual orientation/gender identity. Generally, ERGs are initiated by employees, although they can be created by Center leadership. ERG members are drawn together by a shared interest or goal and focus on relationship building within and across NASA work groups. ERGs foster professional development, assist in recruiting a diverse workforce, and increase community partnerships.

NASA's DEIA Efforts

NASA Administrators issue annual EEO policy statements in accordance with Equal Employment Opportunity Commission (EEOC) instructions. Agency heads are required to communicate a commitment to equal employment opportunity and a discrimination-free workplace.[12] The most recent policy statements from the NASA Administrator emphasize the Agency's commitment to and

[10] NASA consists of a Headquarters office in Washington, D.C., nine geographically dispersed Centers, and the Jet Propulsion Laboratory, a federally funded research and development center.

[11] The DEIA Partnership Committee is led by ODEO's Associate Administrator and is composed of key NASA organizations and leaders including the Office of the Chief Human Capital Officer, Chief Data Officer, Performance Improvement Officer, Chief Learning Officer, Chief Financial Officer, Agency Equity Team lead, and Office of the General Counsel.

[12] These instructions are part of the model EEO program, pursuant to Title VII of the Civil Rights Act of 1964 (Title VII), as amended, 42 U.S.C. § 2000e et seq., and Section 501 of the Rehabilitation Act of 1973 (Rehabilitation Act), as amended, 29 U.S.C. § 791 and the Americans with Disabilities Act Amendments Act of 2008 (Pub. L. No. 110-325).

enhancement of its diversity and inclusion efforts. In September 2021, the Administrator stated that the Agency would continue to prioritize a culture in which employees feel they can be authentic, welcomed, respected, included, and engaged; maintaining an environment where employees consistently and systematically receive fair, just, and impartial treatment; and ensuring employees can fully and independently access facilities, information and communication technology, programs, and services. In January 2022, in an all-NASA email, the Administrator emphasized the critical importance and value of DEIA for the entire workforce and its role in enabling the Agency to recruit and engage the best talent from the full spectrum of our society with a variety of skills, capabilities, perspectives, thinking, culture, and backgrounds. Figure 3 outlines significant NASA's DEIA efforts over the past decade as well as those in response to Executive Orders 13985 and 14035.

Figure 3: Timeline of Major NASA's Diversity and Inclusion Efforts since 2010

Source: NASA OIG presentation of Agency information.

In October 2021, NASA completed a self-assessment that evaluated its current state of DEIA, a key requirement of Executive Order 14035. NASA officials reported a commitment to DEIA for their entire workforce that reflected the priorities noted by the Administrator's 2021 policy statement. The Agency also reported that staffing and budget constraints presented a challenge that affected its ability to innovate in DEIA programs and initiatives.

In November 2021, the White House issued the Government-wide Strategic Plan to Advance Diversity, Equity, Inclusion, and Accessibility in the Federal Workforce (hereafter referred to as the Government-wide Strategic Plan).[13] This plan outlines a roadmap for implementing Executive Order 14035 and lays out key steps agencies can take to strengthen DEIA in their workforce policies, practices, and culture. The plan encourages agencies to measure their organizational effectiveness in advancing DEIA using a maturity model, an industry best practice for improving organizational outcomes.

In December 2021, the Office of Management and Budget (OMB) scored NASA's DEIA approach using the data NASA provided in its October 2021 self-assessment. OMB found the Agency was generally advancing DEIA but its efforts were lacking because (1) its data-driven approach only captured data for baseline reporting and compliance; (2) retention practices were not actively advancing DEIA or providing information to employees about resources or actively working to mitigate barriers faced by employees in the workplace; and (3) while pay and compensation practices were compliant with nondiscrimination policies, they do not advance DEIA goals or actively work to advance pay equity across the Agency. NASA used the results from OMB's DEIA Maturity Model scorecard as a baseline to identify key priorities for the Agency's 2022 Strategic Plan.[14] See complete OMB results in Appendix B.

In response to Executive Order 13985, NASA issued its Equity Action Plan in April 2022.[15] The plan calls for the increased integration and utilization of contractors and businesses from underserved communities to expand equity in NASA's procurement process. By paying particular attention to small businesses classified as Disadvantaged-, HUBZone-, Service-Disabled Veteran-, and Women-Owned, the Agency intends to promote equitable economic investment and spur innovation.[16]

In August 2022, the NASA Administrator announced the Agency's DEIA Strategic Plan for Fiscal Years 2022–2026 (hereafter referred to as DEIA Strategic Plan).[17] The plan aligns with the Government-wide Strategic Plan and reaffirms the Agency's commitment to advancing scientific knowledge and caring for its workforce and contractors. The DEIA Strategic Plan also aligns with the Agency's Strategic Plan, includes workforce performance goals relating to DEIA, and outlines NASA's efforts to advance Agency-wide DEIA growth and maturity over the next 5 years. See Figure 4.

[13] The White House, *Government-wide Strategic Plan to Advance Diversity, Equity, Inclusion, and Accessibility in the Federal Workforce* (November 2021).

[14] NASA, *2022 Strategic Plan* (March 28, 2022).

[15] NASA, *NASA Equity Action Plan* (April 2022).

[16] HUBZone small businesses are those in historically underutilized areas such as an agricultural cooperative.

[17] NASA, *Fiscal Years 2022-26 NASA Strategic Plan for Diversity, Equity, Inclusion, & Accessibility* (August 2022).

Figure 4: NASA's DEIA Strategic Goals (as of 2022)

Source: NASA OIG presentation of Agency information.

By December 2022, NASA Center ODEOs and mission directorates were required to submit an implementation plan that aligns programs, initiatives, and activities to NASA's DEIA Strategic Plan. The implementation plans are intended to articulate how the organization will track program milestones; balance and prioritize current and future requirements to ensure resource requirements and budget phasing plans are accurately estimated; apply appropriate risk management in prioritizing and executing requirements; and formulate performance goals, measures, and targets to align with and support the performance goals in the DEIA Strategic Plan.

NASA Has Made Little Progress in Improving Representation of Women and Minorities in Its Workforce over the Past 10 Years

Despite its initiatives to increase diversity and supportive rhetoric from senior Agency leaders, NASA has made little progress in increasing the representation of women and minorities in the Agency's civilian workforce and leadership ranks. Specifically, while NASA developed a Diversity and Inclusion Strategic Implementation Plan more than a decade ago, the overall percentage of woman and minorities in the NASA workforce has remained essentially unchanged since that time while the Agency has also struggled to promote women and minorities to senior leadership positions. Moreover, during the past 10 years the Agency has experienced a significant decrease in veteran hiring.

The lack of discernible progress towards its DEIA goals is due to the Agency's siloed approach to advancing DEIA, with ODEO and OCHCO focused on balancing efforts to meet federal workforce reporting requirements with integrating these concepts into Agency culture. In 2005, NASA began incorporating diversity and equal employment opportunity elements into supervisors' performance plans but did not hold leaders fully accountable until 2021. Additionally, while the Agency's goal is to integrate DEIA into every NASA-sponsored leadership development opportunity, until recently mentoring opportunities were limited, and the Agency lacked professional development opportunities and training courses that included DEIA elements. The Agency recently started to analyze barriers to employment and promotion opportunities for specific demographic groups but these efforts are in their early stages. Finally, a lack of readily available data to inform Agency decision-making has also limited NASA's efforts to measure progress in diversifying its workforce.

NASA's Civilian Workforce Demographics Have Remained Unchanged over the Past Decade

NASA monitors its workforce composition data to not only track deviations over time among various demographic categories but also to compare NASA's workforce with the broader civilian federal workforce. According to the EEOC, the Civilian Labor Force (CLF) is a benchmark for agencies to use to compare agency workforce demographics. The CLF includes data from the Bureau of Labor Statistics and is composed of all non-institutionalized civilians aged 16 and over who are either employed or unemployed. In 2021, NASA's workforce was similar to the CLF, with three exceptions: the Agency employed a higher percentage of Asian Americans and Pacific Islanders (8.7 percent in the NASA civilian workforce compared to 4.6 percent in the CLF) and a lower percentage of both Hispanics (8.5 percent versus 10 percent) and women (34.9 percent versus 48.2 percent).

NASA also compares the demographics of its civil servant workforce to the Relevant Civilian Labor Force (RCLF). The RCLF is the Civilian Labor Force that is directly comparable (or relevant) to the occupational population being considered in the federal workforce. The RCLF is the benchmark used to measure an individual federal agencies' minority representation relative to the Civilian Labor Force and may vary

from agency to agency due to the differing occupational mix within each agency. For example, if NASA analyzed representation of Black or African American engineers in its workforce, they would compare this number with Black engineers reported in the RCLF. Specifically, in 2021 NASA reported that Black or African American, Hispanic, American Indian and Alaska Native, and Multiethnic individuals were employed in mission critical science and engineering occupations at the same or higher rates compared to the RCLF.[18] In contrast, Asian American and Pacific Islanders at NASA were employed at a rate lower than their representation in the RCLF in several mission critical science occupations such as aerospace engineering and physical sciences.[19]

When comparing NASA's civilian workforce composition over the past decade, we found the Agency's demographics have remained unchanged in most categories. As shown in Table 2, in 2021 Whites comprised approximately 70 percent of NASA's workforce, Blacks or African Americans comprised approximately 11 percent, Asian Americans approximately 9 percent, and Hispanic Americans approximately 9 percent. Multiethnic, Native American, Native Hawaiian or Other Pacific Islander (OPI), and Undeclared made up the remaining approximately 2 percent of NASA's workforce. Over the past decade, the Agency has experienced minimal increases in Asian American and Hispanic representation (approximately 2 percent each). Black or African American and the other ethnic categories remained unchanged or decreased slightly, while Whites declined 3.3 percent over the decade. Women, as a percentage of the NASA workforce, remained essentially unchanged.

Table 2: NASA Gender and Ethnic Demographic Composition between 2012 and 2021

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Gender										
Female	35.2%	34.9%	34.8%	34.8%	34.8%	34.3%	34.3%	34.3%	34.4%	35.0%
Male	64.8	65.1	65.2	65.2	65.2	65.7	65.7	65.7	65.6	65.0
Ethnicity										
Black or African American	11.8	11.8	11.8	11.8	11.7	11.6	11.5	11.3	11.1	10.9
Asian American	6.8	7.0	7.1	7.1	7.2	7.4	7.6	7.8	8.2	8.6
Hispanic	6.7	6.8	6.9	7.2	7.5	7.8	8.0	8.2	8.4	8.7
Multiethnic	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4
Native American	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.0	0.9
Native Hawaiian OPI	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Undeclared	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.5
White	73.2	72.9	72.7	72.3	72.0	71.6	71.3	71.1	70.7	69.9

Source: NASA OIG analysis of NASA BOBJ data as of February 2022. Amounts are rounded and total employee percentages may not equal 100.

[18] Mission critical science and engineering occupations include aerospace, electrical, electronics and computer engineers; physical scientists; and space scientists.

[19] NASA, *Model Equal Employment Opportunity Program Status Report: FY 2021*.

To help address NASA's lack of progress in improving workforce diversity, in 2021 the Agency elevated DEIA efforts to the Administrator and Deputy Administrator level to ensure strategic prioritization and senior level management support of DEIA activities and policies across the Agency. As part of the development, review, and approval of NASA's DEIA Strategic Plan, the Agency established a DEIA governance structure. The newly established governance structure elevated DEIA responsibility to the Deputy Administrator with the ODEO Associate Administrator, who oversees NASA's DEIA Strategic Plan implementation, performance, and assessments, as a direct report. In addition, the Agency's governance framework elevated DEIA to the Executive Council, the Agency's senior decision-making body, to monitor and assess implementation progress on a quarterly and annual basis.[20] The ODEO Associate Administrator also addresses progress at monthly senior management meetings. Further, the DEIA Strategic Plan tasks Center DEIA councils and Employee Resource Groups (ERG) with aligning their activities, informing, and advising on policy, strategy, and implementation; coordinating groups and Center employees, and developing and executing Center DEIA Implementation Plans.[21] However, according to the ODEO Associate Administrator, the Agency remains in a transitional period, working to move from a compliance-focused posture (i.e., collecting and reporting data to address federal requirements with DEIA efforts stove piped within ODEO) to a more strategic position where DEIA efforts are integrated in all Agency activities.

In 2021, NASA senior leadership also formed the Inclusion, Diversity, Equity, and Accessibility Steering Committee to address the two Executive Orders issued in 2021 and assess the state of DEIA at NASA. Headed by the Deputy Associate Administrator, the Steering Committee is composed of multiple senior NASA leaders including the Chief Human Capital Officer, Deputy Chief Scientist, the General Counsel, and the Chief Financial Officer. In 2021, the Committee conducted a series of listening sessions with ERGs across the Agency during which common themes emerged in the areas of recruiting and hiring, learning and development, leadership and decision-making, careers, growth, and workforce composition, retention, and engagement. For example, ERGs pointed to a lack of representation in leadership positions (General Schedule [GS]-14 and above).[22] ERGs also requested active participation from senior leadership in ERG-sponsored events and initiatives and recognized the need for additional mentoring and sponsorship programs to help lower-level employees ascend to leadership positions across the Agency. Finally, ERGs identified a need for more recruitment and outreach in underserved and underrepresented communities to inspire students to pursue STEM fields and increase diversity with interns and full-time employees.

