



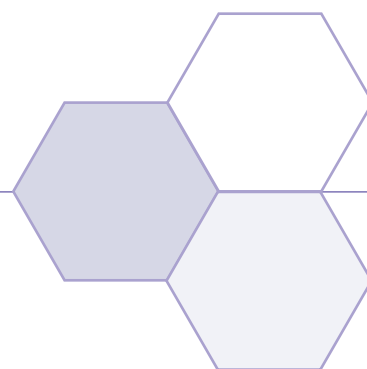
PROMISING PRACTICES
for **EQUAL OPPORTUNITY,**
DIVERSITY, and INCLUSION

JULY 2015

National Aeronautics and Space Administration

Office of Diversity and Equal Opportunity
NASA Headquarters
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Washington, DC 20546

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MESSAGE

FROM THE ADMINISTRATOR



At NASA, we have always strived for the stars—both literally and figuratively. This is no less true for our equal opportunity (EO) and diversity and inclusion (D&I) efforts than it is for our storied space program, awesome scientific endeavors, and world-class aeronautics research. At NASA, EO and D&I are fully reflected in the Agency’s Strategic Plan, which includes as a key objective our efforts to “attract and advance a highly skilled, competent, and diverse workforce, [and] cultivate an innovative work environment.” In keeping with the strategic importance of EO and D&I at NASA, this collection of promising practices demonstrates many of the efforts the Agency is taking to increase the diversity of our workforce at all levels, and to make our workplace second to none when it comes to inclusion and equality of opportunity for all employees. Throughout these pages, we share many of the strategies we are engaging in as an Agency, as well as across our Centers.

Many of our most promising programs and initiatives have started with our Centers, and we are extremely proud of the work they are doing in this arena. Each of our Centers is integral to mission success because of the critical role each plays in achieving that success. The same is true for diversity, inclusion, and equal opportunity, which are just as imperative to accomplishing the mission of our Agency. It is an awesome and unique mission, one that requires the dedication and support of people from all walks of life, bringing the many diverse perspectives, talents, and life experiences needed to solve the most complex of technical problems.

It is my firm belief that we cannot lead the world in space flight, science, and aeronautics research if we cannot lead as an employer of choice for the best and the brightest. In short, we seek to be a leader in all that we do and to remain the best place to work in Government. With these goals in mind, NASA invites you to review some of our key promising practices for diversity, inclusion, and equal opportunity.

It is my firm belief that we cannot lead the world in space flight, science, and aeronautics research if we cannot lead as an employer of choice for the best and the brightest.

A handwritten signature in black ink, which appears to read "C. Bolden". The signature is stylized and written in a cursive-like font.

Charles F. Bolden, Jr.
July 2015

MESSAGE

FROM THE ASSOCIATE ADMINISTRATOR FOR DIVERSITY AND EQUAL OPPORTUNITY

NASA shares in common with other Federal agencies, private employers, and indeed with the Nation as a whole, the twin goals of advancing equal opportunity (EO) and diversity and inclusion (D&I) among our workforce, as well as in our programs and activities involving members of the public. This publication showcases a number of innovative and creative EO and D&I efforts we are spearheading as an Agency, and across our Field Centers. It reflects NASA's long-standing commitment to continually strive for engagement, excellence and innovation among our workforce and to reach out to members of the public with our story.



Promising Practices helps further this commitment by sharing a host of ways that we as an Agency are advancing the principles and practices of EO and D&I, not in an abstract, notional sense, but in the day-to-day, practical world in which we all live and work. Whether it is helping to make our Web sites more accessible to individuals with vision disabilities, better ensuring that all of our employees have a meaningful opportunity to be heard by leadership, or partnering with our local educational and business communities to engage and inspire young people from all backgrounds, NASA endeavors to lead the way in advancing EO and D&I.

There remains much more to be done. As a living document to which new practices will continually be added, this first edition of *Promising Practices* is intended to enhance cross-pollination among the NASA Centers. We believe that, in serving as an idea generator from Center to Center, the document should greatly assist NASA in its efforts to spark innovation and

creativity in the EO and D&I arenas. We encourage each Center to utilize the practices highlighted here to help enhance its standing as a NASA leader in EO and D&I.

A handwritten signature in black ink that reads "Brenda R. Manuel".

Brenda R. Manuel

July 2015

There remains much more to be done. As a living document to which new practices will continually be added, this is a first edition of a Guide intended to enhance cross-pollination among the NASA Centers.

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This Guide was developed under the executive leadership of Brenda R. Manuel, Associate Administrator for Diversity and Equal Opportunity. The co-Project Directors were members of her staff—David Chambers, Senior Civil Rights Analyst, Program Planning and Evaluation Division, and Danette R. Mincey, Director, Complaints Management Division. The Technical Advisory Team was comprised of Office of Diversity and Equal Opportunity (ODEO) senior staff, including Sharon Wagner, Director, Program Planning and Evaluation Division; Barbara Spotts, Agency D&I Manager; Crystal Moten, Agency EEO Training Manager; Omega Jones, Executive Officer; and Rebecca Kraus, Civil Rights Analyst. Members of the NASA EO and D&I community serving on the Agency-wide Task Team for the project included the following, organized under the sub-team on which each participated:

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CHAPTER 1

Demonstrating Leadership Commitment

INTRODUCTION



Demonstrated leadership commitment is a critical component in both advancing equal employment opportunity (EEO) and in going beyond compliance with EEO requirements to successfully weave diversity and inclusion (D&I) into the fabric of Agency culture. In the case of EEO, U.S. Equal Employment Opportunity Commission (EEOC) Federal sector regulations require that the Agency's head of EEO report directly to the head of the Agency. At NASA, this is the case, with the

Associate Administrator for Diversity and Equal Opportunity reporting directly to the Administrator. As a regulatory requirement, it is a basic aspect of compliance with EEO. However, a top-down leadership commitment is also necessary in the context of D&I, where the research literature, case studies, and practical applications have shown that this is without doubt the “make or break” factor in the success of any D&I effort. The promising practices in this section illustrate the breadth and depth of this commitment among NASA's senior leadership team.

Institutional Leadership

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Diversity and Inclusion Strategic Partnership (DISP). As part of its strategic approach to institutionalizing D&I, NASA created a senior leadership body to advise the Administrator in his role as Agency D&I Champion. This body, the DISP, is comprised of top leaders from both the Agency and Center levels and is thus inclusive of all backgrounds and disciplines represented among NASA's leadership. Members are advised by a team of subject matter experts reflecting the arenas of D&I, EEO, human resources (HR), legal, and labor, among others. The DISP regularly strategizes on proactive approaches to address the Agency's D&I needs, playing a critical role in developing and implementing the Agency's D&I plans and initiatives. It is also instrumental in devising new and innovative solutions to D&I challenges. NASA Centers have followed the Agency's lead in establishing their own Center-level D&I Councils made up of senior leaders and representative stakeholders.

Equal Opportunity (EO) and Diversity and Inclusion (D&I) Fully Reflected in the Agency Strategic Plan. NASA has established a fully realized presence for D&I, as well as EEO, in the Agency's Strategic Plan and Performance and Accountability reporting structure. Through a strong partnership between the Agency Offices of Diversity and Equal Opportunity and Human Capital Management, NASA has specific and measurable outcomes and performance goals for D&I. NASA also established an Agency D&I Strategic Partnership, inclusive of the full spectrum of senior leadership positions, to better ensure diverse inputs into D&I decision making and fully shared accountability, as well as to create sustainability through an institutionalized D&I structure.

Through a strong partnership between the Agency Offices of Diversity and Equal Opportunity and Human Capital Management, NASA has specific and measurable outcomes and performance goals for D&I.

