NASA'S 200-DAY PROGRESS REPORT ON EQUITY ASSESSMENTS

Due Date: *August 8, 2021 (Upload by Monday, August 9ᵗʰ at 5:00 PM)*
Method of Submission: *MAX:* (b) (6)
Maximum Length of Report: *20 Pages*
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Release: This document is not intended for public release, and contains internal, deliberative information provided to enable decisions relating to FY23 budget decisions and final reviews of public-facing Agency Strategic Plans, Priority Goals, and Learning Agendas. Information in the 200 Day Equity Assessment will be used to support agency development of their public-facing One Year Equity Action Plan.

(1) Information about the agency and report preparation
- **Agency Name**: National Aeronautics and Space Administration
- **Date of agency head review:** August 9, 2021
- **Primary Point of Contact:** Melanie Saunders, Deputy Associate Administrator, (Phone Number), melanie.saunders-1@nasa.gov
- **Overview of agency mission and intersection with equity** (*How does your agency serve the American public?*):

NASA inspires the Nation by advancing understanding of the Earth and space by sending astronauts and robotic missions to explore the solar system and developing new technologies and approaches to improve aviation and space activities. Our work benefits Americans and all humanity. Today, our Nation's economic prosperity, National security, and cultural identity depend on our leadership in aeronautics, space exploration, and science.

NASA Equity Assessment Process: NASA has inclusion as one of its core values. To ensure commitment to this important core value, NASA operates an Agency Inclusion, Diversity, Equity, and Accessibility (IDEA) Steering Committee (referred to as Diversity, Equity, Inclusion, and Accessibility (DEIA) in the 90-day equity assessment report), which consists of senior agency leadership, and extended Strategic Partnership with the Employee Resource Groups (ERGs). The primary focus of this group is to ensure the advancement of equity initiatives to expand opportunities for Americans in underrepresented and underserved communities, as well as to ensure that equity is ingrained in NASA's decision-making processes. This committee also ensures equity efforts have strong internal alignment and ties to integrated diversity and inclusion programs to support equitable opportunities for all employees. Since its reinvigoration in January 2021, the IDEA Steering Committee has focused on several initiatives, including but not limited to:

- Established a Senior Advisor for IDEA position to report to the Deputy Associate Administrator. This senior leader manages and maintains the agency's focus on IDEA efforts and actions.
- Established an Equitable Data Working Group to explore ways to leverage underutilized or inaccessible government data in order to measure and promote equity.
- Reinvigorating the Agency's IDEA Strategic Plan aligned with the Administration's priorities.

- Incorporating IDEA objectives and content into NASA's Strategic Plan to communicate its importance to all stakeholders.

Senior Leadership Engagement and Employee Engagement: In FY 2021 and onward, NASA leadership conducted/is conducting a series of leadership and employee engagement events and initiatives that are led by the Deputy Associate Administrator and IDEA Steering Committee, including but not limited to:

- Presented the agency IDEA framework to the Agency Senior Management Council on April 2, 2021 and received buy-in from all leaders.
- Met with the Directors of all NASA Centers and discussed IDEA initiatives and assigned them the responsibilities to increase equity activities at their Centers, specifically to engage with their employees to better understand local equity baselines.
- Hosting a series of listening sessions with the ERGs to understand employee perspectives on equity across the agency and identify and assess gaps. To date, listening sessions were conducted with the Women's group, the African American group, the Hispanic group, the Asian and Pacific Islander group, the Individuals with Disabilities group, the Native American group, the LGBTQ+ group, and the Veterans group. Sessions with early career and various other groups are scheduled.
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In FY 2021, all NASA SES performance plans were strengthened with increased IDEA focus and a higher evaluation factor weight was allocated to the IDEA element to further drive accountability and commitment to ensure diversity, inclusion equity, and accessibility initiatives are in all activities.

NASA accepts the challenge to continue our legacy of achievement and greatly expand the benefits we provide to mankind. Descriptions have been provided below for the NASA Offices mentioned in this report.

- o The Office of STEM Engagement delivers tools for young Americans and educators to learn and succeed. OSTEM seeks to: 1) Create unique opportunities for a diverse set of students to contribute to NASA's work in exploration and discovery; 2) Build a diverse future STEM workforce by engaging students in authentic learning experiences with NASA's people, content and facilities; and 3) Attract diverse groups of students to STEM through learning opportunities that spark interest and provide

connections to NASA's mission and work. Click <u>here</u> for information about OSTEM.

o The Science Mission Directorate (SMD) expands the frontiers of Earth science, heliophysics, planetary science, and astrophysics. Using robotic observatories, explorer craft, ground-based instruments, and a peer-reviewed portfolio of sponsored research, SMD seeks knowledge about our solar system, the farthest reaches of space and time, and our changing Earth. Click <u>here</u> for more information about SMD.

o The Space Technology Mission Directorate (STMD) develops transformative space technologies to enable NASA's future missions. NASA's investments in revolutionary, American-made technologies provide solutions on Earth and in space. Click <u>here</u> for more information about STMD Programs.

o The Office Chief Financial Office, Grants Policy and Compliance (GPC) Branch provides leadership and oversight in grants management policy and compliance and internal guidance and training to NASA Technical Officers, Grant Officers, and the Grants Community implementing government-wide and NASA specific regulations for awarding and administering grants and cooperative agreements. In Fiscal Year 2019, NASA issued approximately $1.1 Billion in grants and cooperative agreements. Each year, NASA issues approximately 1,977 new awards and provides policy guidance and instruction for approximately 6,646 awards. Click <u>here</u> for more information about GPC.

o The Office of Procurement (OP) oversees the acquisition process to support successful accomplishment of the Agency's current and future missions. OP provides policy, oversight, and optimization of procurement resources, and supports Mission Directorate acquisition strategies to enable more efficient operations for the Agency. Click <u>here</u> for more information about OP.

o The Office of Small Business Programs (OSBP) at NASA Headquarters promotes and integrates all small businesses into the competitive base of contractors that pioneer the future of space exploration, scientific discovery, and aeronautics research. Click <u>here</u> for more information about OSBP.

How can the agency, in the course of fulfilling its mission, advance equity and remove barriers for underserved communities, whether in terms of the delivery of services, navigation of processes and programs, how decisions are made, and / or in relation to new policy and assistance initiatives?

In an effort to learn more about the underserved communities seeking to do business with NASA, NASA issued a Request for Information (RFI) on Advancing Racial Equity and Support for Underserved Communities in NASA Programs, Contracts and Grants Process (<u>NASA Equity RFI</u>) on June 15, 2021. The comment period for the NASA Equity RFI ends on August 31, 2021. As of August 5, 2021, 118 public comments were received in writing. Additionally, NASA hosted a public meeting on July 13, 2021, that included a plenary session hosted by key NASA Senior Leaders, and breakout sessions for each focus area described in the 90-day Equity Assessment Report and in this 200-day Equity Assessment Report. The plenary session was broadcasted online via <u>NASA TV</u> and the breakout sessions were held via Cisco

WebEx. The public meeting was advertised on the Federal Register and on NASA's Mission Equity page. The public meeting was widely attended by large and small businesses as well as universities, see the number of attendees in the chart below. Additionally, NASA is continuing to engage with and collect data from external engagement meetings with underserved and underrepresented communities.

Public Meeting Attendance	
Plenary/Focus Area	Viewership/Number of Attendees
Plenary	Views - 26,175
1 - OSTEM Internship Program	275
2 - SMD's Scientific Competition Processes	90
3 - OCFO's Grants/Cooperative Agreements with MSIs	148
4 - Enterprise Procurement Strategies/Product Service Lines Set-Aside for Underserved Communities, e.g. Ability One, Small Business Socioeconomic Programs	131
Section 3B Program Area - STMD Early Stage Innovations	124
Total	26,943

NASA plans to use relevant data and feedback from the NASA Equity RFI and the public meeting to inform its business processes, remove barriers, plan strategic and productive stakeholder engagement meetings and maximize opportunities to impact underserved communities.