ERGs suggest active participation from senior leadership in ERG-sponsored events.

[20] The Executive Council typically addresses decisions affecting the Agency's high-level strategy, organization, governance, budget, and stakeholder management.

[21] DEIA councils and ERGs are located at each NASA Center and are composed of members from different groups like women, minorities, and individuals with disabilities.

[22] The GS classification and pay system covers the majority of civilian white-collar federal employees in professional, technical, administrative, and clerical positions. There are 15 GS grades—GS-1 (lowest) to GS-15 (highest). Above GS positions are Senior Executive Service members who operate and oversee nearly every government activity and sit below the top presidential appointees.

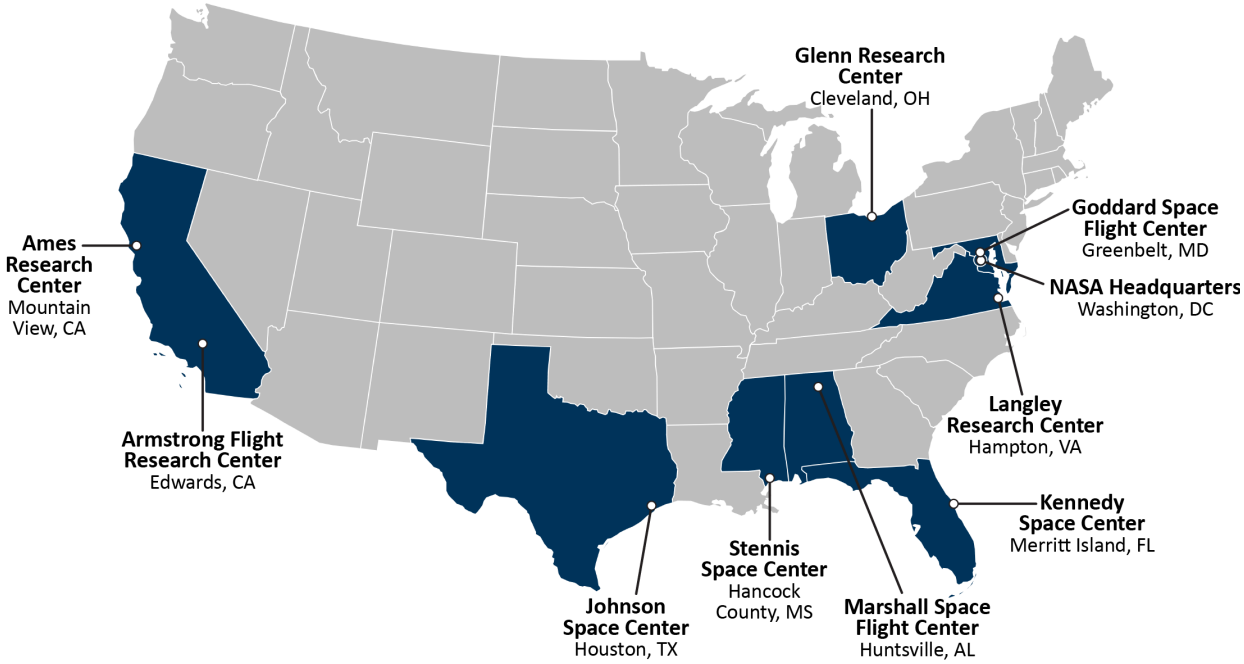
Individual ERGs identified specific concerns related to their affinity groups. For example, the Black/African American ERG requested training and a less cumbersome process for the application and hiring system, the Hispanic ERG recommended recruitment and retention efforts for Centers located in areas with low Hispanic populations, and the Asian American and Pacific Islanders ERG noted a need to educate the workforce on the many cultures and backgrounds that exist within their community. As a follow-up to their listening sessions, the Steering Committee proposed actions to address both the common themes identified and the concerns specific to individual ERGs. For example, OCHCO is now tasked with conducting usability testing, developing job aids, and conducting road shows on the hiring and application system.

The Hispanic ERG recommends recruitment and retention efforts for Centers located in areas with low Hispanic populations.

NASA Center Demographics

Demographic data has not varied significantly over the past decade at individual NASA Centers located across the country. See Figure 5 for the locations of the NASA Centers we reviewed.[23]

Figure 5: NASA Center Locations



Source: NASA OIG presentation Agency information.

[23] NASA has nine geographically dispersed Centers: Ames Research Center in Mountain View, California; Armstrong Flight Research Center in Edwards, California; Glenn Research Center in Cleveland, Ohio; Goddard Space Flight Center in Greenbelt, Maryland; Johnson Space Center in Houston, Texas; Kennedy Space Center in Merritt Island, Florida; Langley Research Center in Hampton, Virginia; Marshall Space Flight Center in Huntsville, Alabama; and Stennis Space Center in Hancock County, Mississippi.

HR managers we interviewed across NASA Centers explained that although Centers are increasing their emphasis on advancing diversity, the results over the past decade are mixed. To address what they saw as concerning trends in the lack of change in diversity statistics for their Centers, HR managers implemented varying plans but the success of these efforts remains to be seen. Appendix C outlines demographic data by Center.

To increase racial, ethnic, and gender representation, HR managers suggest holding hiring managers accountable through performance plans and evaluations, encourage and support managers to attend hiring fairs, and provide unconscious bias training hiring managers and supervisors.

Two Centers, Ames Research Center (Ames) and Armstrong Flight Research Center (Armstrong), increased Black or African American representation over the past decade, but those increases were minimal—0.8 percent and 0.3 percent, respectively. Our analysis determined that in 2021, approximately 24 percent of Armstrong's civil service workforce were women, a figure that has been stagnant for a decade. The Regional HR Director for Ames and Armstrong suggested that to increase racial, ethnic, and gender representation, the Agency could hold hiring managers accountable through performance plans and evaluations, encourage and support managers to attend hiring fairs, and provide unconscious bias training for hiring managers and supervisors. In addition, the official said Ames and Armstrong are working to promote an inclusive work environment and work-life balance as remote and telework opportunities have opened opportunities to hire employees from underserved communities. Nevertheless, the Regional HR Director described hiring as very competitive at both Centers and noted that while both generally receive a diverse pool of applicants, they often fail to hire these candidates because of the long federal hiring process and lower pay at these two Centers compared to private sector firms in the Silicon Valley (near Ames) and Edwards, California (near Armstrong).

At Glenn Research Center (Glenn), the percentage of Black or African American employees decreased almost 2 percent in a decade from 10.2 percent in 2012 to 8.5 percent in 2021 while the percentage of women remained constant at approximately 29 percent. The Glenn HR Director acknowledged the decrease in diversity but said the Agency is moving to a new hiring system that will capture more applicant data to assist managers in analyzing and developing more effective hiring strategies at the Center. In addition, the HR Director said they provide regular demographic updates and quarterly trend analysis to Glenn's Executive Mission Support Council, as well as engaging with its ERGs—including Center Director attendance at ERG meetings—to gain immediate feedback about ERG concerns and other non-quantitative information. The HR Director cited recent improvements in the hiring of women, noting that 36 percent of new hires in March 2022 were women (compared to the Center average of approximately 29 percent women).[24]

Marshall Space Flight Center (Marshall) has seen small gains in minority representation over the past decade. For example, Asian American representation increased from 2.6 percent in 2012 to 3.7 percent in 2021, while Hispanic representation increased from 2.6 to 4.8 percent and Whites decreased from 81.3 percent in 2012 to 78.4 percent in 2021. The HR Director at Marshall stated their organization reviewed workforce demographics and percentages in 2021 and 2022 to determine whether their recruiting and hiring efforts are effectively advancing DEIA at the Center. The HR Director noted that a

[24] The 36 percent increase in women hired in March 2022 is in comparison to the prior month. Appendix C includes gender representation at Glenn for the past decade.

record number of anticipated retirements in the next few years provides an opportunity to increase diversity, including hiring personnel of differing ages and experiences.

Likewise, Goddard Space Flight Center (Goddard) has made similar gains in several categories of minority representation including Asian American representation that increased from 7.9 percent in 2012 to 10.4 percent in 2021 while losing ground with Black or African American representation that decreased from 16.7 percent to 15.2 percent during the same period. When discussing options to improve diversity hiring at the Center, a Goddard HR official suggested encouraging hiring and promotion managers to attend DEIA training and casting a wider net to include more minority applicants.

A Goddard HR official suggested encouraging hiring and promotion managers to attend DEIA training and casting a wider net to include more minority applicants.

At Langley Research Center (Langley), the percent of Black or African American employees has decreased 2 percent over the last decade, from 10.4 percent in 2012 to 8.4 percent in 2021, while the percent of Asian Americans increased from 5.7 percent in 2012 to 7.2 percent in 2021, and Hispanics from 3.2 percent in 2012 to 5.1 percent in 2021. To help address this trend, the Langley Center Director attends monthly ERG meetings and partnered with OCHCO to develop recruitment videos to attract diverse candidates.

At Johnson Space Center (Johnson), civil service demographics have remained relatively static over the last decade except for Hispanics who have increased 2.6 percent from 10.1 percent in 2012 to 12.7 percent in 2021. To address the lack of progress in advancing minority and women representation, Johnson HR officials explained that executives report semiannually to the Center Director on the work they are doing related to DEIA.

Lastly, civil service demographics at Kennedy Space Center (Kennedy) have remained relatively unchanged over the last decade. Black or African American representation remained stable at 7.9 percent in 2012 compared to 7.8 percent in 2021, however, Hispanic representation increased from 10.9 percent in 2012 to 14.6 percent in 2021 and Asian Americans increased from 4.6 percent in 2012 to 5.5 percent in 2021. To address Black or African American representation, in 2021 the Kennedy HR Director sent surveys to 15 Historically Black Colleges and Universities (HBCU) and invited representatives from the schools' engineering programs to the Center to discuss how HBCUs can adjust their programs and curriculum to better prepare students for careers in the aerospace industry.

NASA Shows Little Increases in Women and Racial and Ethnic Minority Representation at the Senior Leadership Level

In addition to its civilian workforce remaining essentially demographically unchanged during the past decade, we found NASA has made few gains in the percentages of women and racial and ethnic minorities in its senior levels (GS-14, GS-15, and Senior Executive Service[SES]) during the same period.[25] For the GS-14 grade level, we found the percentage of Black or African American employees remained static from 2012 to 2021 at approximately 10 percent, Asian American employees increased 1.6 percent, and Hispanic employees increased 1.2 percent. Native American, Native Hawaiian OPI, and undeclared

[25] The Office of Inspector General considered GS grades 14 and 15 and SES as senior grade level employees. We collected demographic data for NASA's GS-14, GS-15, and SES employees over the past decade and compared the results for each demographic category to the Agency's total number of employees in that grade. For the purposes of this report, we designated grade levels GS-11, -12, and -13 as mid-level employees.

employees remained the same. We also found that the representation of women at the GS-14 level increased by approximately 1 percent during this timeframe to 33.1 percent of the workforce by 2021. See Table 3.

Table 3: NASA GS-14 Employees by Gender, Race, and Ethnicity between 2012 and 2021

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Gender										
Female	32.3%	32.2%	32.2%	32.1%	31.8%	32.0%	32.1%	32.5%	32.8%	33.1%
Male	67.7	67.8	67.8	67.9	68.2	68.0	67.9	67.5	67.2	66.9
Total Employees	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Race and Ethnicity										
Black or African American	10%	10.3%	10.3%	10.6%	10.3%	10.4%	10.3%	10.2%	10.0%	9.9%
Asian American	7.7	7.7	7.7	7.7	7.8	7.9	8.1	8.5	8.9	9.3
Hispanic	7.0	6.9	7.0	7.2	7.3	7.5	7.6	7.8	8.1	8.2
Multiethnic	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Native American	1.1	1.1	1.1	1.2	1.2	1.1	1.1	1.1	1.1	1.0
Native Hawaiian OPI	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Undeclared	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
White	73.7	73.5	73.3	72.8	72.7	72.5	72.4	71.8	71.3	70.7
Total Employees	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Source: NASA OIG analysis of NASA BOBJ data as of February 2022. Amounts are rounded and total employee percentages may not equal 100.

At the GS-15 grade level, we found that the number of Black or African American and Asian American employees increased 1.1 percent and Hispanic employees increased 0.5 percent during the same 10-year period. Native American, Native Hawaiian OPI, and undeclared employee representation remained essentially the same. We also found that the representation of women increased by 1.3 percent during this 10-year period. See Table 4.

Table 4: NASA GS-15 Employees by Gender, Race, and Ethnicity between 2012 and 2021

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Gender										
Female	27.4%	27.3%	27.5%	27.7%	27.8%	27.9%	28.4%	28.5%	28.7%	28.7%
Male	72.6	72.7	72.5	72.3	72.2	72.1	71.6	71.5	71.3	71.3
Total Employees	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Race and Ethnicity										
Black or African American	7.6%	7.6%	7.7%	7.8%	8.0%	8.0%	8.3%	8.4%	8.5%	8.7%
Asian American	6.8	7.0	7.0	7.1	7.1	7.3	7.4	7.5	7.8	7.9
Hispanic	5.6	5.6	5.6	5.8	5.9	5.8	5.9	6.0	6.0	6.1
Multiethnic	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Native American	0.8	0.9	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7
Native Hawaiian OPI	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
Undeclared	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2
White	79.0	78.7	78.6	78.2	78.0	77.9	77.3	77.2	76.6	76.2
Total Employees	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Source: NASA OIG data analysis of NASA BOBJ data as of February 2022. Amounts are rounded and total employee percentages may not equal 100.