Head of Diversity and EO is an Integral Member of Senior Leadership. At the Agency level, in addition to the Associate Administrator (AA) for Office of Diversity and Equal Opportunity (ODEO) reporting directly to the Agency head, the AA also serves as a strategic member of the Agency's senior leadership team. The AA functions within the Agency leadership hierarchy and is a member of high-level leadership forums, including the Senior Management Council, Senior Executive Committee, Executive Resource Board, Baseline Performance Review Team, as well as sits on a number of high-level leadership boards and panels. The AA, ODEO has a seat at the table for high-level Agency decisions and briefings and forums to bring issues affecting EEO and diversity to the attention of senior management officials.

NASA CENTERS

Center Diversity and Inclusion Councils. Following the Agency's lead, each NASA Center and Headquarters has created a Diversity and Inclusion Council as a foundational element and focal point for D&I efforts. Among the most noteworthy of the Center councils is Johnson Space Center's (Johnson) Inclusion and Innovation (I&I) Council. At Johnson, Center leadership explicitly tied the value of innovation and inclusion in the Center's diversity council, blending the two concepts in the name of the body. The I&I Council's mission is to develop and implement initiatives that encourage open mindedness, allowing for the inclusion of a variety of perspectives and people. The mission seeks to increase collaboration, enhance creativity, and lead to the development of innovative solutions to the Center's challenges. In turn, these innovative solutions play a significant role in Johnson's ability to achieve mission success, excellence, as well as the Center's ability to compete to win both today and tomorrow.

The Center Director is the chair with both permanent and rotational members coming from the director and deputy ranks. Council members serve as leaders, role models, and facilitators of open mindedness, inclusion, and innovation and provide guidance on how inclusion fosters creativity and innovation. In addition, they define, prioritize, and lead the Center's I&I strategy and initiatives.

Another noteworthy example: the Ames Research Center's (Ames) Diversity and Equal Opportunity Board (DEOB). DEOB membership includes the Center Director, Directorate senior leadership, a Union representative, and the Center's Advisory Group chairs. The focus of the meetings is driven by issues raised by senior leadership, advisory group membership, and Ames Office of Diversity and Equal Opportunity (Ames ODEO) staff. DEOB meetings are held to permit the discussion of Center concerns and ensure recommendations for resolution. Meetings occur at a minimum of six times per year, with opportunities to schedule special DEOB's as deemed necessary. As a result of the DEOB's meetings, the Center has acquired a new accessible transportation bus, developed an Ames Disabled Access Team (ADAT) to review Center access concerns, and implemented a Center D&I lecture series in partnership with the Center's Advisory Groups (AGs) and Chief Scientist to promote D&I awareness.

At Armstrong Flight Research Center (Armstrong), the Center Director is the Diversity Champion and permanent chair of the Center's Diversity and Equal Opportunity Council (DEOC). The council consists of a variety of supervisory and non-supervisory employees who rotate every two to three years. The Diversity and Inclusion Strategic Plan is not only the responsibility of the Equal Opportunity and Diversity Office, but it is the responsibility of every employee at the Center. In order to foster D&I ownership and accountability at Armstrong, each D&I plan strategy is championed by an Executive Leadership Team (SES) member. The strategy champion is partnered with a DEOC member supervisor and employee. The DEOC members work as liaisons between the responsible office and champion for each strategy. Accomplishments and status of each strategy are reported at the DEOC Quarterly meetings.



Individual Leadership



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Associate Administrator's Message to Second-Level Supervisors. In November 2014, NASA Associate Administrator Robert Lightfoot recorded a video message to second-level supervisors. The video, available in the online System for Administration, Training, and Educational Resources for NASA (SATERN), provides training to supervisors on the Agency's Performance Management Program. The training focuses on accountability, transparency, and fairness in ratings, and directs second-level supervisors to review all employee ratings submitted by first-level supervisors. Second-level review is necessary to ensure that no inconsistencies and disparities, which can be introduced, for example, by unconscious biases, exist in NASA performance reviews. In addition to emphasizing the need for meaningful second-level review, the Associate Administrator focused on the criticality of performance management, especially as it relates to supporting first-level supervisors and leading by example.

Strengthening Management Outcomes (SMO) Initiative. The Agency Office of the Chief Financial Officer (OCFO) conducts an internal management initiative, titled "Strengthening Management Outcomes," to create a forum for OCFO supervisors to discuss management practices that would enhance the OCFO culture and promote timely focus on issues of greatest impact to the organization. The SMO lead constructs a list of topics for the year focused on advancing the group's capabilities and fine-tunes each session with leadership input. The monthly meetings last for 90 minutes and have a detailed agenda with speakers, as appropriate. The overall goal is to tie topics and discussions to the responsibilities of managers for both their staff and larger organizational goals and concerns. In terms of EEO and D&I, the SMO efforts have also increased transparency of supervisory practices and decisions, such that individuals across the organization feel they or their group are treated fairly and equitably.

NASA CENTERS

Inclusion and Innovation (I&I) Status Card. At Johnson, the I&I Status Card was designed and implemented to not only enhance management accountability, but also to provide a means for reflection about how management actions and decisions can shape our organizations. The Status Card facilitates the monitoring and tracking of I&I progress at the directorate level. More specifically, each directorate-level organization is responsible for producing its Status Card report twice a year—at the midpoint and end of year. The online Status Card application, developed in-house, produces a succinct two- to three-page report, containing both qualitative and quantitative sections. The qualitative section allows directorate level organizations to highlight actions and behaviors that demonstrate their engagement in inclusion and innovation activities. It is divided into several subsections. The first subsection seeks to capture ways

the Directors have raised awareness of D&I across their workforce and includes a summary of participation in I&I related training. Other subsections ask for information about upcoming I&I related challenges, as well as innovation achievements. The quantitative section is a one page summary that includes race and gender breakdowns for the overall population, intern population, grades, reassignments, ratings, and promotions. Each Director completes the card using year-end data and then discusses it with the Center Director and shares best practices with other senior leaders in a group forum.

Interactive Theater Sessions. Various NASA Centers are using innovative techniques for training the workforce on D&I topics. At Marshall Space Flight Center (Marshall), a D&I training initiative incorporates scenarios designed to help sensitize leaders and supervisors to micro-inequities, as well as to help establish a common language around D&I. Approximately 200 employees have viewed the theatre sessions. These sessions are advancing a common understanding around improving teamwork by raising awareness around micro-inequities. Marshall also purchased videos depicting actors acting out examples of micro-inequities. The videos are used in training sessions with managers and employees to make them aware of subtle situations of bias, discrimination, and micro-inequities, and to help stimulate their thinking on and greater openness to D&I. Goddard Space Flight Center (Goddard) is another Center that has used interactive theater for EO/D&I training purposes on topics such as performance management and anti-harassment training for supervisors.

Leadership Visibility as a Cornerstone of D&I Leadership. Leadership visibility is a cornerstone in Agency and Center D&I. For example, the Langley Research Center (Langley) senior leadership team regularly visits with various offices and organizations through the Management by Walking Around Initiative. These informal visits



At Marshall Space Flight Center (Marshall), a D&I training initiative incorporates scenarios designed to help sensitize leaders and supervisors to micro-inequities.

give employees an opportunity to interact with management in their own environments where they can provide a snapshot of how they contribute to the mission one-on-one with leadership. This provides a forum for members of the leadership team to express their appreciation directly to the staff for their individual and team contributions. This forum is highly valued by both staff and leadership teams because of its focus on how the diversity of the Center's workforce enhances the ability to exceed the Agency's expectations.

Similarly, at Marshall, a large group of senior leaders fanned out in smaller groups of four to five to meet with all employees at the Center in relatively small groups to engage in dialogues about D&I. A chart presentation, carefully crafted by a group of Center senior leaders during an off-site meeting, formed the basis for the dialogues. These dialogues provided senior leaders an opportunity to explain the goals and rationale behind the Center's emphasis on D&I, what micro-inequities are and what they look and sound like, and how D&I impacts high performance. The charts were benchmarked by Headquarters ODEO for the Agency's D&I efforts.