To demonstrate our commitment to this important initiative, NASA established a Mission Equity website that links to information about the RFI, the public meeting and about all of NASA's efforts underway to advance equity under programs, projects, contracts and grants.

NASA's Office of Diversity and Equal Opportunity (ODEO) leads diversity and civil rights policies, programs, and services – enabling the universe of available talent to contribute inclusively and equitably to NASA. Additional information about is on the ODEO website.

• ODEO updated its internal Agency policy (NASA Procedural Requirements) on January 12, 2021 to expand the definition of harassment pertaining to the NASA workforce and contractors. By expanding the definition of harassment, the new policy enhances opportunities for individuals to raise concerns regarding inequities in the workplace. **Update**: As a critical component of its efforts to maintain an equitable and inclusive work environment, ODEO continues to implement its newly revised anti-harassment policy and procedures including the expanded definition of what constitutes harassment. Part of this implementation is a case tracking system that enables the agency to monitor cases in real-time, allowing for more efficient and timely case processing. The system enables trend analysis of affected communities by providing data on the underlying base of cases, such as race, sex, or disability. The system therefore allows NASA to better understand and address the program's impact on undeserved communities within the Agency's workforce.

- ODEO is developing Agency guidance on gender transitioning, in partnership with the Agency's ERG for lesbian, gay, bisexual and transgender (LGBT) employees. This will greatly assist the Agency's efforts to ensure appropriate action is taken regarding gender transitioning and reduce inequities for transgender employees. **Update**: The gender transitioning guidance remains in progress and ODEO continues to work closely with the LGBTQ community in its development. The guidance will be published in the first quarter of FY2022 and it will address such key topics as the difference between gender expression and gender identity, roles and responsibilities of Agency staff such as human resources in the gender transitioning process, right to privacy of transitioning individuals, and restroom and locker access, among other critical topics for the transgender community.

- Approach update *(How has your agency updated or refined your general approach to the equity assessment from the 90 Day Report submitted? What additional actions pursuant to Executive Order 13985 on Advancing Racial Equity and Support for Underserved Communities through the Federal Government have you taken?)*
    - ODEO finalized NASA procedural requirements on June 23, 2021 that re-establish Agency policy and procedures for conducting civil rights compliance reviews of grant recipient institutions and receiving complaints of discrimination or harassment. Among the changes to Agency policy, ODEO has revised its procedures to: (a) clarify that sex discrimination includes sexual orientation and gender identity discrimination as well as: (b) provide a definition for the term "harassment." ODEO also has expanded its selection criteria for compliance reviews to include information reported by the news media and from Federal, state, or local government agencies in addition to the entity's self-reporting on the Agency's Form 1206.

    - In March 2021, ODEO issued a Title IX violation finding based on its compliance review of Louisiana State University (LSU). This was the first finding of a violation of Title IX ODEO has issued in its 15-year history of conducting Title IX compliance reviews of grant recipients. ODEO persuaded LSU to enter into a resolution agreement to initiate corrective actions for areas of noncompliance, including the provision of appropriate resources to conduct effective Title IX coordination and revisions to Title IX policies and procedures to ensure prompt and equitable handling of complaints, in accordance with NASA Title IX regulations. (b) (5)
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    - In the second quarter of FY2022, ODEO will communicate with all NASA grant recipient institution Authorized Organizational Representatives (AORs) to reiterate that, pursuant to a term and condition of NASA grant awards effective April 9, 2020, AORs must share with NASA any findings/determinations of harassment regarding a NASA-funded Principal Investigator (PI) or co-Investigator. AORs must submit the required report to NASA pursuant to the term and condition. This policy enables the Agency to better ensure that grant recipients are taking appropriate steps to maintain safe and inclusive research environments for all faculty, staff and students serving on NASA-funded research grants.

- Stakeholder engagement (*Consistent with Section 8 of EO 13985, how has the agency identified and meaningfully invited, welcomed, and included participation of members of communities who have been historically underserved by, or subject to discrimination in, agency policies and programs, as well as community-based organizations and civil rights organizations, in the process of the agency's equity assessment and planning approach?*)

    - ODEO is developing a policy statement for the NASA Administrator reaffirming the Agency's commitment to diversity, equity, equal opportunity, inclusion and accessibility among programs receiving NASA financial assistance, such as university research grants. The policy statement will provide specific information on NASA's and grant recipients' legal obligations, including recourse for those who believe they have experienced discrimination or harassment to file complaints. The policy statement will be posted on NASA's MissionSTEM website and will encourage participation from those wishing to file complaints by providing the appropriate Web address for filing.
    - In selecting grant recipient institutions, e.g., university research programs, for civil rights compliance reviews, Agency policy includes, among the criteria for selecting recipients on which to conduct compliance reviews: issues identified by community organizations or advocacy groups that are related to actual incidents to support their concerns. Research into published reports by such groups is part of the process for assessing civil rights compliance.
    - ODEO posts NASA civil rights compliance reports on the Agency's MissionSTEM website. Some of the reports contain corrective actions and recommendations for reviewed recipients to strengthen their equity and inclusion programs by coordinating with advocacy groups for historically underserved communities, for example, language minority or disability advocacy groups.

(2) Findings regarding specific programs, policies, or processes. *(For this reporting, agencies should be sure to identify what they assessed, why, and what they learned. For each set of programs and policies agencies selected for intensive assessment (as documented in section 3 of your agencies' 90 Day Report), please include)*:
- Name of program/policy
- The potential barriers and perceived opportunity (hypothesis)
    - May include but not limited to enrollment and access as well as in taking advantage of procurement and contracting opportunities, as relevant
- Current or potential equity impact: why the agency selected the particular program/policy for review and what about the program/policy made it the right initial focus for assessment of agency equity practice
- Summary of Equity Assessment approach
- Definition and description of impacted underserved communities
- Limitations and opportunities related to data, data disaggregation, and measurement
- Target equitable outcomes, as derived from equity assessment, and how success of improvements will be measured moving forward

- Reform actions implemented thus far, and those under consideration based on equity assessment
    - *What steps has the agency taken or will you take to accomplish these ends?*
    - *Are new policies, regulations, or guidance documents necessary to advance equity in the program/policy?*
    - *Are additional capacity, expertise, or resources required for further work, and do you plan to incorporate this into your budget request?*
- Immediate, tangible improvements in people's lives that you anticipate these potential reforms making or that have resulted to date from the equity assessment

Focus area #1: OSTEM Internship Program

Program Summary: As COVID-19 pandemic restrictions change and the agency is transitioning to Stage 2 (Return to On-site Work), NASA is beginning to consider onsite internships; therefore, we have expanded this focus area. NASA internships, both virtual and onsite, leverage NASA's unique missions and programs to enhance and increase the capability, diversity and size of the nation's future science, technology, engineering and mathematics (STEM) workforce. Internships are available from high school to graduate level. Internships provide students with the opportunity to participate in either research or other experiential learning, under the guidance of a mentor at NASA.

Potential Barriers (b) (5)

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Current or Potential Equity Impact (b) (5)

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Summary of Equity Assessment Approach: NASA is assessing this program using following approaches:
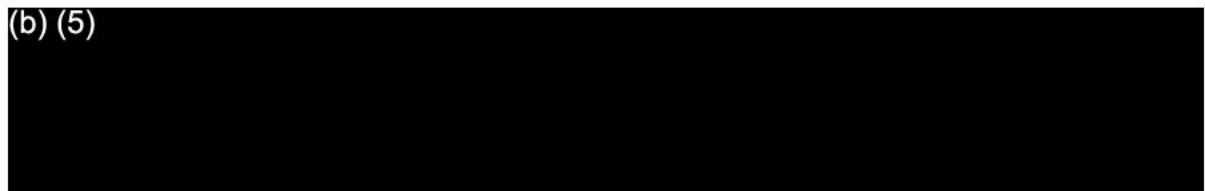
- **OSTEM's Learning Agenda.** NASA OSTEM implements a comprehensive performance assessment and evaluation strategy that includes a Learning Agenda. The Learning Agenda includes an evidence-based decision-making process that engages both internal and external stakeholder audiences in key conversations that set learning agenda questions, activities, and disseminate findings. Beginning in 2019, NASA began implementing evidence activities in support of the Learning Agenda question: "How have NASA STEM Engagement investment broadened participation of historically underrepresented and underserved groups in STEM fields in NASA STEM Engagement activities?"