The demographic trends for NASA's SES and Senior Leader (SL) levels were similar to those for employees at the GS-14 and GS-15 levels, showing little change over a decade. We found that minority representation among SES and SL leadership has remained consistently low compared to their White counterparts. When considering gender, SES and SL demographic representation has remained consistently male (holding steady at just over 70 percent over the 10-year period). That said, in 2023 Goddard, Kennedy, Johnson, Marshall, and the Jet Propulsion Laboratory were led by female Directors.[26] In terms of ethnicity, SES and SL demographics has also remained consistent with nearly 80 percent of the positions held by White employees. See Table 5.

[26] The Jet Propulsion Laboratory is NASA's only federally funded research and development center and is managed by the nearby California Institute of Technology.

Table 5: NASA SES and SL Employees by Gender, Race, and Ethnicity between 2012 and 2021

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Gender										
Female	28.7%	28.7%	28.5%	28.4%	28.6%	28.9%	28.9%	28.9%	28.7%	29.9%
Male	71.3	71.3	71.5	71.6	71.4	71.1	71.1	71.1	71.3	70.1
Total Employees	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Race and Ethnicity										
Black or African American	8.3%	8.2%	8.2%	8.1%	8.2%	8.2%	8.4%	8.5%	8.4%	8.2%
Asian American	5.1	5.0	4.9	5.0	5.0	5.2	5.3	5.3	5.3	5.7
Hispanic	5.6	5.5	5.4	5.5	5.5	5.4	5.4	5.5	5.4	5.6
Multiethnic	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5
Native American	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Native Hawaiian OPI	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.0
Undeclared	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0
White	79.8	80.0	80.1	80.0	80.1	79.6	79.6	79.5	79.7	79.3
Total Employees	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Source: NASA OIG analysis of NASA BOBJ data as of February 2022. Amounts are rounded and total employee percentages may not equal 100.

The ODEO Associate Administrator recognizes the need to improve the diversity of the Agency's promotion pipeline to increase representation of women and minorities in NASA senior leadership positions. According to the Associate Administrator, while NASA senior management is aware of the issue, the root cause and barriers to promotion are currently unknown. The Associate Administrator acknowledged the Agency needs to identify the root cause even though resources needed to conduct such a barrier analysis have historically been constrained or unavailable. Instead, ODEO has been focused on complying with Executive Order requirements and responding to an increase in reasonable accommodation requests due to the COVID-19 pandemic. Moreover, to conduct a detailed barrier analysis, the Associate Administrator said the Agency needs better data sources and more useable data analytics.

NASA's Efforts to Improve Representation and Promotion of Women and Racial and Ethnic Minorities Have Shown Little Impact to Date

While NASA is taking steps to address its limited progress in women and racial and ethnic minority employee representation—such as holding managers accountable for DEIA outcomes through performance evaluations and developing metrics in its DEIA Strategic Plan—these efforts have yet to result in meaningful improvement in women and minority representation in the Agency's workforce. Gaps in professional development opportunities, a lack of data to inform decision-making, recruiting challenges, and inconsistent DEIA training for hiring managers all combine to inhibit the Agency's progress in diversifying its workforce and leadership ranks. Finally, absent comprehensive analyses to determine barriers to employment and promotions for woman and racial and ethnic minorities, NASA

will continue to struggle to make anything more than marginal gains towards achieving its DEIA strategic goals and objectives.

Leadership Accountability

Prior to 2021, NASA did not fully hold leaders accountable for advancing DEIA efforts in their annual performance appraisals. While NASA incorporated a diversity and equal employment opportunity element into supervisors' performance plans as early as 2005, this element focused on compliance with Agency equal opportunity laws and regulations. The performance standards have evolved over time and in 2021, NASA incorporated leadership accountability for addressing DEIA goals within senior leaders' performance plans to help promote a diverse and inclusive environment. SES performance plans now include a Diversity, Equity, and Inclusion sub-element and the weight for the SES "Leading People" element has increased from 25 to 30 percent. Guidance for the revised performance plans include examples of behaviors that demonstrate support and advocacy of DEIA principles. For example, leaders should be creating awareness and prioritizing diversity, equity, and inclusion, as well as equal employment opportunity in the recruitment, hiring, development, and management of the workforce. The guidance also states that managers should ensure an inclusive environment that supports the expression of diverse ideas and opinions; provides everyone with the opportunity to reach their full potential; and unify individuals, teams, and groups within the organization and across the Agency.

In addition to changes to senior level executives' performance plans, all NASA supervisors' annual performance plans were updated in 2014 but continued to focus on compliance with equal opportunity and diversity laws and regulations. In 2021, the plans were again updated to include the following sub-element: Equal Employment Opportunity (EEO) and Diversity/Inclusion. To achieve the top rating for this sub-element, the supervisor must substantively exceed expectations for five performance indicators:

- participates in activities such as dialogues and conflict resolution training,
- works proactively to address/resolve situations that might lead to EEO complaints or grievances,
- articulates the NASA Inclusion core value and focus on unity as important to effective and safe mission accomplishment,
- participates in training and/or education programs/activities/courses that enhance cultural competency, and
- works to broaden job outreach to attract a diverse range of qualified candidates.

NASA also updated its DEIA Strategic Plan in 2022 to support leadership accountability with data and evidence based decision-making tools intended to encourage data sharing and improve accountability. The Strategic Plan calls for improved DEIA data analytics capabilities and the creation of a DEIA dashboard to increase transparency in areas such as demographic representation, professional development, and career advancement. The intent of the planned DEIA dashboard is to provide hiring managers and senior leaders with access to demographic data that would enable them to make better-informed decisions on detail assignments, hiring, and promotions. Previously, this DEIA data was not centralized or accessible to NASA leadership. In turn, the Deputy Administrator acknowledged that holding management accountable is difficult without collecting data and establishing metrics.

Additionally, the DEIA Strategic Plan includes an objective to address leadership accountability and establishes four performance goals: (1) leaders visibly and vocally demonstrate their commitment to

DEIA as a mission priority, (2) provide leadership with multicultural and DEIA competency through formal education programs and sponsored activities, (3) leader actions and expectations demonstrate NASA's core values and are regularly communicated to all employees, and (4) leaders engage employees beyond established employee groups, teams, clubs, and networks to ensure broad understanding of workplace concerns and offer equitable access to senior leadership. The performance measures and actions for these goals are yet to be established. In our view, while establishing the accountability goals is a positive first step, without measurable actions and deadlines the Agency is unable to monitor whether the goals have been met.

Gaps in Professional Development and Training Opportunities

NASA suspended most of its professional development training between 2019 and 2022 in part due to the restructuring and reorganizing of business functions across NASA during this period. Prior to restructuring, NASA provided highly competitive professional development programs at multiple grade levels. For example, the Agency offered NASA First for GS-11 and GS-12 employees, NASA Next for GS-13 and GS-14 employees, and a SES development program for GS-15s.[27] However, according to OCHCO officials, funding for these employee professional development and leadership programs was allocated to other priorities within the Mission Support Directorate beginning in 2019. As a result, OCHCO did not offer the cohort programs and other professional development programs for several years beginning in 2019. In 2022, OCHCO reinstated the NASA First program, and officials explained they are planning to bring back the Mid-Level Leader Program redesigned as the NASA Next program in the spring of 2023. According to OCHCO officials, the cohort programs will focus on developing GS-11 through GS-14 civil servants in mid- to senior-level positions who have a high potential for assuming greater leadership responsibilities. The cohort programs will include a DEIA module or DEIA elements will be incorporated throughout the program.

In addition to the suspension of these professional development programs, from September 2020 to January 2021 an Executive Order barred federal agencies from providing diversity and inclusion training to their employees.[28] The order prohibited federal employees, military personnel, and contractors from teaching, advocating, acting upon, or promoting any training courses that included concepts such as that one race or sex is inherently superior to another race or sex, the United States is fundamentally racist or sexist, or that an individual, by virtue of their race, bears responsibility for actions committed in the past by members of the same race or sex. NASA officials said they immediately stopped all DEIA-related training at NASA upon issuance of the order until it was rescinded in January 2021.

As outlined in its DEIA Strategic Plan, NASA is working to address the issue of preparing employees for promotion and increasing the pipeline of women and minorities to be promotion-eligible through a greater focus on formal and informal education programs, including employee mentoring and coaching. However, the Agency has not established policies or procedures that provide an Agency-wide comprehensive mentoring program. Instead, Centers continue to rely on individual Center-based mentoring programs. For example, Johnson offers a formal mentoring program at regular intervals throughout the year with notifications sent to its entire workforce with assistance from the Center ERGs

[27] NASA First is an Agency-wide leadership development program targeted to GS-11, GS-12, and first-year GS-13 employees. NASA Next is a one-year, part-time, 60-person cohort program open to GS-13 and -14 civil servants and is a redesign of the former Mid-Level Leader Program. NASA Next is focused on developing mid-level professionals (GS-13 and GS-14) for leadership responsibilities. The SES development program is a 1-year program for GS-15's aspiring to work at the executive (SES, SL, and Scientific or Professional) level.

[28] Executive Order 13950, *Combating Race and Sex Stereotyping* (September 22, 2020).

in recruiting mentees and mentors. Langley's program is open to civil servants and contractors and offers both virtual and in-person mentoring opportunities. Glenn's formal mentoring program seeks to recruit diverse employees and mentors across Centers, including representatives from differing grade levels, occupations, and technical and institutional organizations. In our view, establishing an Agency-wide program would enable both mid-level and senior-level employees to connect and network with more senior leadership across the Agency, as well as allow NASA officials to monitor the demographic participation in the program and work to ensure a diverse pool of eligible employees have the opportunity for mentorship.

In addition to formal training and mentoring opportunities, NASA established a Talent Marketplace in 2019, an Agency-wide system that gives NASA's civil service employees access to non-competitive development or lateral opportunities (e.g., internal detail opportunities, short-term/part-time assignments, lateral reassignments) across the Agency. Talent Marketplace is intended to increase the visibility of detail opportunities to all NASA employees. In addition, the Agency is offering several of these detail opportunities remotely, which enables employees to gain valuable experience without relocation or personal hardship. The Talent Marketplace also enables managers to look for talent across a wider pool than just their individual business units or Centers.

NASA Barrier Analysis in Early Development

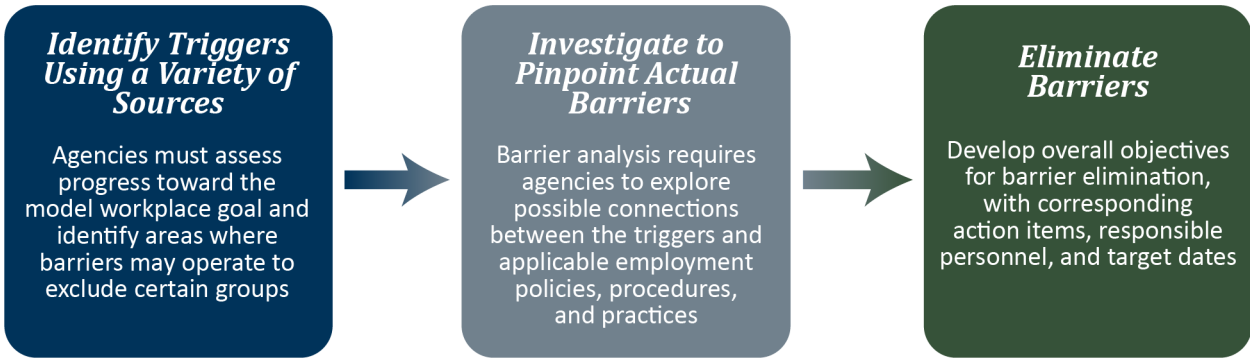
According to the Equal Employment Opportunity Commission (EEOC), NASA and all other federal agencies are required to conduct a continuing campaign to eradicate every form of prejudice or discrimination from personnel policies, practices, and working conditions.[29] Agencies must conduct a self-assessment on an annual basis to monitor progress, identify areas where barriers exist to exclude certain groups, and then develop strategic plans to eliminate barriers identified during this assessment process. The EEOC defines a barrier as an agency policy, principle, or practice that limit or tends to limit employment opportunities for members of a particular group based on their sex, race, ethnic background, or disability status. According to the EEOC, many employment barriers are built into organizational and operational structures and embedded in the day-to-day procedures and practices of the agency.[30]

A barrier analysis includes examination of workforce demographic data at all stages of the hiring process—including recruitment, selection, promotion, and retention—to identify barriers to equal employment opportunity for different segments of the workforce such as women or racial and ethnic minorities. See Figure 6.

[29] EEOC, Section II "Barrier Identification and Elimination," *Instructions to Federal Agencies for EEO MD-715*, and pursuant to 29 CFR 1614.102(a)(3).

[30] EEOC, EEO MD-715.