Another Center, the NASA Shared Services Center (NSSC), has established, under the direct and personal leadership commitment of its Center Director, a three-phased

approach for building D&I into the foundation of the Center. NSSC initiated the first phase by encouraging all managers, supervisors, team leads, and team members to actively solicit input and opinions during meetings of individuals who were not speaking up. The second phase consisted of an offsite full-day training session presented by a dynamic D&I Facilitator familiar with the NASA D&I initiative, which addressed a variety of issues from impact of unconscious bias to the expansion

of inclusive practices to the creation of a leadership support system. The third phase focuses on building accountability into the initiative through performance planning and monitoring.

Mandatory Lesbian, Gay, Bisexual, and Transgender (LGBT) Training for Managers.

Kennedy Space Center (Kennedy) made LGBT training mandatory for its Division Chiefs and Branch Chiefs. The course was specifically designed for managers who are not familiar with the LGBT community. The course emphasizes the imperative need to understand and use the appropriate vocabulary in order to show respect. The course, which is three hours in length, is described as "a learning safe zone designed to increase awareness and understanding of the LGBT community at KSC." It is an education opportunity that promotes open questions and discussions.

...the NASA Shared Services Center (NSSC), has established, under the direct and personal leadership commitment of its Center Director, a three-phased approach for building D&I into the foundation of the Center.

Senior Leaders Sharing Their Individual Leadership Journeys. A few NASA Centers have developed mechanisms for employees to learn more about senior leadership from the leaders themselves. For example, Langley has a Profiles in Leadership Series in which senior leaders present to employees on their individual leadership journeys. At Langley, senior leaders make such presentations several times a year to allow employees to get to know more about their senior leadership and provide them with an opportunity to interact with management on a more personal level.

At Armstrong, its New Professional Group holds quarterly meetings that highlight a member of the Center's Executive Leadership Team. At the meetings, the senior leader talks about current news, happenings, and issues at the Center. They also describe their current job, responsibilities, and the career path taken to get to their current position, and allow time for questions.

Senior Managers Sharing D&I Experiences. Marshall created a series of videos by senior managers sharing their views and personal experiences about D&I for release Center wide. They convey the senior management's emphasis on the importance of the values of teamwork and excellence, and contribute to retaining a diverse workforce, and creating the right environment for all employees to flourish and achieve top performance.



Unified Leadership Message for EO and D&I. At Ames, there is an intentional focus on creating a unified message for EO and D&I to more effectively increase awareness and promote a collaborative, open, and innovative work environment. On a quarterly basis, each EO liaison embedded within the Center’s various divisions meets with division staff leadership to relay information about D&I and EO. The “unified messages” consist of updates on current and new laws, EO process and procedures, information on observance months, Advisory Group (AG) events, and other relevant topics. These sessions are also used to disseminate information about awards, leadership, mentorship, and career development opportunities. EO liaisons encourage Division Chiefs to identify individuals to encourage and nominate for Center opportunities. Best practices regarding D&I efforts are shared and used to provide learning circles and engage in dialogues. The unified message is also shared with AGs for communication with their membership. ●





CHAPTER 2

Attracting Top Talent

INTRODUCTION



Every employer seeks out top talent. One might say that “NASA is no exception”—except that it is. NASA has a mission as an employer that is unique. We seek to take humankind to the stars and in order to get there we not only want, but also need, top talent in narrow and highly competitive fields such as aerospace engineering and astrophysics. If we want to ensure our workforce reflects the diversity of the public we serve, we need individuals from a wide variety

of backgrounds, skills, and abilities that can bring unique perspectives, and life experiences, to tackle highly complex challenges to achieve NASA’s mission. To provide some context from an EEO perspective, under EEOC regulations, Federal agencies are required to communicate the agency’s EEO policy and its employment needs to all sources of job candidates. The legal requirement to include all sources reflects a floor of basic regulatory compliance. But, we at NASA have long sought to go well beyond compliance, seeking true excellence through a broader focus on diversity and inclusion of all employees. The promising practices in this section spotlight the specific ways in which we have sought to find the best talent across the broad spectrum of American society to ensure the greatest diversity in our workforce.

Outreach

By offering students the opportunity to work with NASA scientists and engineers, ACCEDP expands career horizons for those students and allows them to acquire technical knowledge and critical skills.

NASA CENTERS

Ames Community College Education and Development Program (ACCEDP). ACCEDP is a career-building internship opportunity specifically designed by Ames for San Francisco Bay Area community college students. The ACCEDP initiative supports the NASA Education Framework by addressing the shortage of college students engaged in and pursuing careers in science, technology, engineering, and mathematics (STEM) and fields related to NASA Mission Support. To this end, ACCEDP has partnerships with San Francisco Bay Area community colleges to recruit talented students to participate in internships with NASA researchers and mission support professionals. By offering students the opportunity to work with NASA scientists and engineers, ACCEDP expands career horizons for those students and allows them to acquire technical knowledge and critical skills.

Social Media and High Tech. NASA Centers are continuously increasing their presence in social media. For example, Johnson implemented the following activities to enhance diversity in recruitment: a) furthered Johnson's social media presence by utilizing Twitter and Facebook to share both recruiting information and program/student experience information; b) mentored students in the creation of a new Johnson student recruitment video that featured both Education Interns and Pathway Interns; c) in an effort to increase student reach in Fall 2013, utilized Johnson's External Relations' Digital Learning Network to deliver two Webcast Info sessions (one for career services personnel and one for students); d) piloted (c) by using video technology for Pathways Intern Panel interviews (would normally be phone interviews); and e) participated in their first Skype career fair (with Illinois Institute of Technology).

Student Intern Onboarding. Student interns have traditionally been an important source for identifying new talent at NASA. Ames and Goddard have designed and conducted training specifically intended to address the needs of students coming to the NASA workplace for the first time. However, there is a need to help students

unfamiliar with the NASA workplace to better understand Agency core values and the policies and procedures that support them. For example, the NASA commitment to a harassment-free workplace is taught by these Centers to civil servants and contractors, as well as with student interns and their mentors, all of whom are required to take Prevention of Harassment training. Additionally, this training educates all concerned about appropriate behavior in the workplace, including how to interface appropriately in the mentor-mentee positions that civil servants and contractors naturally assume with student interns.



Recruitment

AGENCY LEVEL

Operation Warfighter. In 2013, the Office of Strategic Infrastructure (OSI) began working with Operation Warfighter (OWF) and has had one veteran join the office in an internship capacity. The main objective of OWF is to place recovering Service members in supportive work settings that positively impact their recovery. The program represents an opportunity to facilitate recovering Service members' development and employment readiness by providing assistance with résumé building, exploring employment interests, and developing job skills through internship opportunities. OSI used its past veteran to accomplish work that can no longer be supported because of full-time equivalent (FTE) cuts. OSI plans to continue this practice and is working with the program and the Office of Human Capital Management to bring another veteran to the office in the near future.

OSI has also had success in promoting diversity and inclusion within the contracting realm. Currently, OSI has long-standing contractual relationships with two women-owned small businesses. Each vendor (an editor for policy documents and an Ombudsman Consultant) contributes to the office's overall functional management responsibilities by providing relevant expertise where it does not otherwise exist within the organization.



NASA CENTERS

Achieving the Two Percent Individuals with Targeted Disabilities (IWTDD) Goal. Goddard holds the distinction of being the only NASA Center that has achieved the Government-wide two percent goal for IWTDD. At Goddard, the EEO and Human Capital Offices partnered to develop and implement a strategic plan to recruit and hire Individuals with Disability (IWD) and IWTDD. This plan included two key elements. The first of these was Outreach, Recruitment and Hiring. Here, Goddard took a multifaceted approach to increasing the representation of IWD and IWTDD. The Disability Program Manager and the Special Program Coordinator developed an outreach and recruitment plan that included: recruitment activities with significant numbers of qualified IWTDD; utilization of social media to communicate recruitment efforts; consultation with State Division of Rehabilitation Services; and utilization of other state services for Schedule A referrals.