    ○ In support of this question, OSTEM executed the Diversity Deep Dive study in FY2020. This study assessed historical data and engaged multiple stakeholders in setting recommendations that could further enhance NASA's goals in broadening student participation. The study was conducted for internal purposes and the recommendations were used to set plans for FY2021 and FY2022 including the Career Readiness Assessment and the Internship Outcome Assessment.

    ○ The Career Readiness Assessment, which began in September 2021, will investigate the career readiness of early career NASA STEM professionals who had a NASA internship prior to their employment as compared to those who did not. The study will include analysis of differences based on underrepresented group status. The study is planned for completion in fall 2022.

    ○ The Internship Outcome Assessment, currently underway, will measure students' immediate outcomes of participating in a NASA internship and it assess differences based on underrepresented group status. A significant milestone for this study was the 1-year conditional Paperwork Reduction Act (PRA) clearance from OMB for an intern survey. In March 2021, NASA received OMB approval to conduct methodological testing of a draft Intern Survey. In April 2021, NASA conducted testing of the survey on past interns. In June 2021, NASA administered the refined Intern Survey to spring 2021 interns. A survey was also administered to the mentors of spring 2021 interns. Both surveys will be administered to summer and fall interns and mentors. The survey results will contribute to the study's findings and recommendations. The study is planned for completion in spring 2022.

- **OCHCO Pathways/OSTEM Internship Collaboration.** To more effectively serve students and potentially reach greater numbers of underrepresented students, Office of the Chief Human Capital Officer (OCHCO) and OSTEM are increasing integration of programmatic strategies, implementation, and resources. A managerial summit held in spring 2021 identified areas of similarity and difference between the programs. The numerous successes of the collaborative team include: a common onboarding and orientation process; joint communication and recruitment tools; a collaborative landing page for recruiting interns and Pathways; joint intern engagement activities; and an

integrated mentoring support team. Initial analysis of the FY2016-2021 student participation showed similarities in overall underrepresented placement percentages between the two programs. Although, greater numbers of students participated in OSTEM internships. The number of OSTEM interns is driven by the funding available for stipends each semester from multiple Agency sources vs. the long term, multi-semester commitment to bring on a Pathways intern as a civil service employee with benefits. Future efforts for the collaboration include establishing holistic goals and expectations for interns including 21st Century Workforce skill development and mentor/supervisor selection and development processes.

- **Analysis of intern and mentor surveys.** In response to the pivot to all virtual internships in the Spring, Summer and Fall 2020 sessions, OSTEM administered lessons learned surveys to interns and mentors regarding the transition to and implementation of virtual internships. Based on the responses, OSTEM made changes each session to improve the program. Overall, mentors were pleased with the success of virtual internships, felt the interns made impactful contributions, and were interested in continuing virtual or hybrid internships in the future. Interns felt they were engaged in quality projects and that their work benefitted the project. Based on feedback, the internship team focused on improving accessibility to IT tools, including laptops for interns, and creating opportunities for interns to network and learn more about NASA. Additionally, training was provided to mentors focusing on tips and techniques to mentor virtual interns. In response to aspects of the survey feedback, OSTEM established an umbrella Space Act Agreement (SAA) in December 2020, with Oak Ridge Associated Universities (ORAU) entitled Increasing Access to STEM Engagement and STEM Education Opportunities and Experiences. The first annex to the SAA is to create mini-video seminars for MSI students on how to be better prepared for a NASA internship. The first videos under this partnership will be available in August 2021, viewable on the ORAU website.

- **Utilization of Social Media Platforms: Handshake, Symplicity, and LinkedIn.** Using Handshake proved beneficial as the internship team reached 3,533 students and fielded numerous follow-on questions. Symplicity did not prove to be as effective. The primary reason for using Symplicity was to reach students at Morgan State University (MSU), a Historically Black College/University (HBCU) in Baltimore, MD. MSU migrated to using Handshake; so the internship team will no longer be using Symplicity. A LinkedIn Recruiter license from OCHCO was shared with OSTEM in December 2020. Over 900 messages have been sent to higher education students through LinkedIn at MSIs. With the license, the MSI coordinator will be able to develop future campaigns to contact students from underrepresented communities from MSIs. Campaigns are held during each intern session in the fall, spring, and summer. The MSI coordinator consistently scans LinkedIn to find and make connections to potential students and institutions.

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Description of Underserved Communities: For this program, underserved communities are defined as racial and ethnic minorities, as defined in Executive Order (EO) 13985, that are underrepresented in STEM degree enrollment and women.
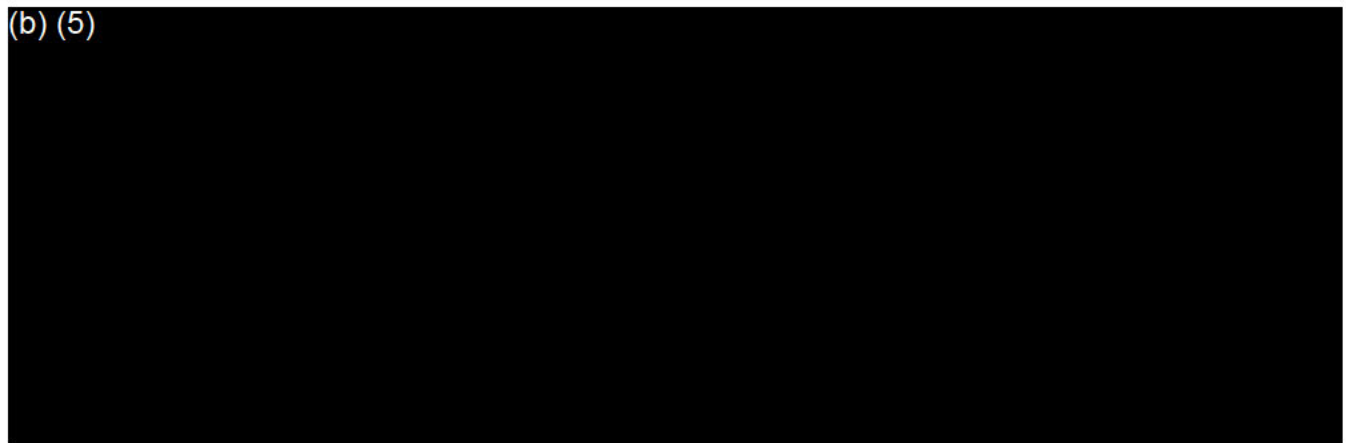
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- **Improved onboarding process**. Following each intern session, the team conducts lessons learned discussions with Center intern coordinators, the Office of Chief Information Officer (OCIO), and the Office of Protective Services. Those sessions have resulted in refinements to onboarding process, orientation approaches for interns, revised lists of recommended classes for interns, improved delivery of laptops to interns, and streamlined approaches for security reviews. The onboarding process have been improved in the following ways: the recent

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welcome to NASA session for new 2021 summer OSTEM and Pathways interns featured welcome remarks by NASA Administrator Bill Nelson, Associate Administrator for Human Exploration and Operations Kathy Lueders, Deputy Associate Administrator for Aeronautics Jon Montgomery, and NASA Astronaut Don Pettit. Additionally, a panel was conducted with Center Directors from the Johnson Space Center, the Ames Research Center, and the Marshall Space Flight Center. Future sessions will include diverse senior leaders across the agency, so interns can see and hear from NASA's diverse leadership team and workforce.