Figure 6: EEOC Barrier Analysis Process



Source: NASA OIG presentation of EEOC information.

While NASA has developed a plan to identify barriers to promoting underrepresented groups to senior levels and improving accessibility to data via DEIA dashboards, these efforts have not matured to a point where they are resulting in meaningful change. According to ODEO officials, resource constraints such as a limited number of data analysts have impacted NASA's ability to conduct barrier analyses, leaving the Agency focused mainly on compliance and meeting the federal reporting requirements outlined in Executive Orders and required by the EEOC instead of taking a more proactive approach to identifying barriers to employment.

In 2021, NASA developed a plan to begin conducting these in-depth reviews and as of October 2022 the Agency is in the final phase of conducting a barrier analysis related to participation of Asian Americans and Pacific Islanders and women in physical sciences. NASA identified this group for the Agency's first barrier analysis examination because Asian Americans and Pacific Islanders and women in physical sciences are employed at lower percentages at NASA than in the Relevant Civilian Labor Workforce (RCLF).[31] Specifically, Asian Americans and Pacific Islanders account for 12.5 percent of NASA physical scientists but 14.9 percent of such positions in the RCLF. In addition, women at NASA make up approximately 32.4 percent of physical scientists compared to 39 percent in the RCLF. When completed, the Agency intends to use this analysis to address recruitment and hiring practices that lead to such imbalances.

The Agency also plans to conduct future barrier analyses including an examination of the recruitment, hiring, and promotion of individuals with disabilities and examine barriers to promotion to GS-14 and higher grade levels.

Lack of Reliable Applicant Data

Prior to 2020, NASA relied on its own online hiring system known as NASA STARS to recruit and review applications for civil service employment. Because the hiring process was primarily carried out at each NASA Center, no standardization existed on how hiring and demographic data was collected. While Center HR officials had access to a limited amount of applicant demographic information, these officials said the data was not consistently complete and the format in which it was maintained was not user-

[31] The RCLF is the civilian labor workforce that is directly comparable, or relevant, to the population being considered in the federal workforce. NASA compares the demographics of its civil servant workforce to the RCLF.

friendly. To conduct a detailed assessment of workforce demographics, HR managers at Centers would utilize internal data analysts to provide technical assistance and interpret the data.

By 2021, NASA had moved from its own recruiting and hiring system to USA Staffing, a system used by more than 70 federal agencies and managed by the Office of Personnel Management. This transition moved data collection from a decentralized Center-based process to a more standardized, enterprise-wide level. While this change resulted in the potential to provide hiring managers with comprehensive, real-time data about applicants and hiring trends, the extent to which this data will be helpful has not yet been determined. However, even this enterprise-level data collection faces inherent limitations. For example, providing demographic data is optional for applicants with only 60 to 80 percent of applicants completing the data fields for race, gender, and national origin. Therefore, even under the best data collection scenario where the data captured is complete and accurate, the resultant analysis will not reflect demographic data from the full applicant pool. In addition, several Center HR Directors stated that the recent move to an enterprise-wide model has resulted in data being centralized at NASA Headquarters, limiting their individual access to applicant and hiring data at the Center level.

NASA is currently developing a process to analyze hiring data from USA Staffing, and as of October 2022 OCHCO had completed analysis of four quarters of applicant data (spring 2021 to summer 2022) for the Pathways Internship Program.[32] During this time period, NASA received 27,612 applications from 17,882 unique applicants. Applicants progress through a sequence of three steps to determine whether their qualifications meet the minimum requirements: (1) Minimum Qualification, (2) Assessment Questionnaire, and (3) Best Qualified. According to OCHCO's analysis, the sequence of steps indicates that the process provides a diverse applicant pool for selection. However, based on OCHCO's preliminary analysis, between the Best Qualified list and final hire, the percentage is no longer similar, with White and Asian American applicants selected for hire at a higher percentage. NASA OCHCO officials explained that there is currently no information on how applicants were selected from the Best Qualified list. NASA plans to conduct this same analysis for other applicant pools in March 2023 when more data is projected to become available.

Finally, although NASA's two primary internship programs—Pathways as well as the NASA Office of STEM Engagement Internships—are highly competitive, the programs' recruitment resources are limited.[33] One full-time recruiter works within OCHCO to facilitate recruiting efforts at colleges and universities nationwide including those in underserved communities. As a result, the time, tools, and guidance available to help applicants from underserved communities succeed in the hiring process are limited.

NASA participates in multiple outreach programs to recruit employees and interns including virtual targeted recruitment activities at Historically Black Colleges and Universities (HBCUs), Hispanic Serving Institutions, and other Minority Serving Institutions. According to NASA officials, the lack of dedicated recruiting resources hinders the Agency's recruiting efforts for both internships and permanent positions. Several HR officials noted that ERGs can be an effective recruiting tool to help address limited formal recruiting resources. However, we found that not every Center consistently uses their ERGs to assist with recruitment. Some Centers such as Johnson and Goddard use ERGs to assist in recruiting both permanent employees and interns while other Centers such as Langley and Johnson provide

[32] The Pathways Internship Program offers students and recent graduates paid internships that are direct pipelines to full-time employment at NASA upon graduation.

[33] The NASA Office of STEM Engagement Internships Program offers paid internships that allow high school and college-level students to contribute to Agency projects under the guidance of a NASA mentor.

funding to the ERGs to conduct recruiting activities. ERGs conduct in-person and virtual visits with colleges and universities (including HBCUs), share job postings received from HR to alumni or targeted networking groups, and attend events and outreach to discuss employment opportunities at NASA.

NASA Experienced a Significant Reduction in Veteran Hiring over the Past Decade

NASA has experienced a steep decline in veteran hiring over the past 10 years, most significantly within the past 4 years. Veterans consistently make up approximately 31 percent of federal employees, with a wide distribution of veteran employment by agency ranging from 7.6 percent at the U.S. Department of Health and Human Services to 47.2 percent at the U.S. Department of Defense. Analysis of personnel data from 2014 through 2018 by the Government Accountability Office (GAO) showed that veterans left federal service at slightly higher rates than non-veterans, and veterans hired in the last 5 years left at even higher rates than newly hired non-veterans.[34] While veterans primarily left federal service due to retirement, they also resigned for non-retirement reasons at 1.6 times the rate of similar non-veterans. GAO estimated 18.7 percent of veterans resigned within their first 5 years of federal service compared to 11.1 percent of similar non-veterans.

At NASA, veterans have consistently comprised 11 percent of the civilian workforce over the past decade with approximately 38 percent working in the science and engineering fields. In 2021, the average age of a veteran working for NASA was 49.24 compared with non-veterans of 48.22. About a third of these veterans are either currently eligible for retirement or eligible for retirement within the next 5 years.

As shown in Table 6, our analysis indicates a significant decline in NASA's veteran hiring from 2018 to 2021, with the proportion of veterans hired falling from 22 percent in 2018 to 13 percent in 2021. Moreover, the 13 percent figure in 2021 was less than half of the 28 percent of veterans hired in 2015. Given the age and retirement eligibility of NASA's existing veteran workforce, if the Agency hiring continues this downward trend NASA's veteran workforce will see a continued significant decline in the coming years.

Table 6: NASA Veteran Hiring between 2012 and 2021

New Hires	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
All	707	723	509	625	911	865	1,112	1,220	1,486	1,117
Veteran	115	196	134	177	226	170	240	224	163	145
Veteran by Percent	16%	27%	26%	28%	25%	20%	22%	18%	11%	13%

Source: NASA OIG analysis of BOBJ data as of February 2022.

We noted that hiring flexibilities that eliminate veterans' preference (which otherwise encourages the hiring of veterans over other candidates) has contributed to the decline in veterans' hiring at NASA. Specifically, in October 2018 the Office of Personnel Management announced a new direct hiring authority for a variety of STEM positions. Direct hiring authorities expedite the hiring process by

[34] GAO, *Veteran Federal Employment: OPM and Agencies Could Better Leverage Data to Help Improve Veteran Retention Rates* (GAO-20-592, July 22, 2020.)

eliminating veterans' preference, rating and ranking, and other standard selection procedures and may have contributed to the declining numbers of veterans hired at NASA since 2018. The Office of Personnel Management authorized direct hiring authority for NASA from 2019 to 2024 due to the crucial STEM hiring needs of the Artemis campaign. While the Agency's DEIA Strategic Plan does not address veteran hiring, OCHCO officials are aware of this trend and said they are putting more focus on veteran outreach and recruitment. For example, from January 2022 through June 2022 the Agency created a 6-month detail position to focus on recruiting veterans with a detailee participating in digital job fairs and information sessions aimed at attracting veteran applicants.

LACK OF TIMELY AND RELIABLE DATA HINDERS AGENCY ACTIONS TO ADVANCE DEIA

NASA lacks a comprehensive, authoritative, and consolidated source for DEIA data that measures the Agency's demographic representation and trends. Localized legacy data collection solutions, populated by data scattered across independently managed systems, has led to confusion among end users and inconsistent reporting of analytical results. While the Enterprise Data Platform (EDP) is NASA's answer to developing Agency-wide data to advance DEIA, delays in its implementation have limited the Agency's ability to access and interpret data for decision-making.[35] To be effective, the Agency needs to capture current and comprehensive DEIA data, enable predictive analysis, and leverage data to monitor outcomes.

Demand and Requirements for DEIA Data Are Increasing

Data is only useful if it is complete, accurate, and reliable and able to be used to make informed decisions on a timely basis. While NASA currently has numerous sources of employee demographic data, it lacks a definitive source of DEIA data related to its civilian workforce. At present, NASA's DEIA data is distributed across multiple platforms and organizations and structured in a complex web of interrelated, yet independently managed data domains. Firewalls and access controls create siloed data systems that in turn inhibit a common enterprise approach to DEIA data governance, resulting in incomplete data inventories and limited search capabilities. In addition, NASA does not maintain a data catalog—an inventory of data assets across all data sources to help organizations discover, understand, and consume data better. These independently deployed functions have led to disjointed and duplicative work efforts, tools, infrastructure, and resources related to DEIA data analysis.

According to OCHCO, obtaining DEIA data for analysis is often a time-consuming and resource-intensive endeavor. While these officials say demand for DEIA data is on the rise, staff spend more time finding where DEIA data is located and converting it into a readily usable format than they do using the data to inform timely and actionable insights. Further, duplication of efforts by different Centers and organizations to gather and analyze DEIA data results in wasted time and inconsistencies across the Agency. For instance, Center and organizations use different software, criteria, and data dictionaries to gather and categorize data and therefore the analysis of this data and outputs may be inconsistent. We found that some Centers build customized local databases to house data and hire statisticians to analyze the data, which compounds the problem of duplication, instead of aligning work for scale.

For example, ODEO has three databases that contain NASA employee or applicant demographic data: Workforce Information Cubes for NASA, Oracle Business Intelligence Enterprise Edition, and Business Objects (BOBJ). Each database is owned and maintained by a different NASA organization, and there can be discrepancies among the various data sources depending on the parameters and filters used. Additionally, limitations exist within each of these databases. Workforce Information Cubes for NASA is

[35] EDP is intended to centralize many of the Agency's data sources in the areas of HR, procurement, training, and safety. For the purposes of this audit, we focused on how EDP will centralize HR data and its relation to advancing DEIA.

intended to be used as a quick data pull for ethnicity and gender data only, while Oracle Business Intelligence Enterprise Edition is mainly used for reporting of demographic data to the EEOC. BOBJ provides organization-level HR data but does not contain data related to job applicants.

On the DEIA Maturity Model, OMB rated NASA at the lowest level for its the data-driven approach. NASA's DEIA self-assessment and its required EEOC reporting reveal several areas where data analyses are lacking or data is not widely available, including applicant data and composition of hiring panels. This lack of consistent data impacts NASA's ability to leverage data in decision-making, particularly regarding DEIA and workforce initiatives. As previously mentioned, NASA struggles with the lack of data to hold managers accountable, identify barriers to promotions, and transition its data analysis function from a compliance activity to a strategic decision-making tool. To address this issue, NASA management has made improving its data analytics a top priority in its DEIA efforts.

The 2022 DEIA Strategic plan calls for the consolidation of data sources into the EDP, envisioned as a "one-stop shop" for data virtualization and management, data modeling and analytics, data visualization, and data sharing. The purpose of the EDP is to provide actionable tools for storing, maintaining, analyzing, securing, and governing the data in a reusable manner. NASA intends for EDP to be the centralized data store that enables Agency management to evaluate root causes, enable performance assessments, and inform evidence-based discussions and decisions. Accurate and predictive data analytics underpins the Agency's DEIA future actions, and NASA's DEIA success hinges on the successful, sustained implementation of a centralized data repository.

Enterprise Data Platform Experiencing Significant Challenges

In FY 2021, the Office of the Chief Information Officer (OCIO) partnered with ODEO and OCHCO to roll out EDP and transition the Agency's DEIA data management and analytics from a decentralized to an enterprise approach. EDP's development, however, has been plagued by a lack of sustained funding, indecision, and delays.