The second element was Retention via Education and Awareness. Here, the Goddard Equal Opportunity Programs Office (Goddard EOPO) also developed a strategy to improve retention of individuals with targeted disabilities by enhancing general education and awareness efforts at the Center to include: conducting "Disability Awareness Roadshows" across the Center to increase education and awareness among supervisors regarding reasonable accommodations; conducting Schedule A hiring presentations to increase supervisors' understanding of that particular hiring

authority; partnering with the Center's Selective Placement Coordinator to ensure that the onboarding process for new hires requesting accommodations went smoothly; conducting Reasonable Accommodations discussion at all New Supervisor orientations; and offering "Power and Privilege: Disability" training to all supervisors.

Some additional specific examples of strategic action Goddard has taken that Centers may wish to consider include:

- Establishing collaborative relationships with community groups, universities, professional organizations, and publications to improve outreach and recruitment opportunities and communicate with them in advance of recruitment events to ensure that IWTD are aware of NASA's visit and interest.
- Utilizing the Office of Personnel Management (OPM) Shared Register of Applicants With Disabilities.
- Utilizing the Pathways program, internships, fellowships, and other pipelines to recruit IWTD, such as the NASA Motivating Undergraduates in Science and Technology (MUST) Scholarship Project, Achieving Competence in Engineering, Computing, and Space Science (Project ACCESS); and the Workforce Recruitment Program (WRP).
- Placing at least two students through Project ACCESS, with an emphasis on placing students with targeted disabilities.
- Following up with former and current interns with targeted disabilities to encourage their participation in the NASA Co-operative Education Program and provide information about NASA employment opportunities.
- Ensuring outreach and recruitment materials, including those for the Co-operative Education Program and internship programs, are accessible by IWTD.
- Developing an electronic mailing list of disability advocacy groups in the local area and send regular e-mail notices regarding job openings and Schedule A information.



Attracting and Hiring IWTD. Ames and Goddard have each produced a Schedule A workshop for Executive Council members. The NASA Shared Services Center Diversity and EO and HR Offices partnered in developing a Schedule A PowerPoint presentation, which was jointly delivered to all NSSC supervisors. These kinds of efforts can help to demystify the process of utilizing Schedule A for managers and supervisors, helping to increase the likelihood that they will utilize Schedule A and other hiring flexibilities designed to bring more IWTD on board.

Debrief Checklists/Demographic Analyses of Selections for Non-Routine Assignments.

The NSSC MD 715 Plan has a requirement for managers and supervisors to conduct meaningful debriefs for non-selected applicants for NSSC vacancies. A Debrief Checklist is utilized to ensure all debriefs are consistent, thorough, and provide applicants with resources to improve their competitive posture. Further, in its efforts to help ensure a level playing field for NSSC employees, NSSC is conducting demographic analyses of employees selected for non-routine assignments, acting assignments, special projects, rotational opportunities, training, and conference participation. The NSSC D&I Council will review the results and make recommendations to the Executive Director regarding the process currently in place.

NASA Glenn Recruitment Days at Minority Serving Colleges and Universities. Glenn Research Center (Glenn) began holding recruitment events at minority serving colleges and universities in response to the need to recruit minority engineering students into what was then the Cooperative Education (now Pathways) program. It was found that senior managers were more likely to endorse the hiring of minority candidates if they were more intimately involved in the recruitment process. Also, creating a community of alumni from a minority serving institution increases the opportunity for successful future recruitment and also increases retention of the employees.

The first Glenn recruitment event was held at Tuskegee University and resulted in three hires into the Co-op Program. Each successive recruitment trip resulted in the hiring of additional students. Key elements of the NASA Recruitment Days: 1) Involvement of Senior Management – Senior leaders actually interviewed the students; participated in campus tours; and made presentations to students and faculty about the work of their organizations; 2) Involvement of faculty, i.e. Deans, Department Heads, was extremely important. Many recruitment activities only involve career services personnel; and 3) Involvement of alumni, specifically recent hires, to recruit and continue to market Glenn as an employer. The Kennedy Education Programs Office recognized this as a best practice and is now using it as an outreach tool for their intern positions. The Cleveland Clinic has also expressed interest in partnering with Glenn after hearing about it.

Project HIRED Partnership. Ames has an 11 year partnership with Project HIRED, a community organization which provides employment services and training to disabled veterans and IWDs. Ames ODEO co-hosted the 2014 Wounded Warrior Workforce Conference with Project HIRED and focused on providing employment resources and opportunities for disabled Veterans and their spouses. Over 120 participants were in attendance, as well as 26 employers. Employers included Facebook, LinkedIn, IKEA, and NASA. The event included a career fair and workshops on how to apply for Federal jobs and what to expect after transitioning into civilian life. Ames hired three individuals with disabilities as a result of this event. This event was a Center-wide effort and included the collaboration of several offices, including HR, Legal, Education, and the Center Director. For the past several years, Ames ODEO has attended Project HIRED's annual events as an exhibitor.



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Work-Life Balance

AGENCY LEVEL

Work-life Balance Programs. NASA has some of the most widely recognized work-life balance programs anywhere in the Federal Government. Work-life balance at NASA encompasses maximally flexible work schedules, the Agency Office of Human Capital Management’s “Work from Anywhere” initiative, and multiple onsite lactation facilities, among others. These optimized flexibilities help to make NASA a very attractive Agency to many, especially those who are addressing issues such as child and elder care. Strategic balancing of work and life permeates NASA culture. Work-life is embedded at the policy level, included in a variety of Agency policy directives. It is also cultural norm at the Agency, with employees reporting great satisfaction regarding management’s support and attentiveness to work-life balance needs.



NASA CENTERS

Super-flex Friday Plan. A number of Centers are engaging in installation-wide work-life balance initiatives coupled with energy saving measures. For example, Johnson implemented Phase I of its Super-flex plan for every other Friday. Through this strategy, Johnson strives to embrace and enhance workplace flexibility as a positive balance for the workforce and to meet mandated energy and carbon footprint reductions and cost savings. Super-flex highlights Work from Anywhere/Telework and enables civil service employees to continue to use the Maxiflex schedule, allowing a variety of work schedule options. The Super-flex schedule will attract critical talent through work-life fit and schedule flexibilities. Other Centers are also experimenting with extreme flexibilities. Armstrong, Goddard, and Langley have all instituted the “quiet Friday” approach, under which employees are encouraged to telework and not to schedule meetings. ●



CHAPTER 3

Cultivating Excellence, Teamwork, and Innovation

INTRODUCTION



Innovation requires a certain kind of environment to thrive. What are the key “ingredients” for such an environment? At NASA, they are embedded in our Core Values, particularly those of Teamwork and Excellence. For example, as stated in the NASA 2014 Strategic Plan, our approach to teamwork is based on “a philosophy that each team member brings unique experience and important expertise to project issues. Recognition of and openness to that insight improves the likelihood of identifying

and resolving challenges to safety and mission success. We are committed to creating an environment that fosters teamwork and processes that support equal opportunity, collaboration, continuous learning, and openness to innovation and new ideas.” Regarding our Core Value of Excellence, we seek “[t]o achieve the highest standards in engineering, research, operations, and management in support of mission success, NASA is committed to nurturing an organizational culture in which individuals make full use of their time, talent, and opportunities to pursue.” Together,

(CONTINUED)

these Core Values demonstrate well the Agency's commitment to a work culture, or environment, which embraces both opportunity and innovation. The promising practices in this section show how NASA continues to strive for individual and organizational excellence through its openness to innovation and its focus on the Core Values of Teamwork and Excellence.