- **Mentor training sessions**. Approximately 2 sessions for mentors are conducted by the Agency OSTEM team each internship session with additional ongoing outreach to mentors conducted at the Center level by internship coordinators.

- **Intern networking and professional development sessions**. Approximately 3 speaker events are offered weekly to interns on a range of topics. A representative sample of topics for the month of June included the Marshall Propulsion Test Area, Structural Test (ST), Strategies for a Successful Internship, familiarization with the NASA@Work platform, Women in Engineering Panel, and Learn More about the History of NASA. Additionally, individual Centers also provide networking and professional development opportunities at the local level.

The assessment work yielded additional areas for consideration. As NASA returns to onsite work at the Centers, OSTEM will continue to engage internal and external stakeholders in designing what the internship program will look like in the future. In addition to the continuation of fully virtual internships, OSTEM is working with mentors to consider a new hybrid approach that would combine virtual and onsite components. The outcome of NASA's Future of Work efforts will significantly impact the considerations for the design of internships as NASA considers the benefits and flexibilities of employee virtual work. Forefront in the design of the future internship program will be ensuring that every intern whether virtual, onsite, or hybrid continues to have a high-quality experience and mentors continue to experience impactful contributions from interns.

Stakeholder Engagement Strategies: NASA has conducted the following engagement strategies:
- **Internal Stakeholder Assessment.** The internal strategy focused on mentors, interns, and NASA employees. Mentors and Interns completed surveys and employees were engaged through ERGs. Interns participating in sessions on NASA culture were engaged in small group sessions to discuss successful internship strategies.
- **Mentor Training/Equity Sessions**. Mentors were offered the opportunity to participate in sessions on the importance of equity as well as successful techniques for interviewing student candidates. Mentors were also invited to diversity talks from ODEO. The mentor equity sessions included a joint session with OCHCO for OSTEM and Pathways mentors with a focus on the following areas: hiring manager skills and practices, including the process of selection; interview tips and unintentional bias. The internship program is continuing to refine mentor preparation for virtual interns and the onboarding and orientation of interns.
- **Collaboration with ERGs**. Engaging and collaborating with ERGs, OSTEM tapped into the potential of those groups to increase the diversity of mentors, raise awareness about

internship opportunities, and provide recommendations to expand underrepresented student recruitment activities. Examples of OSTEM's collaboration with the various ERGs are immediately below.

- Hispanic Outreach and Leadership Alliance (¡HOLA!): 40 employees from 6 Centers joined a January 2021 Mentor Roadshow, which resulted in 3 new mentors and a follow-on student information session in February 2021. OSTEM and HOLA co-hosted a webinar highlighting the intern application process and approximately 400 students from Hispanic Serving Institutions and a range of Hispanic professional associations participated.
- African American Advisory Committee (AAAC): Approximately 100 employees participated in a presentation about intern mentorship in February 2021 during HBCU Day.
- African-American Coalition for Advocacy and Leadership (NACAL): In February 2021, approximately 80 students attended an OSTEM and NACAL co-hosted panel featuring black employees who are former interns.
- Asian American & Pacific Islander (AAPI): In May 2021, the ERG hosted a student information session that featured current NASA employees and a panel of spring 2021 interns. Approximately 300 students, recent graduates, and educators participated in the webinar.

- **Relationship building with MSIs and professional societies**. The importance of understanding and adjusting to the unique nature of each entity is critical. Becoming a trusted partner takes time and patience. The internship team is slowly building connections with the right individuals and entities within institutions. The internship team plans to attend 13 national STEM conferences focused on underrepresented populations and conduct 2 NASA Awareness events focused on MSIs in the Summer/Fall of 2021. Additionally, the internship team plans to participate in five conferences and awareness events in spring 2022. The range of conferences include National HBCU Week, National Society of Black Physicists (NSBP), National Society of Black Engineers (NSBE), American Indian Science and Engineering Society (AISES), American Indian Higher Education Consortium (AIHEC), Great Minds in STEM, Society of Hispanic Profession Engineers (SHPE), Society for Advancement of Chicanos/Hispanics and Native Americans in Space (SACNAS), Society of Asian Scientists and Engineers (SASE), Women of Color, and Society of Women Engineers.

- **MSI Internship Coordinator.** OSTEM hired a full-time MSI internship coordinator to focus on relationships and engagement with MSIs. The coordinator conducted outreach to targeted institutions, communities, and professional societies through direct contact, utilization of social media platforms and informational webinars. The nurturing of these relationships yielded near-term success. A networking event was conducted with Norfolk State University, a public HBCU in Norfolk, VA; Tuskegee University, a private HBCU in Tuskegee, AL reinstated its career services center and NASA has been invited by the new director to participate in upcoming events. Information sessions were also conducted with land-grant research universities such as Florida International University, University of Arkansas Pine Bluff, and Rutgers. OSTEM anticipates

that additional invitations will be forthcoming from other entities as relationships are built.

Focus area #2: SMD's Scientific Competition Processes

Program Summary: The NASA Science Mission Directorate (SMD) funds a national community of external researchers through two types of Broad Agency Announcements (BAAs). The NASA Research Announcements (NRAs) are a type of BAA that initiates a competition among qualified researchers that result in the award of over one thousand grants every year and provides funds for unique research across a range of science disciplines. Through its Announcements of Opportunity (AOs), a different type of BAA, SMD also awards contracts for the development of Earth and space science flight missions. Consistent with the cross-cutting priorities and strategies in the NASA Science Plan ("SCIENCE 2020-2024: A Vision for Scientific Excellence"), SMD is committed to developing a scientific community that reflects the diversity of the nation and instilling a culture of inclusion across its entire portfolio. This commitment has led to concerted efforts to examine the SMD scientific competition process as a whole to address barriers to participation.