Since its inception, EDP funding has been intermittent with the OCIO, ODEO, and OCHCO each funding the project as their budgets allowed. In FY 2022, OCIO secured $6.2 million to fund EDP for FYs 2023 and 2024, but funding beyond that is unknown. The Agency projects a tiered cost model for use of EDP (base service versus demand service) to fund the system past FY 2024. Base services include unlimited access to enterprise search information (search function) and unlimited access to data visualization (analytical function). Funding for the base services will come from the OCIO and include analytical and search functions, such as Center demographics data and data visualizations. The EDP base services also include OCIO coaching and user training. OCHCO and OCIO officials expect a lengthy transition period, even with coaching and training for users to move from legacy systems to fully using EDP for DEIA efforts, a transition that remains optional at this point.

EDP demand services are customized solutions specific to a customer's unique search and analytical needs. Demand services will be determined as organizations move to EDP and assess their specific needs. For example, mission directorates, Centers, and other organizations can customize the search functions and develop a unique data visualization built for their specific needs. According to OCIO officials, depending on the size and complexity of the data analytics required, analytics demand services can range from approximately $28,500 to almost $250,000 while search demand services can range from $150,000 to $600,000 for each set up. The OCIO's goal is to encourage EDP usage that reduces the

base cost requirement for OCIO in the outyears. However, this goal hinges on assumptions that the availability of a centralized, more advanced analytical tool will drive users to transition from legacy systems to the EDP. In our view, voluntary adoption of EDP remains uncertain given the familiarity with existing systems and the possible additional costs associated with EDP demand services.

Beyond its funding challenges, EDP has experienced delays due to the platform's lack of an overall governance and decision-making body to oversee and coordinate efforts among its various stakeholders. While the system was originally slated for completion in late 2020, that date was delayed. As EDP was being developed, no definitive DEIA data source existed and instead data used by the system originates from multiple data sources with numerous data owners. In addition, NASA lacks a data catalog—a single-place inventory of data assets across all data sources. Other technical issues such as firewalls, security, and search capabilities changed the scope of the project several times and resulted in delays and confusion as to the direction of the EDP and how it will be maintained or operated.

The Agency has been able to overcome several governance and technical issues to move the project forward, and in February 2023, the EDP received the authorization to operate. Nevertheless, with the Agency's data-driven approach to DEIA contingent on implementation of the EDP, uncertain funding and ongoing delays impact the Agency's ability to fully utilize EDP to make data-driven strategic and tactical DEIA decisions to advance the Agency's DEIA goals.

CONCLUSION

Over the past decade, NASA has taken action to promote DEIA in the workplace. NASA leadership has identified integrating DEIA into the Agency's culture as an Agency-wide goal. To do so, NASA has elevated inclusion as a core value, issued DEIA strategic plans, designated a Chief Diversity Officer, added DEIA elements to SES and supervisor performance plans, and invested in an enterprise DEIA database. Despite efforts to increase diversity, NASA's workforce demographics have largely remained static over the past decade.

We found the Agency has struggled to increase representation of women and minorities over the past 10 years and promote women and minorities to senior leadership positions. The results of the Agency's renewed focus on diversity remain to be seen. Increasing mid-level professional development and formal mentoring opportunities and analyzing barriers that limit employment opportunities will be imperative to fully embed DEIA into NASA culture. Furthermore, having accurate and reliable data ensures the Agency is most effective in its decision-making. Moving forward, NASA will need to take sustained and tangible actions to move DEIA from a compliance-driven, siloed approach to one integrated across Agency functions and embedded into Agency culture.

RECOMMENDATIONS, MANAGEMENT'S RESPONSE, AND OUR EVALUATION

To continue the Agency's efforts in ensuring a diverse workforce, we recommended the Associate Administrator for Diversity and Equal Opportunity and the Chief Human Capital Officer:

1. Ensure hiring and promotion managers across NASA receive appropriate training to increase DEIA awareness on topics such as implicit bias and inclusive leadership.
2. Ensure leadership-related professional development courses and detail assignments are widely available to prepare a more diverse cohort of employees for promotional opportunities.
3. Establish a comprehensive Agency-wide mentoring program for both mid-level (GS-11, GS-12, and GS-13) and senior level employees at all NASA Centers.
4. Conduct a barrier analysis to identify obstacles restricting women and minorities from senior management positions and develop a plan to address and eliminate these obstacles.
5. Develop a plan that consistently utilizes ERGs to conduct supplemental recruiting activities.
6. Conduct an analysis of all applicant data (similar to interns), including veterans, to better understand hiring trends and outcomes.

We also recommended the Deputy Administrator:

7. Designate an official or organization to oversee coordination between the stakeholders (OCIO, ODEO, and OCHCO) to develop a sustainable operation and funding structure for the EDP.

We provided a draft of this report to NASA management who concurred with recommendations 1 through 6, partially concurred with recommendation 7, and described their planned actions to address them. We consider management's comments responsive; therefore, the recommendations are resolved and will be closed upon completion and verification of the proposed corrective actions.

Management's comments are reproduced in Appendix D. Technical comments provided by management and revisions to address them have been incorporated as appropriate.

Major contributors to this report include Tekla Colón, Mission Support Audits Director; Julia Eggert, Assistant Director; Robert Rose, and Tiffany Xu. Norm Conley and Shari Bergstein provided data mining assistance and Sashka Mannion provided legal assistance. Courtney Daniels, Justin Lafreniere, and Lauren Suls provided editorial and graphics assistance.

If you have questions about this report or wish to comment on the quality or usefulness of this report, contact Laurence Hawkins, Audit Operations and Quality Assurance Director, at 202-358-1543 or laurence.b.hawkins@nasa.gov.

PAUL MARTIN

Digitally signed by PAUL MARTIN
Date: 2023.04.18 13:45:53 -04'00'

Paul K. Martin
Inspector General

APPENDIX A: SCOPE AND METHODOLOGY

We performed this audit from October 2021 through March 2023 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

The objective of this audit was to determine and evaluate NASA's efforts to advance DEIA. Specifically, we assessed NASA's current diversity efforts, determined how the Agency is updating and implementing policies and procedures to further diversity and inclusion, and evaluated whether the Agency collected sufficient and appropriate data. We also analyzed NASA demographic data at both the Agency and Center level from 2012 to 2021.

We reviewed federal and NASA criteria, policies, procedures, and supporting documentation; prior audit reports; external reviews; and other documents related to DEIA. We interviewed Agency officials including NASA's Deputy Administrator, officials from the ODEO including the Associate Administrator, NASA's Chief Human Capital Officer, and Deputy Chief Human Capital Officer, as well as numerous officials from the OCHCO, officials from the OCIO, Directors and Deputy Directors of Human Resources at nine NASA Centers, and representatives from various employee resource groups. We interviewed a DEIA program official from another federal agency to benchmark their processes and procedures to advance DEIA.

Assessment of Data Reliability

We assessed the validity and reliability of human capital data extracted from NASA's BOBJ system by (1) performing electronic testing of required data elements, (2) reviewing existing information about the data and the system that produced them, and (3) interviewing agency officials knowledgeable about the data who provided explanations for any inconsistencies in the data. We determined that the data was sufficiently reliable for the purposes of this report. Although the system is susceptible to errors from human input, we found the system's internal controls, including automated validity checks, reasonably sufficient to combat potential issues.

Review of Internal Controls

We assessed internal controls and compliance with laws and regulations associated with NASA's management of its DEIA program. Specifically, we assessed NASA's current DEIA efforts, determined how the Agency is updating and implementing policies and procedures to further its DEIA efforts, and evaluated whether the Agency collects sufficient and appropriate data. We also reviewed internal controls as they related to the overall objective. However, because our review was limited to these internal control components and underlying principles, it may not have disclosed all internal control deficiencies that existed at the time of this audit. Control weaknesses are identified and discussed in this report. Our recommendations, if implemented, will improve those identified weaknesses.

Prior Coverage

During the last 5 years, the NASA Office of Inspector General and GAO have issued five reports of significant relevance to DEIA at NASA and other federal agencies. Unrestricted reports can be accessed at https://oig.nasa.gov/audits/auditReports.html and http://www.gao.gov/, respectively.

NASA Office of Inspector General

2022 Report on NASA's Top Management and Performance Challenges (MC-2022, November 2022)

NASA's Management of Its Astronaut Corps (IG-22-007, January 11, 2022)

NASA'S Report on NASA's Top Management and Performance Challenges (MC-2021, November 15, 2021)

Government Accountability Office

Intelligence Community: Additional Actions Needed to Strengthen Workforce Diversity Planning and Oversight (GAO-21-83, December 17, 2020)

State Department: Additional Steps Are Needed to Identify Potential Barriers to Diversity (GAO-20-237, January 27, 2020)

APPENDIX B: NASA'S DEIA MATURITY MODEL

According to OMB, the DEIA Maturity Model enables agencies to identify their DEIA maturity along a continuum from building foundational capacity for DEIA work to leading and sustaining practices. In December 2021, OMB reviewed and scored NASA's DEIA approach in seven categories: Diversity Framework; Organizational Structure; DEIA Integration; DEIA Program Structure; Data-Driven Workplace Policy, Practices, and Procedures; SES and Leadership Involvement; and Culture of Inclusion. Four of these categories were divided into more specific subareas (20 total) that were also scored. There are a total of 23 DEIA scored categories.

NASA scored the highest ranking "Level 3 Leading and Sustaining" in the DEIA categories of Diversity Framework, Culture of Inclusion, and Recruitment. NASA scored the lowest ranking "Level 1 Foundational Capacity" in its Data-Driven Approach, Retention, and Pay and Compensation. OMB noted that NASA's data-driven approach only captures data for baseline reporting and compliance and that retention practices contain nondiscrimination compliant and investigation processes but do not provide information to employees about resources or actively work to mitigate barriers faced by employees in the workplace. OMB also noted that pay and compensation practices focus on compliance with nondiscrimination policies but do not advance DEIA goals or actively work to advance pay equity across the Agency. OMB scored 15 of the remaining 16 categories as "Level 2 Advancing Outcomes," with the final cateogry not having sufficient data to be scored. See Table 7 for an overview of NASA's DEIA Maturity Model with the Agency's ranking in the 23 DEIA scored categories highlighted in green.

Table 7: NASA DEIA Maturity Model Overview

Signals of Maturity	Level 1 Foundational Capacity	Level 2 Advancing Outcomes	Level 3 Leading and Sustaining
DEIA Approach	**Focused on complying with nondiscrimination legislation and regulatory requirements.**	**DEIA initiatives yielding improved results and outcomes driven by dedicated resources, strategic planning, goal setting, and evaluation. Agency practices promote the values of DEIA, but DEIA may not yet be integrated across agency mission and strategic planning.**	**DEIA is an integral part of overall Agency mission, vision, values, strategy, policies, and practices. Systematic implementation of DEIA driven through goal setting, data driven analysis, and continuous improvement. Agency undertakes structural reforms of policies and practices to mitigate barriers, if any.**
Diversity Framework	Definition of diversity confined to EEO categories.	Inclusive definition of underserved communities.	☑ Connecting, interrelated approach embraces multiple identities.
Organizational Structure	DEIA work may be under-resourced within the organization and/or decentralized across the Agency.	☑ DEIA work partially funded with limited integration across EEO, HR, civil rights, and diversity and inclusion program offices.	DEIA work fully resourced and led at highest levels of Agency leadership with significant and sustained SES responsibility.

Signals of Maturity	Level 1 Foundational Capacity	Level 2 Advancing Outcomes	Level 3 Leading and Sustaining
DEIA Integration	DEIA work may be siloed within the Agency and/or disconnected from mission and strategic planning.	☑ DEIA goals reflected in Agency strategic planning.	DEIA goals fully and strategically integrated with Agency strategic planning, performance management, and learning agendas.
DEIA Program Structure ***Sub area:*** *Resources*	DEIA may be an unfunded mandate within the Agency; DEIA initiatives and programs may not have dedicated resources.	☑ Limited funding, pending funding request and/or existing infrastructure/teams being leveraged to support the DEIA function.	Appropriate funding and staffing connecting to specific metrics that are established for budget justifications for increased funding for DEIA. Continuous assessment of return on DEIA investments.
DEIA Program Structure ***Sub area:*** *Program Management*	Management of DEIA initiatives may be decentralized within the Agency and/or DEIA programs are not led by senior leadership.	☑ Senior managers have been assigned with program responsibility within the Agency but DEIA initiatives are not yet driven by senior-most leaders with a direct line to the Secretary or Agency head.	Chief Diversity Officer or Diversity and Inclusion Officer has direct line to Secretary or Agency head and coordinates DEIA policies and initiatives across Agency.
Data-Driven Workplace Policy, Practices and Procedures ***Sub area:*** *Data-Driven Approach*	☑ Agency captures data for baseline reporting and compliance.	Agency captures comprehensive data and monitors outcomes via dashboards that are used to inform decision-making.	Agency subject matter experts and general managers leverage data to monitor outcomes and conduct root cause analysis.
Data-Driven Workplace Policy, Practices and Procedures ***Sub area:*** *Policy Development*	Agency policies meet legislative and regulatory requirements and Agency assesses barriers to employment.	☑ Agency regularly evaluates and addresses systemic and cultural barriers, if any, across the talent life cycle for all employees, including those from underserved communities.	Agency regularly assesses practices, addresses any potential barriers, analyzes data, and broadly communicates results/outcomes with the workforce and public.
Data-Driven Workplace Policy, Practices and Procedures ***Sub area:*** *Recruitment*	Recruitment policies and practices may focus on non-discrimination of diverse candidates.	Recruitment policies and practices proactively advance DEIA goals and actively promote diversity.	☑ Recruitment policies and practices strategically integrate DEIA goals, explore opportunities to achieve more equitable outcomes, and actively work to mitigate the effects of systemic bias on underserved communities.
Data-Driven Workplace Policy, Practices and Procedures ***Sub area:*** *Hiring*	Hiring policies and practices focus on compliance with nondiscrimination laws or take basic steps to promote DEIA.	☑ Hiring policies and practices proactively advance DEIA goals and actively promote diversity.	Hiring policies and practices strategically integrate DEIA goals, explore opportunities to achieve more equitable outcomes, and actively work to mitigate the effects of systemic bias on underserved communities.
Data-Driven Workplace Policy, Practices and Procedures ***Sub area:*** *Promotion*	Promotion policies and practices focus on compliance with nondiscrimination protections.	☑ Promotion policies and practices proactively advance DEIA goals and actively promote diversity.	Promotion policies and practices strategically integrate DEIA goals, explore opportunities to achieve more equitable outcomes, and actively work to mitigate the effects of systemic bias on underrepresented communities.