Teamwork

AGENCY LEVEL

Section 508 Interest Group. There is an informal group of visually impaired people across the Agency that holds telecons twice a month to discuss issues pertaining to accessibility. The topics include best practices for use of assistive technology, accessibility issues with Web sites or applications, and Agency policies regarding 508 regulations. The group has played an instrumental role in reviewing proposed Agency policies and procedures relating to electronic and information accessibility, helping to ensure that such policies and procedures are sound prior to their formal issuance. The group has also been an important voice for improving the Agency's implementation of 508 requirements. The group supports NASA's overall mission by helping to ensure that the Agency's strategic implementation is reflective of diverse inputs that help to strengthen our policies and programs.

NASA CENTERS

Ames Disability Access Team (ADAT). The ADAT is a collaboration between Ames ODEO, Facilities, and the Diversity and Equal Opportunity Board (DEOB). The focus of this team is to identify Center buildings and site designs that are not accessible to individuals with disabilities. Ames ODEO, together with the Center architect and facilities, conduct an analysis to determine the inaccessibility, scope of work, and cost to ensure access for IWDs. Once analyzed, the group presents findings to the DEOB for approval, action, and funding for project completion. Thus far, ten out of sixteen projects have been completed in the ADAT process. The team ensures all areas of the Center are accessible to employees, visitors, and applicants for employment.

Exceptional ERG/Advisory Group Utilization. NASA makes excellent use of Employee Resource Groups (ERGs). ERGs are emphasized in the D&I literature and noted among D&I practitioners as a critical means of increasing employee engagement and thereby enhancing inclusion and excellence. At NASA, a majority of our Centers make

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at least some use of ERGs. Several Centers have demonstrated the invaluable nature of ERG utilization exceptionally well. At Ames, Advisory Groups (AGs) are often utilized to assist the Center ODEO in conveying D&I and EO principles. The Ames ODEO actively encourages AGs to support, participate, and collaborate with each other on Center efforts. EO liaisons communicate regularly with advisory groups to share vacancy positions, leadership, mentorship, and career development opportunities, and encourage them to distribute information to their membership. In addition, Ames ODEO encourages their involvement in award nominations and recognition by identifying candidates or nominees. AGs also assist HR with outreach and recruitment activities by accompanying them to career fairs and conferences. Furthermore, Ames seeks to continually ensure that AG chairs are vital members of the Center DEOB by proactively identifying concerns and offering solutions to Center issues.

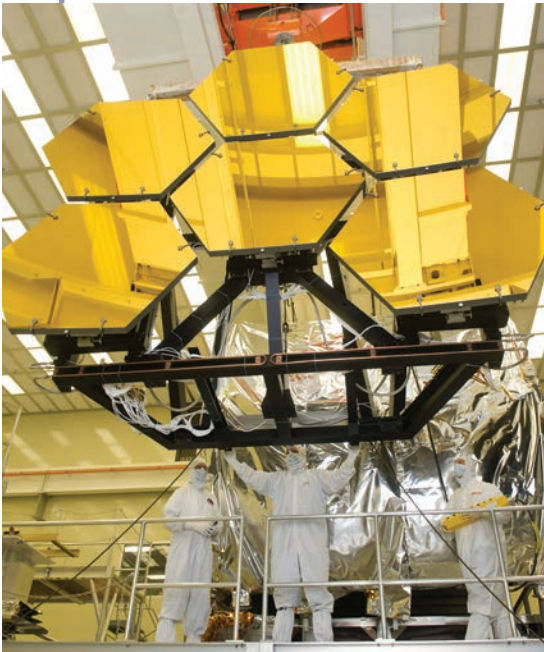
At Glenn, there are eight AGs committed to assisting Center leadership and the Glenn Office of Diversity and Equal Opportunity (Glenn ODEO) in recruiting, retaining, and developing a diverse and inclusive workforce; and educating and engaging the greater Cleveland community in Glenn's mission. The groups host brown bag employee development workshops on topics such as preparing effective USAJOBS résumés and developing a professional network. They also hold mock interview sessions for student interns during the summer to prepare them for possible job opportunities with NASA. Members also act as tutors at schools in the Cleveland community and participate as judges at robotics competitions for elementary school students interested in STEM.

Goddard has ten very active and engaged AGs, which Goddard formally refers to as "Advisory Committees." These Advisory Committees have served as invaluable resources to: 1) work proactively with Goddard management on recruitment, hiring, advancement, and retention of employees, and 2) contribute to the development and implementation of corrective actions that remediate issues in these areas. To better institutionalize the Advisory Committees, Goddard has embedded them in policy directives, established charters with specific roles and responsibilities, provided access to senior leadership, including assigning a Center champion for each group, and given each group monetary resources to carry out their roles and responsibilities.

At Johnson, ERGs have worked similarly to those at Goddard, serving as catalysts to: 1) strengthen recruitment and onboarding, 2) foster cross-Center collaboration, 3) engage the community in Johnson's mission, and 4) enhance the personal and professional development of the membership by providing a platform for the members to practice and demonstrate leadership skills. Johnson has also established the Diversity Network (DN) meeting. The DN has provided a forum for ERGs to meet, collaborate, network, build relationships, and leverage inclusion initiatives.



First-Line Supervisors Resource Group (FLSRG). FLSRG is a Goddard cross-Directorate group of first-line supervisors who are influential in serving as strategic partners in communicating and collaborating with Center leadership. The FLSRG assists in fostering a diverse work environment that is conducive to the needs, professional development, understanding, and utilization of each supervisor's abilities, skills, and knowledge to achieve maximum productivity and inclusion of the Goddard workforce. As part of this effort, the FLSRG is establishing active communication channels with each of the Center's Advisory Committees (AC) to create opportunities for meaningful dialogue on issues relevant to supervisors. This group furthers the Agency's core values of Teamwork and Excellence by providing tools and resources to first-line supervisors and ensuring that they are well prepared for their key role of influence within the Center culture. It also allows supervisors to be active participants with other ACs and be knowledgeable in understanding their specific challenges/issues in the workplace. Supervisors in the group are also better positioned to encourage employees to participate in ACs and overall in D&I efforts. This group was formed by current first-line supervisors who saw a need for this type of forum to exist Center-wide.



Future of Space Exploration Group (MSFC's Space 2100). The Marshall Center Director established a diverse, cross-generational and cross-organizational group to imagine and describe the future of space exploration and the role of Marshall through the year 2100. The initiative, MSFC's Space 2100, has highlighted the efficacy of a diverse team like nothing else. In the fall of 2013, the Center Director challenged employees to describe the future space exploration over the next 40 to 100 years. Marshall's employees are enjoying the opportunity to be included on visioning and strategic planning discussions, but a realization of why this is working is also taking hold. By combining ideas of diverse teams, the collective workforce potential is unlocked with enlightening and lasting impact. Marshall employees are indirectly teaching each other the collective power of diversity and appreciating differences.

Individuals with Disabilities Advisory Groups and ERGs. Among the most active employee groups at NASA are our individuals with disabilities employee groups. A prime example of a high-functioning and impactful individuals with disabilities (IWG) group is Johnson's No Boundaries ERG, established in January 2015. No Boundaries started as the Differently Abled Advisory Group, first established in 2009 to identify solutions for increasing the recruitment strategies, retention, and workplace satisfaction of employees with disabilities. No Boundaries seeks to promote a working environment that is safer, more accessible, and inclusive of IWD/IWTDs. Over the last five years, the group has provided accessibility recommendations on new buildings and emergency evacuation plans, offered feedback on accessibility of work-life balance

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initiatives, and hosted outreach activities to better educate the workforce on disability issues, among many other contributions.

Another excellent example of a disabilities AG is the Glenn Disability Awareness Advisory Group (DAAG), which regularly provides input to Center management, especially as it relates to accessibility. A Center architect is an active member of the DAAG and provides status reports at meetings on the accessibility of new construction. Members also participate in events linking the Cleveland disabled community to Glenn, specifically children with disabilities. Their signature event is the annual Very Special Arts Festival, an event that hosts over 500 children with disabilities annually.