Potential Barriers: SMD is eager to learn about the barriers underserved communities and individuals are facing and to co-develop solutions to address them. The results of the NASA Equity RFI on Advancing Racial Equity and Support for Underserved Communities in NASA Programs, Contracts and Grants Process, (NASA Equity RFI) released June 15, 2021 and public meeting held in July 13, 2021, as well as other SMD-led efforts such as studies commissioned to the National Academies of Science, Engineering and Mathematics (NASEM) and listening sessions tied to the SMD Engagement Strategy described below, will yield important insights and help inform solutions to address the obstacles underserved communities and individuals face when it comes to participating in the NRA and AO processes.
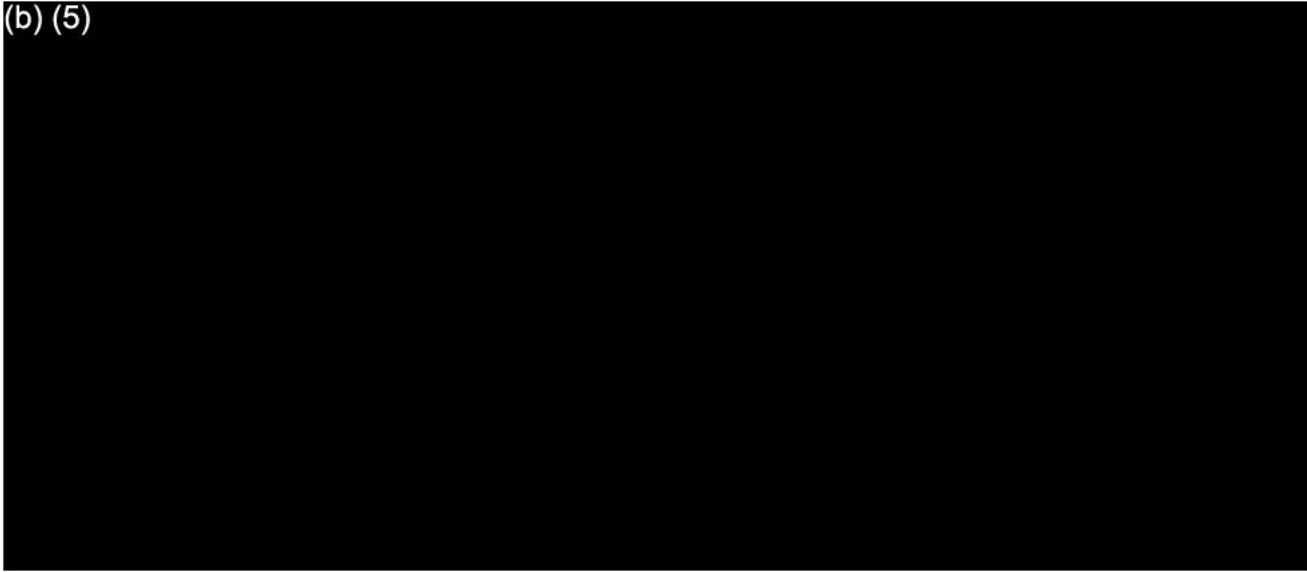
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On June 14-25, SMD hosted the second PI Launchpad, a virtual workshop to teach researchers and engineers how to submit a NASA space mission proposal in the next few years. The objective of the workshop was to broaden the pool of potential NASA space mission PIs. This second PI Launchpad was designed to purposely increase diverse participation and to sensitize the next generation of mission PIs to issues of inclusion and diversity. To ensure a broad, diverse audience, the workshop was advertised: on social media (via Twitter and LinkedIn); through NASA Center networks; professional associations (such as the American Geophysical Union) and affinity groups (by leveraging the NASA MUREP network); and finally through outreach to previous workshop participants to leverage their professional connections. SMD also increased the period to submit applications to add flexibility to the process. As in the first PI Launchpad held in 2019, the application for the second workshop focused on questions of leadership and inclusion, in addition to scientific merit of the concept investigation. Pre- and post-workshop feedback collected by the workshop co-hosts is being evaluated and will assist SMD in measuring the impact of the event.

By early 2022, SMD will receive the reports for two relevant NASEM studies: (1) Increasing Diversity and Inclusion in the Leadership of Competed Space Missions and (2) Foundation for Assessing the Health and Vitality of the NASA SMD's Research Communities. These studies are currently ongoing and will provide SMD with relevant independent insights into how to better advance equity in the research communities it serves. The "Increasing Diversity and Inclusion in the Leadership" study will investigate the barriers to participation of women and

underserved groups in SMD's mission competitions. The "Health and Vitality" study is forecasted to provide SMD with measures to use to understand its scientific communities along with recommendations on the types of data to be collected to make these assessments. SMD continues to collaborate with the Office of the Chief Scientist (OCS) to standardize analysis of proposer and awardee data, both in terms of demographic dimensions as well as other dimensions of diversity, including institution types and PI career stage. SMD's analysis of submitted mission proposals over a 10-year period—using data other than that collected by OCS—has shown that the typical PI is a male who received his Ph.D. over 20 years prior to submitting the proposal. In an analysis of data of leadership and participation in NASA's Astrophysics Explorer-class missions for the solicitations issued during 2008-2016, SMD found the overall participation by women in science teams to be 14%, which is well below the representation by women in astronomy and astrophysics as a whole. Lack of gender diversity can signal the absence of other types of diversity as well, thus indicating opportunities to improve diversity across multiple dimensions.

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Limitations and opportunities related to data, data disaggregation, and measurement: The questions in the current data collection tools yield limited data to measure equity among key dimensions of diversity. Expanded demographic and other questions as permitted by applicable law and regulation, could help expand the use of statistics as an equity assessment tool for the other dimensions of diversity outlined in the EO. SMD looks forward to the recommendations of the Equitable Data Working Group to understand how existing and new information collection tools may be better leveraged to evaluate these and other equity-related efforts.

Target equitable outcomes, as derived from equity assessment, and how success of improvements will be measured moving forward: The anticipated equitable outcomes are a PI base and a set of proposing and awarded institutions that are representative of the diversity of the Nation. The primary way SMD will evaluate efforts intended to advance these equitable outcomes is the ongoing analysis of AO and grant application and selection data, including voluntary demographic data collected by OCS. Expanded analysis of this data by the office of the SMD Deputy Assistant Administrator for Research will be paired with targeted feedback mechanisms such as the listening sessions, post-event surveys etc., as well as the results of relevant NASA-commissioned and external studies to inform the ongoing evaluation of policies and procedures.

Reform actions implemented thus far, and those under consideration based on equity assessment: (*What steps has the agency taken or will you take to accomplish these ends? Are new policies, regulations, or guidance documents necessary to advance equity in the program/policy? Are additional capacity, expertise, or resources required for further work, and do you plan to incorporate this into your budget request?*) SMD is actively building on ongoing efforts to improve existing policies, procedures and guidance to advance equity and model

inclusive behavior in the scientific competition process. In a general sense, recent reforms have sought improvements in the proposal submission phase as well as in the evaluation phase, with a goal to improve both the diversity of individuals/institutions participating in the process as well as to identify and address the potential obstacles to their success; see examples below.

- In March 2020, A new Term and Condition (T&C) was added in NASA grants requiring recipient organizations to report when a PI or co-investigator (Co-I) has been placed on academic suspension for harassment;
- Since September 2018, following the release of the NASA Policy Statement on "Antidiscrimination in NASA Conducted or Funded Program, Activities, and Institutions" SMD has provided Agency resources to PIs, CO-Is and grantees on how to report harassment concerns;
- In 2018, a requirement was added that all peer review panels include a discussion of cognitive (implicit) biases; and
- Since 2017, SMD has been developing multiple online and in-person resources to demystify the proposal development and submission process, many of which are available on the NASA New PI webpage.
- In 2017, new language, copied below, was added in the BAAs to promote team diversity for both research awards and PI-led mission teams;

  - "NASA recognizes and supports the benefits of having diverse and inclusive scientific, engineering, and technology communities and fully expects that such values will be reflected in the composition of all panels and teams including peer review panels (science, engineering, and technology), proposal teams, science definition teams, and mission and instrument teams." Section III, *Eligibility*
  - "Students, faculty or staff in programs receiving NASA financial assistance, such as grant awards from this solicitation, may raise allegations of discrimination, including harassment, by contacting the NASA Office of Diversity and Equal Opportunity. Information on filing a complaint through ODEO at >https://missionstem.nasa.gov/filing-acomplaint.html<." Section VII, Points of Contact.