Signals of Maturity	Level 1 Foundational Capacity	Level 2 Advancing Outcomes	Level 3 Leading and Sustaining
Data-Driven Workplace Policy, Practices and Procedures ***Sub area:*** *Retention*	☑ Retention practices include nondiscrimination complaint and investigation processes.	Retention practices proactively advance DEIA goals and provide information about resources to employees.	Retention practices actively work to mitigate barriers faced by employees in the workplace, including employees from underrepresented communities.
Data-Driven Workplace Policy, Practices and Procedures ***Sub area:*** *Professional Development*	Professional development programs do not include DEIA content and/or only convey information to employees about opportunities.	☑ Professional development programs proactively advance DEIA by including targeted DEIA content.	Professional development programs strategically advance equity for employees by mitigating barriers, including for employees from underserved communities.
Data-Driven Workplace Policy, Practices and Procedures ***Sub area:*** *Pay and Compensation*	☑ Pay and compensation practices focus on compliance with nondiscrimination policies.	Pay and compensation policies advance DEIA goals and seek to improve fair pay.	Pay and compensation policies actively work to advance pay equity across the Agency.
Data-Driven Workplace Policy, Practices and Procedures ***Sub area:*** *Reasonable Accommodation for Employees and Applicants with Disabilities*	Reasonable accommodations policies focus on compliance with nondiscrimination laws.	☑ Reasonable accommodations policies seek to improve employee experiences and promote opportunity for employees with disabilities.	Reasonable accommodations policies advance accessibility Agency-wide and advance equity for Americans with disabilities.
Data-Driven Workplace Policy, Practices and Procedures ***Sub area:*** *DEIA Training*	DEIA trainings may be underfunded, have limited availability, and/or meet minimum requirements for accessibility.	☑ DEIA trainings proactively advance equity by promoting a culture of inclusion.	DEIA trainings are an integral part of the Agency-wide learning agenda and are strategically leveraged to advance Agency-wide equity goals.
Data-Driven Workplace Policy, Practices and Procedures ***Sub area:*** *Workplace Safety and Sexual Harassment*	Workplace safety policies focus on compliance with laws and mandates, and the Agency has written workplace safety policies in place.	☑ Agency proactively advances DEIA through robust implementation of written workplace safety policies.	Workplace safety policies are promoted by the senior-most leaders within the Agency and are an integral part of workplace culture.
Data-Driven Workplace Policy, Practices and Procedures ***Sub area:*** *Inclusive Workplace Culture*	Agency may lack inclusive workplace programming and/or programming is limited in scope.	Agency proactively advances DEIA values in workplace culture.	☑ Agency integrates workplace inclusion measures into overall performance management and strategic planning.
Data-Driven Workplace Policy, Practices and Procedures ***Sub area:*** *Reasonable Accommodation for Employees Seeking a Religious Accommodation* ***Not Enough Data to Score NASA***	Reasonable accommodations policies focused on compliance with non-discrimination laws and mandates.	Agency takes proactive steps to advance inclusion for employees who are people of faith and improves the experience of accessing religious accommodations.	Agency embeds inclusion of employees of all faiths and religious beliefs throughout workplace culture and continuously improves the religious accommodations process.
SES and Leadership Involvement ***Sub area:*** *Engagement*	Leaders endorse DEIA and encourage participation/ participate in some workforce DEIA events/observances.	☑ Leaders regularly elicit employee feedback and seek support from ERGs.	Leaders model and champion DEIA consistently.

Signals of Maturity	Level 1 Foundational Capacity	Level 2 Advancing Outcomes	Level 3 Leading and Sustaining
SES and Leadership Involvement ***Sub area:*** *Accountability*	Agency may lack clear accountability structures to ensure leaders are involved in promoting and advancing DEIA within the workplace, or DEIA is promoted by leaders who feel personally motivated.	☑ Leaders are held accountable for DEIA actions/outcomes, as appropriate, by way of their performance evaluations.	Leaders integrate DEIA into their decision-making process, governance structure, mission, and goals.
Culture of Inclusion ***Sub area:*** *Strategy*	Agency may have ad hoc or standalone initiatives focused on raising awareness of the benefits of an inclusive workplace culture.	Agency has clear mission, vision, and values that reflect a commitment to DEIA and alignment to internal and external brand in the language used to promote DEIA.	☑ Agency has a formal DEIA strategy, including milestones/timelines and ongoing evaluation of effectiveness.
Culture of Inclusion ***Sub area:*** *Employee Experience*	Agency builds employee engagement/ERGs on an ad hoc basis.	☑ Agency adopts inclusion programs and initiatives that align with Agency-wide DEIA and mission goals.	Agency leverages the diverse backgrounds of employees and ERGs to enhance results of Agency programs and initiatives.
Culture of Inclusion ***Sub area:*** *Accessibility*	Agency meets legislative and regulatory requirements for access needs and reasonable accommodations.	☑ Agency makes key investments to improve and expand accessibility proactively across the organization.	Agency proactively assesses the environment for barriers to accessibility and makes improvements based on continual evaluation of data and changes in legal requirements.

Source: OMB ranking of NASA's DEIA posture against the DEIA Maturity Model (December 14, 2021).

Note: This table has been adapted from its original OMB format.

APPENDIX C: NASA CENTER DEMOGRAPHICS FROM 2012 TO 2021

These tables present the civil service workforce demographics at each NASA Center, the NASA Shared Services Center, and the Office of Inspector General over the last decade.[36]

Table 8: Demographics of Ames Research Center Employees between 2012 and 2021

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Gender										
Female	32.1%	32.1%	32.2%	32.0%	32.3%	32.6%	33.5%	33.6%	33.4%	34.4%
Male	67.9	67.9	67.8	68.0	67.7	67.4	66.5	66.4	66.6	65.6
Total Ames Employees	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Race and Ethnicity										
Black or African American	5.2%	5.4%	5.6%	5.8%	5.7%	5.8%	5.9%	5.7%	5.8%	6.0%
Asian American	20.2	20.5	20.1	20.3	20.2	20.3	20.5	21.6	22.3	23.3
Hispanic	9.3	9.0	8.9	9.3	9.5	9.7	9.9	10.1	11.0	11.0
Multiethnic	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.5	0.5
Native American	1.4	1.3	1.3	1.4	1.2	1.2	1.2	1.0	0.9	0.9
Native Hawaiian OPI	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.5	0.5	0.5
Undeclared	0.0	0.0	0.0	0.0	0.2	0.6	0.6	0.4	0.2	1.0
White	63.2	63.1	63.3	62.5	62.5	61.7	60.9	60.1	58.8	56.9
Total Ames Employees	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Source: OCHCO's Tableau Dashboard as of July 26, 2022. Amounts are rounded and total employee percentages may not equal 100.

[36] The Jet Propulsion Laboratory employs approximately 40 civil service employees whose demographic data is included with NASA Headquarters.

Table 9: Demographics of Armstrong Flight Research Center Employees between 2012 and 2021

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Gender										
Female	24.5%	22.8%	22.4%	22.8%	23.8%	23.4%	22.8%	23.3%	23.6%	23.7%
Male	75.5	77.2	77.6	77.2	76.2	76.6	77.2	76.7	76.4	76.3
Total Armstrong Employees	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Race and Ethnicity										
Black or African American	5.0%	4.8%	5.1%	5.8%	5.3%	5.2%	5.2%	5.4%	5.8%	5.3%
Asian American	10.1	9.7	10.7	10.5	10.4	11.0	11.6	11.4	11.2	12.0
Hispanic	9.3	9.8	10.2	11.3	12.7	13.9	13.9	14.6	14.8	15.0
Multiethnic	0.8	0.7	0.7	0.5	0.7	0.7	0.7	0.7	0.9	1.0
Native American	1.9	2.2	2.1	2.3	2.3	2.3	2.2	2.3	2.2	2.7
Native Hawaiian OPI	1.0	1.0	0.8	0.7	0.5	0.7	0.7	0.7	0.7	0.7
Undeclared	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
White	71.8	71.8	70.2	68.9	68.2	66.2	65.8	65.0	64.4	62.3
Total Armstrong Employees	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Source: OCHCO's Tableau Dashboard as of July 26, 2022. Amounts are rounded and total employee percentages may not equal 100.

Table 10: Demographics of Glenn Research Center Employees between 2012 and 2021

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Gender										
Female	30.4%	29.9%	30.2%	30.3%	29.9%	29.0%	29.3%	29.3%	28.8%	29.4%
Male	69.6	70.1	69.8	69.7	70.1	71.0	70.7	70.7	71.2	70.6
Total Glenn Employees	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Race and Ethnicity										
Black or African American	10.2%	10.1%	10.0%	9.9%	9.4%	9.3%	8.9%	8.5%	8.6%	8.5%
Asian American	6.3	6.3	6.4	6.1	6.3	6.3	6.3	6.3	6.4	6.5
Hispanic	4.9	5.0	5.0	4.9	5.1	5.1	5.3	5.6	5.7	6.1
Multiethnic	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.2
Native American	0.9	0.9	0.9	0.8	0.9	0.8	0.8	0.6	0.4	0.4
Native Hawaiian OPI	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Undeclared	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.3
White	77.5	77.6	77.5	78.0	78.1	78.3	78.5	78.7	78.4	77.9
Total Glenn Employees	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Source: OCHCO's Tableau Dashboard as of July 26, 2022. Amounts are rounded and total employee percentages may not equal 100.

Table 11: Demographics of Goddard Space Flight Center Employees between 2012 and 2021

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Gender										
Female	38.6%	38.4%	38.3%	38.5%	38.0%	37.4%	37.3%	37.0%	36.5%	36.4%
Male	61.4	61.6	61.7	61.5	62.0	62.6	62.7	63.0	63.5	63.6
Total Goddard Employees	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Race and Ethnicity										
Black or African American	16.7%	16.7%	16.7%	16.8%	16.5%	16.0%	15.8%	15.8%	15.6%	15.2%
Asian American	7.9	8.0	8.3	8.5	8.4	8.8	8.9	9.3	10.0	10.4
Hispanic	5.4	5.3	5.3	5.5	5.9	6.1	6.3	6.5	6.9	6.9
Multiethnic	0.1	0.1	0.1	0.2	0.3	0.4	0.3	0.4	0.4	0.4
Native American	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.5	0.5
Native Hawaiian OPI	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1
Undeclared	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
White	69.3	69.2	69.0	68.4	68.2	67.9	67.8	67.3	66.5	66.2
Total Goddard Employees	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Source: OCHCO's Tableau Dashboard as of July 26, 2022. Amounts are rounded and total employee percentages may not equal 100.

Table 12: Demographics of Headquarters Employees between 2012 and 2021

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Gender										
Female	49.5%	48.9%	49.1%	48.8%	48.1%	47.1%	47.9%	48.1%	49.1%	50.2%
Male	50.5	51.1	50.9	51.2	51.9	52.9	52.1	51.9	50.9	49.8
Total Headquarters Employees	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Race and Ethnicity										
Black or African American	25.6%	25.7%	24.9%	25.0%	24.8%	24.8%	24.4%	23.7%	22.4%	21.5%
Asian American	5.0	5.6	5.6	6.2	5.9	6.0	6.3	7.1	7.5	7.4
Hispanic	3.7	4.0	4.1	4.9	5.4	6.0	5.7	6.1	6.9	7.5
Multiethnic	0.5	0.6	0.6	0.5	0.5	0.7	0.7	0.6	0.4	0.5
Native American	0.4	0.5	0.6	0.6	0.4	0.5	0.6	0.6	0.8	0.8
Native Hawaiian OPI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Undeclared	0.0	0.0	0.0	0.0	0.1	0.5	0.2	0.1	0.0	0.4
White	64.9	63.6	64.2	62.8	62.9	61.5	62.2	61.7	62.0	61.9
Total Headquarters Employees	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Source: OCHCO's Tableau Dashboard as of July 26, 2022. Amounts are rounded and total employee percentages may not equal 100.