Innovation

AGENCY LEVEL

D&I Training Design Methodology. ODEO is enhancing its D&I efforts with an Agency-wide training initiative, focusing on the kinds of complex D&I issues for which ODEO felt the workforce is now ready after several years under the Agency's D&I Strategic Implementation Plan. The training methodology has been very intentionally focused on learning from NASA managers, supervisors, and employees themselves what their specific issues and challenges are as a group and individually. In order to develop a series of modules targeted to specific segments of our workforce, such as senior leadership, mid-level managers, and employees, ODEO conducted a series of focus groups designed to provide a better understanding of the broad challenges facing the Agency in the D&I context. More specifically, the focus groups assisted in ascertaining the specific content needs of each targeted group, including knowledge levels, practical concerns for each group, and relevant applications. An additional goal was to collect examples of D&I challenges, successes, and suggestions to address the challenges to make the course more relevant to each employee category and to build effective case studies that demonstrate the literature on D&I practices. An underlying goal of the focus groups was to highlight the Agency's D&I work and build employees' willingness to engage in the course once it is developed. ODEO believes this methodology is well suited to accommodate the training needs of a large workforce with multiple dimensions of diversity, such as NASA's.

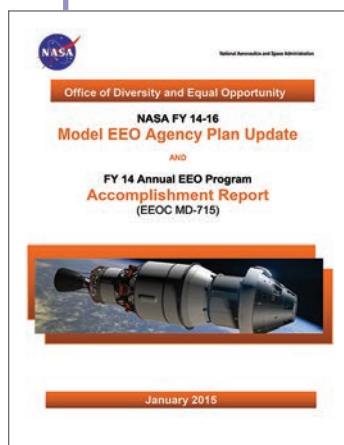
D&I Assessment Survey. Commencing in 2010 and conducted biannually, ODEO has implemented an Agency-wide D&I survey. The purpose of the survey is to assess current workforce perceptions about diversity and inclusion, such as employee views about the culture of diversity and inclusion at NASA, including how managers, supervisors, senior leaders, and Center leadership promote and practice NASA diversity and inclusion policies and personal perceptions of how inclusive our workforce is. ODEO used the initial survey to establish a diversity and inclusion snapshot, identify a baseline for our strengths and challenges, and design future activities for the continuing

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enhancement of D&I efforts at the Agency. The subsequent surveys are a measure of our successes and challenges. In keeping with the holistic approach embodied in the Agency's D&I Framework, results of the survey are used to help shape the strategies and actions in the Agency D&I Strategic Implementation Plan, as well as Center reporting and Center D&I planning.

NASA Guidance on Gender Transition. ODEO developed this guidance to be a resource tool to help NASA managers and supervisors to work effectively with an employee who is undergoing a gender transition. The guidance focuses on the practical considerations in this process rather than on legal rights and remedies. These considerations include making changes to Official Personnel Files and NASA ID badges, addressing issues of restroom and locker room access, and dealing with religious objections or other concerns raised by employees, to name a few. The guidance also encourages managers, supervisors, and employees to consult freely with their EO, Diversity, or HR offices to seek advice on a case-by-case basis.

New Framework for the Model EEO Agency Plan. In 2014, ODEO shifted to a new approach to streamline the development and implementation of its Model EEO Agency Plan, which agencies are required to submit annually to the U.S. Equal Employment Opportunity Commission. The purpose of the new approach is to focus attention on a limited number of high-priority challenges and define the overarching Agency challenges and strategies, but leave it to the Centers to define the tactical actions they will use to address the challenges. In other words, the Agency-level plan broadly states NASA's EEO challenges and strategies to address them, and Centers decide how to best operationalize the strategies by developing Center-specific actions to meet the objectives. This is a departure from the past, when ODEO identified a number of detailed actions for all Centers to implement. This innovative approach provides greater flexibility for Centers to creatively and collaboratively address EEO challenges that are unique to their Center workforce.



AGENCY AND CENTERS

Communicating Employee Ideas. The Agency, along with several Centers, has instituted innovative mechanisms for employee ideas to be voiced and heard in real time by senior management. At the Agency level, NASA has its **Center of Excellence for Collaborative Innovation (CoECI)**, run by the Human Exploration and Operations Mission Directorate in partnership with Johnson. CoECI helps NASA generate ideas and solve important problems. By issuing these challenges, the Agency readily increases its creative capacity and reach by tapping into diverse talent from around the world. As a pioneer and active user of open innovation methods and tools, the NASA CoECI provides organizations with a cost-effective and complementary means of extending its innovation boundaries.

At the Center level, Stennis Space Center (Stennis) developed the Employee Extreme Ideas team as a means for employees to submit/communicate ideas that they felt would: 1) assist in engaging Center employees, 2) assist in improving/sustaining the morale of Center employees, and 3) provide a way for employees to get their ideas to the Center Director. In a similar vein, the NSSC launched an “Innovations” Web site linked from the NSSC Home Page which encourages all NSSC team members to post their ideas, requests for solutions, and other suggestions.

EO and D&I in Managerial Performance Plans. NASA incorporates EO and D&I as critical performance elements for senior executives as well as General Schedule (GS) managers and supervisors. Senior executives’ performance plans specify under the critical element of Leading People that executives will encourage a work environment open to the expression of diverse ideas and opinions, including dissenting views. Executives also strive to maintain a work environment free of discrimination and harassment. They are called upon to resolve conflicts in a constructive manner, if possible, by Alternative Dispute Resolution. They also are asked to demonstrate how they have advised employees of opportunities for mentoring, developmental programs, details, and special assignments. Finally, they are asked to demonstrate positive steps in incorporating demographic diversity into the organization. The Administrator has weighted the Leading People element at a quarter of the overall performance rating for direct reports. ODEO has prepared a guidance identifying activities that are consistent with high-level performance in this arena.

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NASA CENTERS

Center-wide Speed Networking. Goddard offers a Center-wide speed networking program to help employees connect with each other personally so that when they meet during their work day, they see associates, colleagues, or friends rather than strangers. This is a quarterly event open to all civil servants and contractors, and it helps to create a sense of community on Center. In two minutes, assumptions and unknowns can be erased to achieve a level of familiarity that enables them to work collaboratively. Hosting this event exemplifies the Center’s commitment to build an inclusive, collaborative, and innovative work environment. The speed networking sessions contribute to mission success because key knowledge, tips, and best practices are shared among participants. The sessions also help to contribute to mission success because employees are able to more quickly solve problems by utilizing their networks and relationships built during the session.

D&I Accomplishments Tracking. Stennis' D&I Plan contains a section titled "Accomplishments to Date." All accomplishments are captured quarterly and incorporated/updated in the Plan. The purpose of this section is to continually keep employees informed and apprised of the progress the Center is making with its D&I initiatives. Employees are able to view the accomplishments at the Stennis Office of Diversity and Equal Opportunity (Stennis ODEO) [Web page](#). In addition, Stennis has initiated an electronic Accomplishment Tracking System. All managers and supervisors have access to the system and report quarterly on the status/accomplishments of their organizations. Each accomplishment is tied to a Planned Activity and Strategy in Stennis' D&I Plan that identifies managers and supervisors having that particular primary responsibility. Management now takes ownership of those actions. At the end of each quarter, all achievements are to be incorporated into Stennis' D&I Plan. At the end of each fiscal year, an Accomplishment Report will be developed and disseminated to all employees.