Efforts to update SMD Policy Documents (SPDs) to capture new guidance are well under way. SPD-40: Standard for Dual-Anonymous Peer Review describes roles, responsibilities and standards for implementing dual-anonymous peer review (DAPR) for SMD research programs was adopted and published in May 2021. The intent of DAPR is to reduce implicit or explicit biases that peer review panelists may have, causing the reviewer to focus on the scientific merit of proposals instead of the proposers. This will also ensure that proposal review is performed in an equitable and fair manner along with competence and quality.
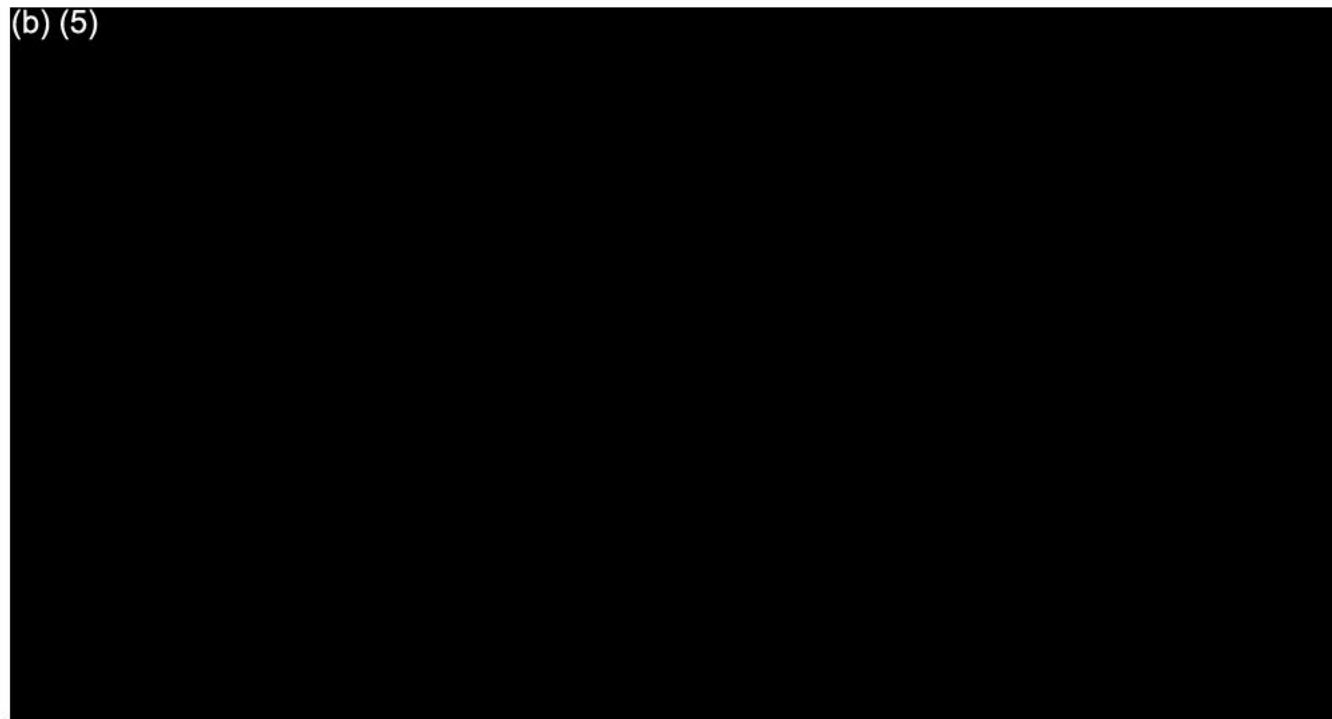
(b) (5)

Immediate, tangible improvements in people's lives that you anticipate these potential reforms making or that have resulted to date from the equity assessment: Efforts such as PI Launchpad, which provides an intensive, targeted learning opportunity to potential future PIs, as well as the NoDD program, which may reduce near-term work-life balance pressures on proposers, are expected to yield the most immediate, tangible improvements on the researcher community. Longer-term improvements to individuals participating in the scientific competition process may include advances in the scientific career of a new cadre of individuals serving as PIs and in other leadership roles.

Focus area #3: OCFO's Grants/Cooperative Agreements with MSIs
Program Summary: Grants Policy and Compliance (GPC) develops and promulgates government-wide and NASA-specific grant policy. Additionally, GPC, deploys internal training to aid in ensuring agency grant policy compliance while expanding and improving the required skillsets for administering and managing grants. To address this discovery, GPC has expanded

its focus to partnering with the three largest grant-issuing Mission Directorates, SMD, STMD, and OSTEM, in providing outreach support to increase program and process awareness, improve external learning and promote engagement.

Potential Barriers: As NASA representatives from GPC and SMD continue to participate in listening sessions and GPC representatives continue to participate in federally sponsored conferences all of which are geared toward and open to the public, barriers and challenges of the grant community are being reported. NASA has learned that the following are barriers: access to information e.g. best practices and new opportunities; lack of awareness of the various NASA grant programs; and lack of full understanding of how to qualify as a successful NASA grantee. To address this discovery, GPC has expanded its focus to partnering with the three largest grant-issuing Mission Directorates in providing outreach support to increase program and process awareness, improve external learning and promote engagement.

Additionally, the results of the NASA Equity RFI, set to close in August 31, 2021, public meeting held July 13, 2021, as well as other listening sessions hosted by the Federal Demonstration Partnership (FDP) will aid in determining any additional barriers that the public is encountering. Once those barriers are identified, NASA is prepared to make any modifications needed to cultivate an environment where underserved communities are equipped to successfully partner with NASA. NASA is currently compiling and reviewing the feedback received during the public meeting to determine feasibility and required resources needed to address the comments received. Once this analysis is complete, potential barriers may be revealed and next steps to implement changes will become more apparent.

Current or Potential Equity Impact *(why the agency selected the particular program/policy for review and what about the program/policy made it the right initial focus for assessment of agency equity practice)***:** NASA selected grants outreach as a focus area because grants is one of the most prominent methods of partnering with, receiving funds from and doing business with the NASA. The Federal Government awards billions of dollars in grants each year for programs and projects that benefit the public. As such, this program has great potential for equity impact.

Summary of Equity Assessment Approach: GPC plans to collaborate with all grant-issuing Mission Directorates in FY2022 (to: (a) assess and review past and present outreach activities to determine untapped audiences; (b) survey audiences familiar with NASA programs to determine best practices and helpful resources; (c) develop a targeted plan of action for outreach activities to close the identified gap; and (d) conduct specialized training and other outreach support activities.

Description of Underserved Communities: The underserved community for this focus area is defined as Minority Serving Institutions (MSI).
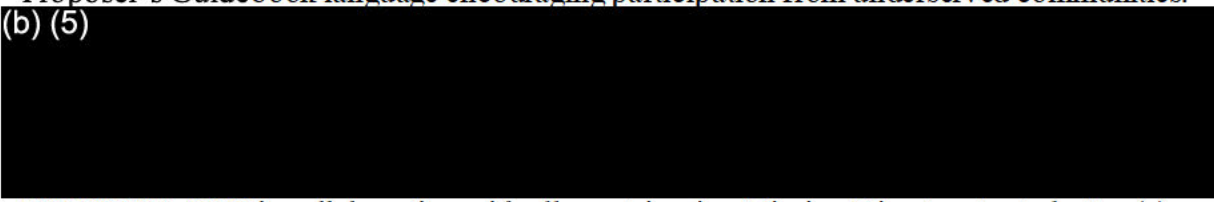
Limitations and opportunities related to data, data disaggregation, and measurement:
One of the limitations that exist include the lack of information available to determine vendor type identification. Recipients are not required to select entity type and NASA's current system is not designed to capture entity type in a standardized manner. Absent this data, it is difficult to