Table 13: Demographics of Johnson Space Center Employees between 2012 and 2021

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Gender										
Female	35.6%	35.3%	35.8%	35.6%	35.4%	35.3%	35.1%	35.5%	35.4%	35.6%
Male	64.4	64.7	64.2	64.4	64.6	64.7	64.9	64.5	64.6	64.4
Total Johnson Employees	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Race and Ethnicity										
Black or African American	9.0%	9.2%	9.2%	9.5%	9.2%	9.2%	9.1%	8.8%	8.7%	8.6%
Asian American	6.4	6.5	6.8	6.7	6.9	7.1	7.3	7.4	7.8	8.5
Hispanic	10.1	10.4	11.0	11.3	11.7	12.2	12.3	12.4	12.5	12.7
Multiethnic	0.2	0.2	0.3	0.3	0.4	0.3	0.4	0.4	0.4	0.5
Native American	1.0	1.0	0.9	0.9	1.0	1.0	0.9	0.9	0.9	0.8
Native Hawaiian OPI	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Undeclared	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.4
White	73.1	72.5	71.5	71.0	70.6	69.8	69.7	69.9	69.5	68.3
Total Johnson Employees	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Source: OCHCO's Tableau Dashboard as of July 26, 2022. Amounts are rounded and total employee percentages may not equal 100.

Table 14: Demographics of Kennedy Space Center Employees between 2012 and 2021

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Gender										
Female	33.9%	33.4%	33.2%	33.0%	32.4%	32.5%	32.7%	32.9%	32.9%	33.5%
Male	66.1	66.6	66.8	67.0	67.6	67.5	67.3	67.1	67.1	66.5
Total Kennedy Employees	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Race and Ethnicity										
Black or African American	7.9%	7.7%	7.8%	7.8%	7.5%	7.4%	7.3%	7.5%	7.6%	7.8%
Asian American	4.6	5.1	5.1	5.2	5.3	5.4	5.4	5.5	5.4	5.5
Hispanic	10.9	11.2	11.5	12.2	12.8	13.2	13.5	13.7	14.3	14.6
Multiethnic	0.1	0.1	0.1	0.2	0.3	0.3	0.4	0.4	0.4	0.5
Native American	1.2	1.2	1.2	1.3	1.4	1.6	1.5	1.6	1.4	1.3
Native Hawaiian OPI	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2
Undeclared	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
White	75.1	74.5	74.0	73.1	72.5	71.9	71.6	71.0	70.6	69.4
Total Kennedy Employees	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Source: OCHCO's Tableau Dashboard as of July 26, 2022. Amounts are rounded and total employee percentages may not equal 100.

Table 15: Demographics of Langley Research Center Employees between 2012 and 2021

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Gender										
Female	29.6%	29.0%	28.5%	28.2%	28.0%	28.2%	27.9%	26.9%	27.7%	27.9%
Male	70.4	71.0	71.5	71.8	72.0	71.8	72.1	73.1	72.3	72.1
Total Langley Employees	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Race and Ethnicity										
Black or African American	10.4	9.7	9.5	9.1	9.3	9.1	9.2	8.7	8.8	8.4
Asian American	5.7	5.7	5.5	5.7	5.7	6.2	6.4	6.7	6.8	7.2
Hispanic	3.2	3.2	3.4	3.6	3.6	4.0	4.2	4.6	4.8	5.1
Multiethnic	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3
Native American	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8
Native Hawaiian OPI	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Undeclared	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.6
White	79.4	80.1	80.3	80.3	80.0	79.5	78.9	78.8	78.4	77.6
Total Langley Employees	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Source: OCHCO's Tableau Dashboard as of July 26, 2022. Amounts are rounded and total employee percentages may not equal 100.

Table 16: Demographics of Marshall Space Flight Center Employees between 2012 and 2021

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Gender										
Female	34.3%	34.3%	34.3%	34.3%	33.7%	33.7%	33.3%	34.3%	34.4%	34.6%
Male	65.7	65.7	65.7	65.7	66.3	66.3	66.7	65.7	65.6	65.4
Total Marshall Employees	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Race and Ethnicity										
Black or African American	11.4%	11.8%	11.9%	12.1%	12.1%	12.3%	12.0%	11.8%	11.3%	11.0%
Asian American	2.6	2.7	2.8	2.9	3.1	3.3	3.4	3.4	3.5	3.7
Hispanic	2.6	2.9	3.0	3.1	3.1	3.4	3.7	3.9	4.1	4.8
Multiethnic	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2
Native American	1.9	1.9	2.0	2.0	2.1	1.8	1.8	1.7	1.7	1.6
Native Hawaiian OPI	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1
Undeclared	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2
White	81.3	80.5	80.1	79.8	79.3	79.0	78.8	78.9	79.0	78.4
Total Marshall Employees	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Source: OCHCO's Tableau Dashboard as of July 26, 2022. Amounts are rounded and total employee percentages may not equal 100.

Table 17: Demographics of NASA Shared Services Center Employees between 2012 and 2021

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Gender										
Female	61.2%	61.3%	60.3%	60.7%	63.7%	63.6%	63.8%	67.6%	68.9%	69.7%
Male	38.8	38.7	39.7	39.3	36.3	36.4	36.2	32.4	31.1	30.3
Total Shared Services Employees	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Race and Ethnicity										
Black or African American	21.1%	20.4%	19.9%	20.7%	28.0%	27.8%	25.0%	25.4%	25.1%	25.4%
Asian American	2.0	1.4	1.5	1.4	1.3	1.3	0.7	2.3	2.2	1.6
Hispanic	4.6	4.9	5.9	5.0	4.5	5.3	4.6	5.2	5.5	4.8
Multiethnic	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5
Native American	1.3	1.4	1.5	2.1	1.3	1.3	1.3	1.2	0.5	0.5
Native Hawaiian OPI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
Undeclared	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
White	71.1.	71.8	71.3	70.7	65.0	64.2	68.4	65.9	66.1	66.7
Total Shared Services Employees	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Source: OCHCO's Tableau Dashboard as of July 26, 2022. Amounts are rounded and total employee percentages may not equal 100.

Table 18: Demographics of Office of Inspector General Employees between 2012 and 2021

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Gender										
Female	40.6%	40.9%	38.6%	38.7%	39.7%	39.7%	38.1%	37.4%	40.5%	41.3%
Male	59.4	59.1	61.4	61.3	60.3	60.3	61.9	62.6	59.5	58.7
Total Inspector General Employees	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Race and Ethnicity										
Black or African American	14.8%	14.9%	12.9%	12.3%	11.4%	11.5%	12.4%	13.1%	13.2%	14.3%
Asian American	8.7	8.4	8.1	6.6	6.2	6.0	6.7	6.1	6.8	6.3
Hispanic American	4.4	5.1	5.2	6.1	6.7	6.0	6.2	6.1	5.9	6.4
Multiethnic	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.5	0.5
Native American	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.0	1.0
Native Hawaiian OPI	0.4	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0
Undeclared	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
White	71.2	70.7	72.9	74.1	74.8	75.5	73.7	73.7	72.7	70.9
Total Inspector General Employees	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Source: OCHCO's Tableau Dashboard as of July 26, 2022. Amounts are rounded and total employee percentages may not equal 100.

Table 19: Demographics of Stennis Space Center Employees between 2012 and 2021

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Gender										
Female	39.3%	39.1%	37.4%	36.9%	36.2%	35.4%	34.3%	34.1%	34.5%	33.6%
Male	60.7	60.9	62.6	63.1	63.8	64.6	65.7	65.9	65.5	66.4
Total Stennis Employees	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Race and Ethnicity										
Black or African American	13.8%	13.4%	14.5%	14.6%	14.8%	15.4%	15.4%	14.4%	13.3%	11.8%
Asian American	1.9	2.4	2.4	3.0	2.7	2.8	2.8	2.6	2.7	3.1
Hispanic	3.4	3.3	3.3	3.6	3.6	4.0	4.1	3.9	3.4	3.8
Multiethnic	0.0	0.3	0.3	0.3	0.6	0.6	0.6	0.0	0.0	0.0
Native American	1.3	1.5	1.5	1.5	1.5	1.2	1.3	2.0	2.0	2.1
Native Hawaiian OPI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3
Undeclared	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
White	79.7	79.2	78.1	76.9	76.7	76.0	75.8	76.7	78.2	78.2
Total Stennis Employees	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Source: OCHCO's Tableau Dashboard as of July 26, 2022. Amounts are rounded and total employee percentages may not equal 100.

APPENDIX D: MANAGEMENT'S COMMENTS

National Aeronautics and Space Administration

Mary W. Jackson NASA Headquarters
Washington, DC 20546-0001

April 10, 2023

' to Attn of: Office of Diversity and Equal Opportunity and Office of the Chief Human Capital Officer

TO: Assistant Inspector General for Audits

FROM: Associate Administrator for Diversity and Equal Opportunity (Acting)
Chief Human Capital Officer (Acting)

SUBJECT: Agency Response to OIG Draft Report, "NASA's Efforts to Increase Diversity in Its Workforce" (A-21-017-00)

The National Aeronautics and Space Administration (NASA) appreciates the opportunity to review and comment on the Office of Inspector General (OIG) draft report entitled, "NASA's Efforts to Increase Diversity in Its Workforce" (A-21-017-00), dated March 13, 2023.

In the draft report, the OIG states that over the past decade, NASA has taken action to promote diversity, equity, inclusion, and accessibility (DEIA) in the workplace but has made little progress increasing representation of women and minorities in the workforce and in leadership positions. Also, the OIG determined that the Agency has struggled to increase representation of women and minorities over the past ten years and promote women and minorities to senior leadership positions.

Specifically, the OIG recommends the following:

To continue the Agency's efforts in ensuring a diverse workforce, the OIG recommends the Associate Administrator for Diversity and Equal Opportunity and the Chief Human Capital Officer:

Recommendation 1: Ensure hiring and promotion managers across NASA receive appropriate training to increase DEIA awareness on topics such as implicit bias and inclusive leadership.

Management's Response: NASA concurs. The Office of the Chief Human Capital Officer (OCHCO) is developing a plan to develop Agency-level guidance to improve and standardize the non-executive talent assessment processes across the Agency, including efforts to better educate hiring managers on their responsibilities and increase awareness on topics such as developing effective interview protocols, unconscious bias, implicit bias, and inclusive leadership. Once this guidance is finalized, we will incorporate it into our HR101 training course for newly selected hiring managers. Offered twice a year, this

training raises awareness about bias in the selection process. In addition, we will use the finalized guidance to update the NASA Semi-Structured Interview Guide, a just-in-time training resource that helps hiring managers navigate the selection process and provides information about common rating biases and mitigation strategies.

Estimated Completion Date: December 31, 2023.

Recommendation 2: Ensure leadership-related professional development courses and detail assignments are widely available to prepare a more diverse cohort of employees for promotional opportunities.

Management's Response: NASA concurs.

Leadership Development Courses
To enhance our efforts to ensure that leadership development courses are widely available, we are currently piloting a process to capture relevant participation data. This will enable us to produce better analytics on the eligibility pool, submitted applications, the pool of down-selected applicants, and the final selectees. These analytics inform our decision-making for key elements of our competitive leadership development programs. This will enable us to track trends for participation rates for women and minorities in these leadership development programs.

OCHCO uses a comprehensive approach to publicize all leadership development course offerings in multiple ways:

- We provide a SharePoint course listing what is available to every employee; Center Learning Officers (CLOs) directly communicate these offerings to their Center workforce. In addition, courses/programs are listed in SATERN, our internal learning management system. Courses are published on internal webpages available to every NASA employee.
- To further the diverse distribution, informational Q&A sessions are held with targeted groups (i.e., Employee Resource Groups (ERG)) to engage potential candidates for competitive leadership development programs.
- For competitive leadership development programs, we use Talent Marketplace to maximize access to available leadership development opportunities and to ensure that any applicant wanting to apply can do so without barriers.
- We utilize Human Resources Messaging System messages that are customized and sent to the targeted audience (i.e., supervisors, GS 11-12, GS 13-14, GS-15s). The Executive Cadre is engaged via a distribution list/e-mail service that reaches the entire NASA Executive population.

Estimated Completion Date: December 31, 2023.

Detail Assignments

- OCHCO utilizes the Talent Marketplace (TMP) to facilitate detail opportunities and reassignments, as well as the employee application process for cohort leadership development programs and details. TMP is available to all NASA employees.
- In addition, OCHCO is currently developing additional Agency guidance on the use of details, including a revamp of NASA Procedural Requirements (NPR) 3300.1C, Employment, Appointment Authorities, and Details, which currently expires on December 1, 2023. We will propose updated guidance on widely advertising leadership detail assignments.

Estimated Completion Date: December 1, 2023.

Recommendation 3: Establish a comprehensive Agency-wide mentoring program for both mid-level (GS-11, GS-12, and GS-13) and senior level employees at all NASA Centers.

Management's Response: NASA concurs.

We currently use nine mentoring programs throughout the Agency that are managed at the Center or Mission Directorate level.

OCHCO is also implementing an Agency-wide pilot with a mentoring platform that is available to all (inclusive of GS-11, GS-12, GS-13, and senior-level employees). This mentoring program pilot intends to increase employee engagement and exposure to diverse experiences; share internal knowledge; support an innovative workforce; and build the skills, networks, and confidence needed to succeed in their career and eventually move into leadership positions. Continuation, post-pilot, of this Agency-wide pilot mentoring platform is contingent upon available funding.