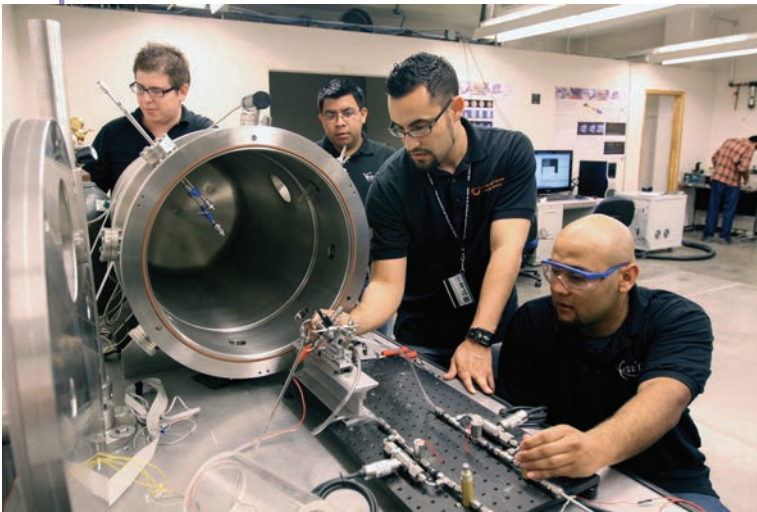
Flash Mentor Matching Event. The first ever Johnson Flash Mentor Matching Event was created to give protégés an opportunity to meet several prospective mentors prior to final match decisions. More recently, Johnson has included "M3 Forums,"

centered on developing its mentors in the program. Johnson HR also revamped its newsletters and Web site and encouraged protégés to find another protégé in the program and create a 2x2 protégé team for sharing best practices and lessons learned.

Glenn Creativity and Innovation (C&I) Initiative.

The Glenn C&I Initiative is a grass-roots effort started by volunteers to foster an innovative culture and spark creativity and innovation at the Center. The group is diverse and is comprised of employees from various disciplines, job classifications/titles, work units, and levels across the Center. The C&I team focuses on eight elements to address the goals of the initiative. Some of the

key elements on which it is based are: 1) Learning – identifying and bringing external training opportunities to the team and Center to enhance and inspire creative capabilities; 2) Collaboration Tools – evaluating and implementing ways to solve problems creatively, making use of interactive media; 3) Creative Spaces – creating unique spaces and exciting environments focused on enhancing creativity, collaboration, and innovation. This practice supports the core values of both excellence and teamwork. The goal of the C&I Initiative is, through the diverse ideas and abilities of team members and the facilitation of C&I methods, to foster a work environment that encourages innovative problem solving.



Goddard Assistive Technology Program. The Goddard Assistive Technology Program was developed in partnership between Goddard’s Equal Opportunity Programs Office and the Information Technology Communications Directorate. This onsite facility was designed to facilitate employee access to assessment referrals and acquisition of electronic assistive technology (AT) for civil servants with disabilities, as needed. Benefits and features of this resource for all managers and employees include better assessments with qualified assessors; consolidated sourcing for AT equipment and devices with a “petting-zoo” to try out equipment before ordering; higher use of low-tech AT devices; more efficient use of resources; and a shorter time to receive equipment. This program helps to recruit and retain top talent at Goddard.

Goddard Civility Collaborative. The Goddard Civility Collaborative is a monthly series of dialogues that create a safe space to explore the concept and practice of civility, respect, and engagement in employees’ everyday lives. Employees examine how they can constantly be more conscious and aware of their words and deeds for the betterment of themselves and for others. Basic tenets include using the power of civility to confront disrespectful behavior and create a safe space for human imagination and intellectual capital to flourish. The Goddard Civility Collaborative is a highly inclusive community with active members from across the Goddard campus. This program contributes to mission related innovation through its focus on building and sustaining leadership competencies and innovative thought practices. It also supports the Center’s efforts to retain top talent by providing a creative space to focus on leadership soft skills. In addition, it promotes the Agency’s core value of Excellence by building balanced leaders focused on Emotional Intelligence as well as technical capability.

GRC Connections. Responding to the need for increased information sharing among employees at all levels, GRC Connections was developed by the Office of the Chief Technologist to provide an innovative venue to share information with employees about interesting activities happening at Glenn. The sessions, held once per month, are limited to 45 minutes because of tight deadlines and other scheduling demands. The sessions feature only one topic with a facilitated question and answer period. Previous sessions have covered diverse topics, including both technical and non-technical subject matter. Examples of past topics include: The Employee Viewpoint Survey Results, Working at GRC – The Young Professionals Perspective, The Center’s Master Facilities Plan, and New Business and External Partnerships. Because GRC Connections is designed to foster a learning culture in the organization, this information sharing activity helps to instill a sense of ownership in the work and accomplishments of the Center and the Agency, which increases employee engagement, essential to teamwork and an innovative workforce.

i am goddard Campaign. The “i am goddard” campaign focuses on the importance of individual contributions to the Center and reminds all employee that everyone is included in making Goddard a high-performing and successful environment. All employees are encouraged to emulate and promote the values of the campaign, “Creating a positive work environment where our ideas span beyond the breadth



of today's view, our contributions are valued, and we continue to share our knowledge base with each other." The campaign focuses on modeling the positive behaviors that Goddard wants to see in the workplace and thereby contributes to overall mission success.

"It Gets Better" Video. Johnson Out and Allied ERG produced the "It Gets Better" video to raise awareness regarding the need for maintaining discrimination and harassment free organizational environments. The NASA Administrator recognized the value of the video and several other Centers used the video during LGBT Month activities.

Organizational Culture and Climate Survey and Video. Johnson facilitated a partnership with Cornell University for a collaborative research project to administer an Organizational Culture and Climate survey. A key goal of the unique research study was to identify best employment practices and to more fully understand how people (with and without disabilities) perceive disability related issues at Johnson. Research findings will enable Johnson to better serve different disability groups at Johnson and ensure that the policies will serve the needs of all employees. Johnson also partnered with Cornell to videotape six employees with disabilities (including an astronaut) in August 2013. The video features employees representing a variety of disabilities, as well as other elements of diversity such as race, gender, and work experiences, and highlights Johnson's reasonable accommodation success stories to promote an environment that is more inclusive of all abilities.

Research findings will enable Johnson to better serve different disability groups at Johnson and ensure that the policies will serve the needs of all employees.

Section 508 On-Site Test Center. Marshall has established a 508 Test Center to support the needs of disabled employees and organizations to determine the most efficient and cost effective 508 tools available on the market. At this Test Center, users can get a demonstration and determine the compatibility of new and existing software or hardware prior to purchase. In the past, employees would request various off-the-shelf

software packages that would not always be compatible with their current operating system. The Information Technology (IT) Office also can design specific tools for the users that will fit their needs. The Center 508 compliance coordinator believes that the Test Center will cut down on organizational cost, unnecessary IT purchases that are not compatible with the current operating systems, and provide users with the desired tools needed to perform their job functions efficiently.

Excellence

AGENCY LEVEL

Anti-Harassment Program. The NASA Anti-Harassment Program institutionalized the practice of addressing harassment allegations as promptly and effectively as possible at the Agency level. Consistent with EEOC guidance, ODEO created the program to provide a separate avenue of redress for harassing conduct. Going well beyond EEOC recommendations, NASA has established an Agency definition for harassment that protects bases not currently covered under the law, for example, status as a parent. The Agency-wide program infrastructure includes anti-harassment coordinators at HQ and every Center, and a robust suite of face-to-face and online training, including video fictionalizations, as well as frequent guidance and technical assistance on new and emerging topics. At the Center level, promising practices include: the development of Center fact-finder cadres for anti-harassment cases, support of top management for the program expressed in written or video messages to the workforce, and “roadshows” to inform all Center organizations about the program.

Conflict Management Program (CMP). The CMP is an innovative approach to meeting the needs of the 21st Century workplace. ODEO designed the CMP to help Agency-wide organizations maintain open and effective lines of communication needed to help optimize mission success at all levels. It provides supervisors, managers, and employees with conflict management tools and techniques to explore the sources of conflict and to create an environment in which effective methods of communication and engagement are consistently utilized. This enables both individuals and organizations to respond more constructively to workplace conflict when it arises, as it inevitably does. CMP has been recognized by OPM as a highly innovative and proactive program, and OPM’s No FEAR Act Report to Congress cited the CMP as a Best Practice.