accurately measure success because success of outreach activities is measured by both an increase in MSI application submissions and subsequent awards issued.
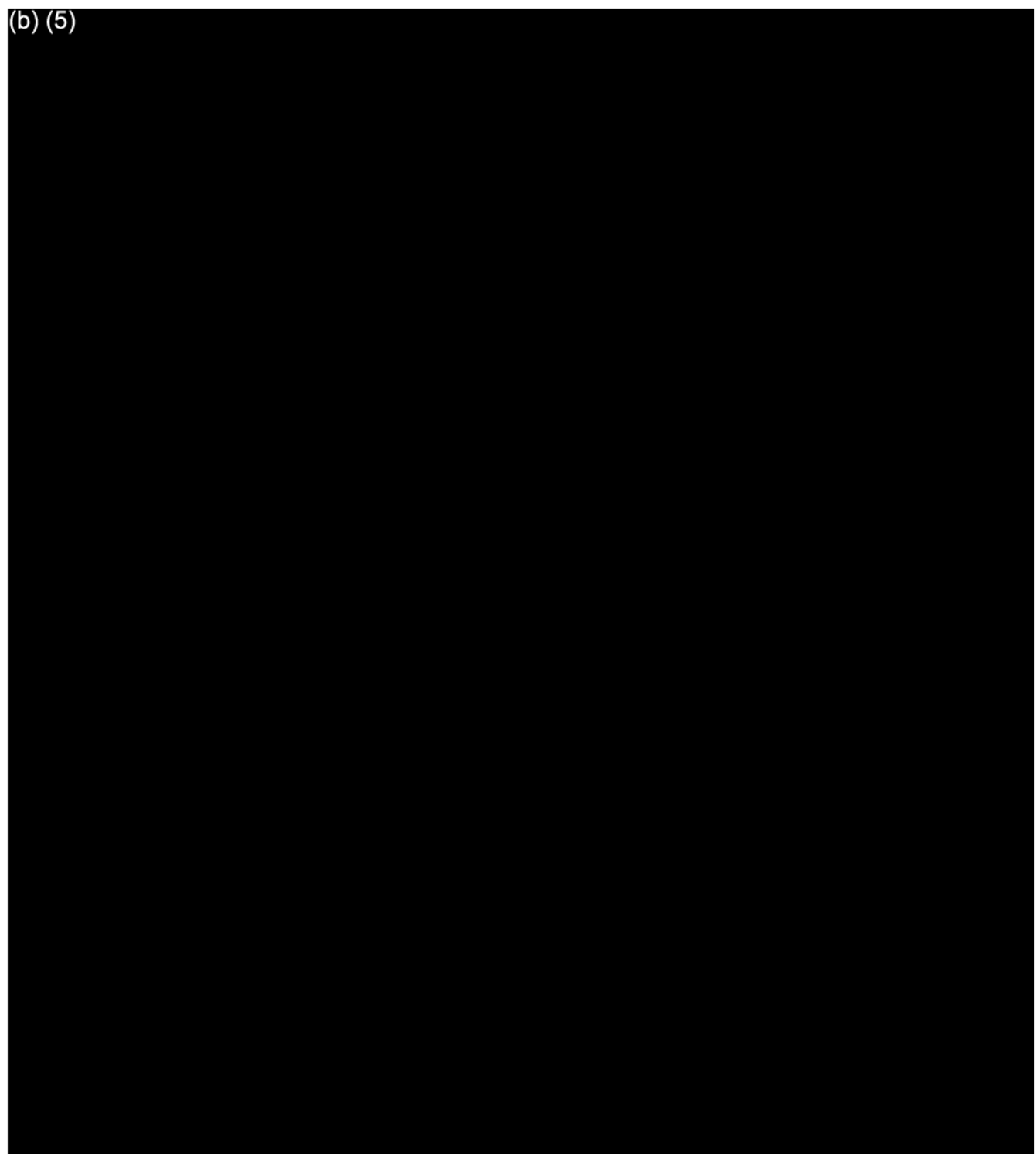
Target equitable outcomes, as derived from equity assessment, and how success of improvements will be measured moving forward: GPC anticipates that once all reform actions listed below, including proposed policy changes and outreach initiatives are implemented, an increase in underserved community grant proposals will ensue. An increase in proposal submission is expected to result in an increase of funded proposals submitted by entities in underserved communities. Data used to measure success can be retrieved from NASA Solicitation and Proposal Integrated Review and Evaluation System (NSPIRES) – NASAs official system for receiving, evaluating and selecting proposals and the Procurement for Public Sector (PPS) – System used to record NASA awards.

Reform actions implemented thus far, and those under consideration based on equity assessment: (*What steps has the agency taken or will you take to accomplish these ends? Are new policies, regulations, or guidance documents necessary to advance equity in the program/policy? Are additional capacity, expertise, or resources required for further work, and do you plan to incorporate this into your budget request?*)
GPC has implemented the following reform actions to modify several policy documents and other guidance manuals to improve the process and make information readily available to the public.

- In February 2021, GPC released its updated NASA's Guidebook for Proposers including introductory language highlighting NASA's commitment to solicit projects that foster formal and/or informal STEM education and contribute to participation by underrepresented or underserved students and education organizations. The introductory language on page three of the Guidebook emphasizes the benefits of having diverse and inclusive scientific, engineering, and technology communities and fully expects the reflection of such values in the composition of all panels and teams. NASA will include similar language in all Notice of Funding Opportunities (NOFO) posted to NSPIRES and Grants.gov, and on all NASA Assistance Listings published to www.SAM.gov in August 2021.
- In August 2021, NOFOs issued on or after August 9th must include the aforementioned Proposer's Guidebook language encouraging participation from underserved communities.
- (b) (5)

- IN FY2021, GPC is collaborating with all grant-issuing Mission Directorates to better (a) assess and review past and present outreach activities to determine untapped audiences; (b) survey audiences familiar with NASA programs to determine best practices and helpful resources; (c) Develop a targeted plan of action for outreach activities to close the identified gap; and (d) Conduct specialized training and other outreach support activities.

(b) (5)

(b) (5)

Focus area #4: Enterprise Procurement Strategies/Product Service Lines Set-Aside for Underserved Communities, e.g. Ability One, Small Business Socioeconomic Programs

Program Summary: OP recently implemented a new enterprise procurement structure to strategically centralize the procurement of products and services lines (PSL) across the enterprise. This change presents an opportunity for OP to set-aside procurements for socioeconomic categories of small businesses, which provides opportunities for underserved communities e.g. Small Businesses, Small Disadvantage Businesses (SDB), Woman-Owned Small Businesses (WOSB), Historically Underutilized Business Zone Businesses (HUBZone), Veteran-Owned Small Businesses (VOSB), Service-Disabled Veteran-Owned Small Business (SDVOSB) and Ability One contractors. OP is also taking the following additional steps to advance equity in contracting:

- Contracting officers will conduct extensive market research (e.g. issue RFIs, conduct industry meetings, etc.,) to find capable contractors, that are members of the underserved and underrepresented communities, to propose to NASA solicitations and document findings in the solicitation/contract file; and

- Contractors through the solicitation process, will be encouraged to partner with MSIs/HBCUs, to diversify its own workforce to add underrepresented employees, and to identify new subcontractors that may operate in historically underutilized populations – rural and/or urban areas – through tailored evaluation criteria.

OP works closely with OSBP to ensure enterprise procurement strategies yield high impact and to increase utilization of contractors that are members of the underserved and underrepresented communities.

Potential Barriers: As NASA continues to implement the new enterprise procurement structure the following potential barriers are possible: (a) educating technical personnel within the NASA mission directorates and program offices on the skills and capabilities of underserved communities; (b) educating contractors about NASA's new enterprise procurement structure; (c) enterprise procurements may be too large and unsuitable for members of the underserved and underrepresented members to compete as prime contractors but this will present more subcontracting opportunities; and (d) members of underserved and underrepresented communities competing for reduced number of contracting opportunities.

Current or Potential Equity Impact *(why the agency selected the particular program/policy for review and what about the program/policy made it the right initial focus for assessment of agency equity practice)***:** NASA selected the procurement process as a focus area because contracts is one of the most prominent methods that contractors can partner with, receive funds from and conduct business with NASA. NASA's procurements totaled over $19.6 billion in FY2020 (see The State of NASA Procurement 2020 Report, A Year in Review). As such, this program has great potential for equity impact.

Summary of Equity Assessment Approach: OP will use data from the Federal Procurement Data System- Next Generation (FPDS-NG), which shows the number of contract awards with their respective award amounts and awardee demographic data as an equity assessment. This data will also show the number of awards made to underserved communities as defined for this focus area.   Additionally, NASA will use the NASA Small Business Scorecard, which reports the number of prime and subcontract awards and respective award amounts to small businesses, in each of the aforementioned categories listed in the *"Program Summary"* section above.

Description of Underserved Communities: The procurement process is governed by regulatory policy, specifically Title 48 of the Code of Federal Regulations also known as the Federal Acquisition Regulation (FAR). The FAR imposes the requirement to promote competition in contracting with some exceptions. The exceptions for competition in contracting include the following, which are identified as underserved communities in EO 13985: SDB, WOSB, HUBZone, VOSB, SDVOSB, MSIs/HBCUs and Ability One Contractors.