We use the 70/20/10 learning framework to develop the workforce personally and professionally in multiple ways. The 20 percent includes learning opportunities through mentoring, coaching, and sponsorship. We also provide BetterUp coaching services to all new supervisors, which represents a significant investment in our supervisors' leadership development. Additionally, BetterUp has specialty coaches in DEIA that are available and utilized by our supervisors.

Estimated Completion Date: December 31, 2023.

Recommendation 4: Conduct a barrier analysis to identify obstacles restricting women and minorities from senior management positions and develop a plan to address and eliminate these obstacles.

Management's Response: NASA concurs.

Current Barrier Analysis Efforts

- NASA identified workforce triggers for Women and Asian Americans and Pacific Islanders (AAPI) within Physical Science occupations, when compared to the Relevant Civilian Labor Force. The Agency is conducting a barrier analysis to explore potential underlying root causes of these discrepancies. The barrier analysis focuses on Physical Science jobs with the highest numbers of employees – Physical Scientists (job series 1301), Physicists (job series 1310), and Space Scientists (job series 1330).

- NASA is using a multiphase barrier analysis process to systematically assess representation in the Physical Science Occupational Series. Phase 1 examined the general representation of demographic groups within the various Physical Science occupations. Phases 2 and 3 examined existing personnel data, such as data on losses and hires, to identify factors that may contribute to discrepancies discovered in Phase 1. In Phase 4, NASA deployed a systematic set of questions to gather more information about triggers uncovered in Phases 1-3. In Phases 5-6, the Agency will use qualitative and quantitative data collection techniques to obtain input from members of potentially affected demographic groups. Finally, in Phase 7, NASA will identify root causes of potential barriers and develop corrective actions.

Estimated Completion Date: December 31, 2023.

Future Barrier Analysis Efforts

- In Fiscal Year (FY) 2024, the Office of Diversity and Equal Opportunity (ODEO) will begin a barrier analysis regarding Women, AAPI, and Individuals With Disabilities.

- ODEO will initiate a barrier analysis regarding grade progression for women and minorities, given that NASA's most recent FY 2022 MD-715, Model Equal Opportunity Program Status Report, revealed that the percentage of minorities and women decreases as grade levels increase. For example, in FY 2022, Hispanics and Latinos accounted for 10.9 percent of NASA employees at grades GS-13 and below, 7.5 percent at grades GS-14 and GS-15, and 5.3 percent of the SES. Women accounted for 40.8 percent of those in grades GS-13 and below, 31.7 percent in grades GS-14 and GS-15, and 36.5 percent of those in the SES. Although the percentages of minorities and women in each of these age groups has increased slightly since FY 2017, the inverse proportionality for women and minorities in higher grade levels has remained.

Capability Improvements Planned

- In FY 2023, ODEO launched an effort to increase both the efficiency and effectiveness of the manually intensive, two-year barrier analysis process. As ODEO implements a DEIA Analytics Capability within the Enterprise Data Platform (EDP), the majority of the collection, computation, and presentation of data needed to

identify triggers and scope future barrier analyses will be automated. This process improvement will enable the Agency to increase the completion of barrier analyses from one every two years to two to three per year.

- In the third quarter of FY 2023, ODEO will deploy a Tableau application within the EDP that will automate key MD-715 tables and trigger analysis logic, which can nominally take upwards of nine months to create in support of the initial stages of a new barrier analysis.

Recommendation 5: Develop a plan that consistently utilizes ERGs to conduct supplemental recruiting activities.

Management's Response: NASA concurs. OCHCO has relied on input from the ERGs to inform and support our Agency recruitment efforts. From collecting feedback from ERG members to updating NASA's Employer Value Proposition to gathering input to develop talent communities, ERGs are vital in our ability to communicate with diverse candidate pools. We plan to continue building and expanding on these efforts going forward.

Talent Communities

- OCHCO will coordinate with ERGs to continue to grow our existing talent communities focused on reaching candidates in targeted demographic pools. The Women and Veterans ERGs were critical in gathering input to develop our Women in Science, Technology, Engineering and Math and Veterans and Military Spouses talent communities. *(Completed.)* We continue to work with ERGs to provide these talent communities with ongoing communications about what it is like to work at NASA, DEIA-related initiatives, job announcements, and more.
- We will continue to work with additional ERGs to develop new talent communities such as People with Disabilities. *(In development.)*
- Under the current Agency administration, we have expanded our use of ERGs to identify information about initiatives across the Agency that we highlight in our communications to potential applicant pools. We also use this information to promote DEIA as an integral part of NASA's employer brand through our digital recruitment platforms on social media such as LinkedIn and NASAPeople on Twitter. *(This effort has been established and is ongoing/continuous.)*
- To facilitate a more consistent exchange of information, we plan to leverage ODEO's new ERG Program Lead to serve as a single point of contact for communicating with ERGs across the Agency. We have also developed a Talent Communities page on OneNASA with more information about our current talent communities, which includes a form for ERG members to submit information to support these recruitment efforts *(in work)*.

Estimated completion date:

- The Women in STEM and Veterans talent communities were established in 2020 and 2021 respectively. We continue to provide ongoing communications to these candidate pools.

- The launch of the People with Disabilities talent community is estimated for Summer/Fall 2023.
- The ERG communication process with ODEO's ERG Program Lead will be established by Fall 2023.

Recruitment Ambassadors

- ERG members can serve as trusted recruitment messengers, especially to their constituent groups. In 2021 and 2022, OCHCO provided resources for ERGs to support outreach to their networks for Pathways vacancies. We plan to extend this effort and provide tools and resources to support all job opportunities at NASA—from entry to the most senior levels. This will be part of a larger Recruitment Toolkit provided to employees with tips and resources on how to share NASA's employer brand, careers, and job information on digital platforms.
- In addition, as more people are returning to in-person recruitment events, we are working to develop a more collaborative framework for capturing events and conferences where recruitment activities may be taking place. We plan to provide resources in the Recruitment Toolkit (such as recruitment training, recruitment materials, etc.) to help employees and ERG members be better recruitment representatives or "ambassadors" for the Agency. This information will be housed on our OneNASA site.
- As part of the Recruitment Ambassador Program, we will develop a network to easily find ambassadors across the Agency (based on skillsets, affinity group, etc.) to attend recruitment events on behalf of NASA. We will also share planned events that ERG members can participate in. We will utilize input from ERGs to identify gaps in our outreach and identify additional events to participate in to ensure we are maximizing our reach to diverse candidates. We will develop this program into a community of practice and will communicate with members regularly through meetings, Microsoft Teams sites, and others.

Estimated Completion Date: December 31, 2023.

Special Emphasis Programs

- Special Emphasis Programs are regulatory programs established to increase representation of underserved groups in the Federal service, support their professional development, and enable their career advancement into the leadership ranks.
- ODEO's Special Emphasis Program managers serve as advisors to ERGs and inform the ERGs on issues, triggers, and known barriers related to outreach and recruitment.
- ERGs will be offered the opportunity to participate in ODEO-funded outreach activities.

Estimated completion date: December 31, 2023.

New NPRs on DEIA Strategic Governance Structure and Program, Including Special Emphasis Program and Employee Resource Group Management

- NPRs establish policies, procedures, and roles and responsibilities under which the NASA DEIA strategic governance structure operates and addresses specific roles and the operational relationship between Special Emphasis Programs (SEPs) and ERGs.

- Help to ensure leadership support, resources, and recognition of SEP and ERG work and commitment to DEIA and the NASA mission.
- Further clarify and reinforce how ERGs contribute to the Agency's mission and enhance DEIA outcomes through initiatives that support employee recruiting, onboarding, and retention by:
    a. Helping to conduct targeted recruitment efforts that attract highly qualified applicants from all segments of society;
    b. Disseminating intern application announcements to partner organizations in the academic, corporate, government, and non-profit sectors; and
    c. Helping to introduce and onboard new and current employees, including interns and post-docs, to organizational culture and workforce norms.

Estimated completion date: September 30, 2023.

Recommendation 6: Conduct an analysis of all applicant data (similar to interns), including veterans, to better understand hiring trends and outcomes.

Management's Response: NASA concurs. OCHCO initiated an analysis of applicant data for all of its Executive (SES, ST, SL) and non-Executive (Direct Hire Authority, Delegated Examining Unity, Internal Merit Promotion, Status, Excepted Service) hiring paths in December 2022. The analysis evaluates hiring trends and outcomes based on Applicant Flow Data (AFD) available from USA Staffing, the Agency's talent acquisition platform. The AFD includes multiple demographic variables relevant to the Agency's DEIA goals and priorities, including ethnicity, sex, disability, and veteran status. The Agency will continue its analysis of applicant demographic data to (1) identify barriers to diversity in hiring outcomes, (2) report the findings to leadership and recommended actions to eliminate barriers, and (3) identify and develop tools to automate the collection, analysis, and reporting of hiring data in partnership with OCHCO's People Analytics Branch.

OCHCO used veterans' data/analysis to develop a Veterans' Talent Community in 2022. We provide ongoing communications via newsletters to veteran candidates about opportunities at NASA. OCHCO has also identified a senior champion for veteran recruitment, who leads a Recruitment Team supporting a joint NASA Glenn/Langley Tiger Team to increase veteran recruitment and hiring. OCHCO will also be onboarding a Veterans Employment Program Manager on a detail assignment to support veteran recruitment and hiring.

The Veterans Talent Community was established in 2022. The Senior Champion and Tiger Team is in place as of early 2023. The Veterans Employment Program Manager will onboard by the summer of 2023.

Estimated Completion Date: Analysis of the AFD for all hiring paths and preparation of the tools to automate the analysis and reporting of AFD will be completed by December 31, 2024.

The OIG also recommends the Deputy Administrator:

Recommendation 7: Designate an official or organization to oversee coordination between the stakeholders (OCIO, ODEO, and OCHCO) to develop a sustainable operation and funding structure for the EDP.

Management's Response: NASA partially concurs

- The Office of the Chief Information Officer (OCIO) is developing the Enterprise Data Platform (EDP) as a "Platform as a Service" and "Data as a Service" capability with projected Agency-wide availability to NASA stakeholders and users. OCHCO and ODEO are two key stakeholders and prioritized early adopters of the EDP.
- As implementation of a cloud-based, big-data platform is a true transformation effort, this effort is covered under the Mission Support Directorate Digital Transformation Roadmap, and the Information Data and Analytics Service Line (IDAS) within OCIO has the responsibility to lead and coordinate with stakeholders of the EDP.
- During the period following factfinding, the OCIO team has made continued progress to build an EDP team and capability. In August 2022, as part of the OCIO Transformation, the IDAS was stood up and responsibility for enabling Data Services was transitioned to this new organization focused on critical data capabilities such as the EDP. Since its inception, IDAS has brought on key leadership and technical FTE while OCIO has committed procurement resources to focus on the continued development of the platform.
- In working with the OCIO EDP team, ODEO's team of data engineers and application developers have acquired and ingested key priority data sets from systems and sources that are both internal and external to NASA to support internal DEIA analytics. These initial data sets have been ingested into EDP, and Tableau applications are being developed to be deployed via EDP to a large NASA-wide user base. The OCIO EDP team's ability to collaborate with ODEO and OCHCO to accomplish this Key Performance Goal of the NASA DEIA Strategic Plan is an example of how the OCIO team has been successful at building out the EDP with its key stakeholders.

Estimated Completion Date: September 30, 2024.

We have reviewed the draft report for information that should not be publicly released. As a result of this review, we have not identified any information that should not be publicly released.

Once again, thank you for the opportunity to review and comment on the subject draft report. If you have any questions or require additional information regarding this response, please contact Candice Blackford at (202) 358-4489.

Theodore Gutman
Digitally signed by Theodore Gutman
Date: 2023.04.08 08:52:30 -04'00'

Kelly Elliott
Digitally signed by Kelly Elliott
Date: 2023.04.10 08:57:22 -05'00'

Theodore Gutman
Associate Administrator,
Diversity and Equal Opportunity (Acting)

Kelly Elliott
Chief Human Capital Officer (Acting)

APPENDIX E: REPORT DISTRIBUTION

National Aeronautics and Space Administration

Administrator
Deputy Administrator
Associate Administrator
Chief of Staff
Acting Chief Human Capital Officer
Chief Information Officer
Associate Administrator for Diversity and Equal Opportunity
Associate Administrator for Mission Support Directorate

Non-NASA Organizations and Individuals

Office of Management and Budget
    Deputy Associate Director, Climate, Energy, Environment and Science Division

Government Accountability Office
    Director, Contracting and National Security Acquisitions

Congressional Committees and Subcommittees, Chairman and Ranking Member

Senate Committee on Appropriations
    Subcommittee on Commerce, Justice, Science, and Related Agencies

Senate Committee on Commerce, Science, and Transportation
    Subcommittee on Space and Science

Senate Committee on Homeland Security and Governmental Affairs

House Committee on Appropriations
    Subcommittee on Commerce, Justice, Science, and Related Agencies

House Committee on Oversight and Accountability
    Subcommittee on Government Operations and the Federal Workforce

House Committee on Science, Space, and Technology
    Subcommittee on Investigations and Oversight
    Subcommittee on Space and Aeronautics