Limitations and opportunities related to data, data disaggregation, and measurement: Limitation in collecting contracting data. Some of the groups identified as underserved communities in EO 13985 are not identifiable in contracting vendor databases, e.g. LGBTQ+, members of religious minorities, persons with disabilities and persons who live in rural areas.

Target equitable outcomes, as derived from equity assessment, and how success of improvements will be measured moving forward: NASA's SBA Small Business Scorecard, which reports the number of contract awards and respective prime and subcontract award amounts to small businesses, in each of the aforementioned categories is a target equitable

outcome. Agency small business goals are negotiated with the SBA and serve as prime and subcontract goals to not only achieve but to exceed.

Reform actions implemented thus far, and those under consideration based on equity assessment: (*What steps has the agency taken or will you take to accomplish these ends? Are new policies, regulations, or guidance documents necessary to advance equity in the program/policy? Are additional capacity, expertise, or resources required for further work, and do you plan to incorporate this into your budget request?*)

Stakeholder Engagement Strategies: NASA is committed to advancing equity in its programs, projects, contracts and grants. NASA issued an RFI and held a public meeting to learn the barriers and challenges members of underserved communities encounter when doing business with NASA. Additionally, OP and OSBP endeavored to learn new strategies to implement to reach and engage members of underserved and underrepresented communities. OP and OSBP are committed to engaging and communicating with industry to ensure the agency has access to new entrants, innovative contractors, and members of the underserved and underrepresented communities.

The NASA Vendor Communication Plan represents NASA's commitment to continued and increased dialogue and exchanges of information with the vendor community from the earliest identification of a requirement through announcement of the award (see Federal Acquisition Regulation (FAR) subpart 15.2). It outlines the communication framework for recurring vendor engagement with OP Senior Leadership and OP acquisition workforce during the acquisition cycle. Some strategies of engagement that OP executed in FY2021 and will continue to execute include: (a) meet regularly with businesses to discuss their capabilities; (b) meet with other agencies such as SBA, Minority Business Development Agency (MBDA) Department of Defense (DoD), General Services Administration (GSA) and other Federal Government agencies to participate in their outreach efforts with small businesses; (c) conduct industry forums quarterly with members of the underserved communities identified in EO 13985; (d) continue hosting quarterly meetings with Council of Defense and Space Industry Associations (CODSIA); and (e) meet regularly with Source America-Ability One representatives to discuss opportunities for contractors that employ persons with disabilities.

OP plans to take the following additional outreach efforts to enhance equity in contracting: (a) convene targeted small group virtual forums with MSIs/HBCU; (b) attend National HBCU Week; and (c) host meetings with various minority-based associations and organizations, such as NSBP, NSBE, AISES, AIHEC, Great Minds in STEM, SHPE, SACNAS, SASE, Women of Color, and Society of Women Engineers. OP plans to continue supporting OSBP's meetings with small businesses to share information on how to do business with NASA, NASA's acquisition forecast, NASA enterprise delivery model, how to comply with new acquisition practices, etc.

OSBP is committed to promoting small business awareness and participation, utilizing innovative techniques at nontraditional venues in geographically targeted areas, to enhance all categories of small business and this includes SDBs. During the COVID-19 pandemic, OSBP participated in and hosted outreach event(s) virtually and had great success with this mode of communication as they reached SBs around the world and will continue to conduct outreach

virtually with vendors. During this 2021 calendar year, OSBP hosted 59 outreach events which included 7 learning series webinars, which are held monthly; 4 Regional Supplier conferences and 48 Center-sponsored events. OSBP regularly attends the Office of Small Disadvantaged Business Utilization (OSDBU) meetings and the SB Procurement Advisory Council meetings. OSBP will continue this aggressive, targeted outreach to support all members of the small business community and other members of the underserved and underrepresented communities.

Immediate, tangible improvements in people's lives that you anticipate these potential reforms making or that have resulted to date from the equity assessment: The videos found herein displays some of the immediate tangible benefits contractors are experiencing as a result of NASA's procurement practices, including contracting with MSIs/HBCUs via the Mentor Protégé Program and small businesses through the new enterprise procurement model.

Updates to Attachment B (3B) What programs, policies, or processes did you consider but are not recommending for initial assessment?

STMD -MUREP Space Technology Artemis Research Grants (M-STAR). Proposals for the second phase of M-STAR were due on May 10, 2021. (b) (5)

(b) (5)

(b) (5) STMD worked with MUREP to finalize selections and available resources, and selections were announced on July 14, 2021. Nearly $3.5 million will be distributed to seven MSIs, including two HBCUs, over two years. Of the seven selected MSIs, five previously won M-STAR planning grants in 2020.

- MSTTR – MSTTR – The inaugural solicitation closed on June 11, 2021. (b) (5)
  (b) (5)
  (b) (5) The review process is completed, and the expected award date is late July/ early August 2021.
- MSI STEM Research & Development Consortium (MSRDC) Partnership - The cooperative agreement is underway and the MSRDC team is learning the NASA landscape and getting introduced to stakeholders in the SBIR/STTR program and the Minority University Research Education Program. In addition, (b) (5)
  (b) (5)

OSBP's Mentor Protégé Program. The NASA Mentor-Protégé Program (MPP) is one of five MPPs that SBA allowed to continue functioning apart from SBA's All Small MPP. This was done primarily because of the special emphasis NASA places on diversity and inclusion among all small businesses eligible to participate as protégés in the program (i.e., SB, SDB, WOSB, HUBZone, VOSB, SDVOSB, and MSIs/HBCUs). This program has shown great success to date, which is why it is not recommended for further evaluation at this time.

Since the beginning of fiscal year 2020, NASA has implemented several enhancements to its Mentor-Protégé Program (MPP) to improve the overall quality of the program. Specifically, all the MPP documents were digitized and rebranded to communicate accessible consistent messaging and content to interested parties. Also, NASA FAR Supplement (NFS) MPP guidance is being updated to reflect: (1) change of lead NASA office managing the Program (from NASA OSBP to MSFC OSBP); (2) frequency of reporting requirements (from semi-Annual report to annual report); and (3) removed the restriction on the number of agreements a protégé can have under the NASA MPP, while maintaining that protégés can be active in only one mentor protégé agreement (MPA) at a time.

Equity Outcomes Related the MPP
- Under a 12-month MPA between Teledyne Brown Engineering (TBE) and the University of Nevada Las Vegas (UNLV), TBE has hired 3 UNLV students for full-time employment following their graduation. In addition, the TBE & UNLV MPA was recognized as the Agency-level NASA Small Business Industry Awards MPA of the Year winner; and UNLV was also selected to participate in 2 NASA Cooperative Agreement Notices (CAN). This MPA began on August 3, 2015.
- As a result of a 9-month MPA between ATK & Florida A&M University (FAMU), FAMU was awarded two NASA CANs. This MPA began on November 7, 2013.
- Under an 18-month MPA between Boeing and Southern University, Boeing has 5 Southern University graduate students working onsite at the NASA Michoud Assembly Facility in New Orleans where the Space Launch System Core Stage is currently being produced. It should be noted that since the signing of this MPA on June 23, 2020 NASA, Boeing, and Southern University has received a tremendous amount of publicity and exposure. Below are a few articles issued within the first few months of the start of the agreement:
    - https://www.subr.edu/index.cfm?action=newsroom.detail&articleID=university-boeing-partner-on-nasa-mentorprotege-program
    - https://www.wbrz.com/news/southern-university-partners-with-boeing-and-nasa-for-aerospace-engineering-mentorship-program
    - https://federalnewsnetwork.com/workforce/2020/10/new-nasa-mentor-program-between-boeing-southern-university