Endeavor. ODEO publishes this online newsletter biannually. *Endeavor* is consciously designed to help sustain NASA work environments that encourage employees to perform at the highest level of excellence, individually and as teams, and to feel free to express differing ideas and perspectives. As such, *Endeavor* provides



in-depth but broadly accessible material on EO and D&I efforts across the Agency and Government-wide. *Endeavor* also provides an additional forum for proactively promoting the principles and practices of inclusion, fairness, and equity, and for raising awareness on the rights and responsibilities established under EO law. To this end, *Endeavor* reports on EO and D&I news, trends and case developments relevant to NASA, spotlights Centers and individual NASA employees, and looks at Agency policy and programs impacting the NASA workforce and members of the public interfacing with the Agency, such as procedures for the provision of reasonable accommodation, language assistance services for persons who are limited English proficient, and much more. In the team spirit of NASA, *Endeavor* seeks contributions from the NASA Center EO and Diversity Offices and Agency stakeholders, such as the Office of Human Capital Management and the Office of Education, to provide information on matters such as professional development initiatives and opportunities. To read editions of *Endeavor*, visit ODEO's Policies and Publications Web page.



ERG involvement in critical components of D&I efforts, such as recruitment and outreach strategies, and representation on D&I Councils, has helped to significantly enhance the organization's overall D&I strategic approach.

Guidance on Developing Effective Employee Resource Groups (ERGs). NASA ODEO developed this guidance to provide the Agency with a better understanding of the value and utility of ERGs in furthering D&I efforts. The guidance also served to support those Centers that already have functioning ERGs and to encourage those that do not to be responsive to such groups, should they wish to form. The guidance, developed with input from the Agency Diversity and Inclusion Strategic Partnership and the Centers, emphasized the importance of ERGs in establishing and maintaining effective D&I initiatives. It expounded on the roles ERGs can play in D&I, for example, helping employees to engage their organizations in more structured and effective ways. ERG involvement in critical components of D&I efforts, such as recruitment and outreach strategies, and representation on D&I Councils, has helped to significantly enhance the organization's overall D&I strategic approach. ERGs also have been shown to greatly increase employee engagement, which has helped lead to improved individual and organizational effectiveness.

ODEO E-Learning Institute. ODEO has established a suite of online learning opportunities for the workforce. The ODEO E-Learning Institute provides the NASA family with real-time education and awareness opportunities on various aspects of EO, diversity, and inclusion at NASA. The E-Learning Institute offers a host of user-friendly educational materials and information that allows all NASA employees to add to their SATERN learning history with valuable credits in diversity and EO.

Currently, the Institute is comprised of three e-learning modules, which enable employees to explore EO and conflict management topics anywhere, at any time. The Alternative Dispute Resolution (ADR) module explains the benefits of utilizing mediation to resolve EEO matters both at the informal and formal stages of the EEO process. Informational materials are provided in a variety of formats, including a video depiction of mediation in action. The Anti-Harassment course shows how the NASA policy and procedures can help to quickly address and resolve allegations of harassing conduct. Informational materials include videos depicting how a harassment allegation can arise and be resolved through the Agency anti-harassment process. The Conflict Management (CM) Refresher course is a follow-on to the CMP Basic classroom training. It reviews the core sources of workplace conflict and emotional responses to conflict. Informational materials include a video portrayal of various conflict management styles and communication skills in action. All ODEO E-Learning courses are accessible through SATERN.

ODEO Information Resource Guide. ODEO launched the [Information Resource Guide](#), a companion to the ODEO eLearning Institute, in April 2014. The Information Resource Guide is an accessible Intranet site that serves as a one-stop-shopping tool for helping managers, supervisors, and employees to better understand and effectively utilize key EO processes, as well as to provide valuable information on a host of EO and D&I related efforts. Among the major topics currently featured are the Model EEO Agency Plan, the Agency's D&I Strategic Implementation Plan, EEO complaints processing, and Anti-Harassment policy and procedures. The Guide is frequently updated to reflect the ever evolving state of diversity and EO, including new and emerging topics such as religious accommodation in the workplace, particularly when it involves garb and grooming; sexual orientation as a per se form of sex stereotyping; and gender identity as a form of gender discrimination. ODEO works in partnership with the Office of Human Capital Management, the Office of Education, and other key stakeholders to provide comprehensive information in these and many other important areas.

Women@NASA Site. The Women@NASA Web site was created in response to an Executive Order, signed March 11, 2009, establishing the White House Council on Women and Girls. Developed by the NASA Open Government Team, the site encourages transparency, participation, and collaboration, even as it provides the perfect opportunity to celebrate women from across the Agency who contribute to NASA's mission in many ways. Since its launch in April of 2012, NASA has added 66 life stories that

have been shared in numerous classrooms across the United States and internationally. The site has attracted thousands of visitors and garnered dozens of speaker requests. Women@NASA continues to expand to include more inspirational videos sharing stories of women at all of NASA's Centers. Following suit at the Center level, a [Women@GRC Web site](#) was developed by Glenn. This Web site allows the Center to highlight the careers of employees that were nominated, but not selected, for featuring on the Women@NASA site.



AGENCY AND CENTERS

Broad Dissemination of Career Enhancing Opportunities. At both the Agency level and at a number of NASA Centers, communications mechanisms such as e-newsletters and online tools are used to widely disseminate career enhancement and development opportunities to the Center workforce. These include high-visibility team assignments, details, and jobs. For example, at the Agency level, NASA has the Project Announcement Visibility Effort, or PAVE, a tool to advertise special project opportunities to HQ and Center employees. NSSC ensures that its vacancy announcements reach all of its approximately 125 employees. Johnson has *JSC Today*, a Center-wide e-newsletter, issued bi-monthly to communicate to the Johnson workforce the various opportunities available to eligible civil servant employees. Goddard Opportunities Bulletin Board System (GOBBS) is the Goddard version. All of these vehicles help to promote the casting of a wide net for opportunities.

NASA CENTERS

Diversity and EEO Action Plan (ARC Form 814). At Ames, EO Specialists (EOS) serve as liaisons to each organization at the Center. Each EOS is assigned a specific organizational code in which communication and information sharing is key. EOS are required to collect ARC Form 814, "Diversity and EEO Action Plan," for a six-month reporting period twice per year. Ames utilizes the ARC 814 form to initiate EO and D&I discussion with division leadership. The form collects specific data and information on each division. The form allows the supervisor a biannual opportunity to review demographic data, identify and annotate challenges to EO, develop remedial strategies and actions, make staffing projections and identify recruitment strategies, address succession planning, initiate feedback for the Employee Performance Communication


System (EPCS) EO performance element, list external outreach activities, and review employee career development activities.

Inclusion and Innovation (I&I) Discussion Groups. Following completion of the Johnson I&I education course, the participants wanted to continue the dialogue begun in the course. Accordingly, a pilot series of twelve I&I Discussion Groups targeted to all employees was kicked off at the end of August 2011. The small, facilitated groups met for one hour a month over six months to discuss a number of topics related to building a more inclusive and innovative environment at Johnson. Discussion topics included employee engagement and productivity; changing environments relative to technology/capability shifts; the value of diversity in problem solving; how stereotypes and biases negatively affect the workplace; and opportunities associated with a multi-generational workforce.

Following completion of a pilot series of twelve I&I Discussion Groups targeted to all employees, the Johnson Director sponsored the development and implementation of the I&I Discussion Groups for leaders in FY 13. Comprised of 10–14 people, the groups provided a safe environment for supervisors and leads to discuss and explore the full spectrum of diversity topics from a leadership perspective. This learning format was used successfully at Goddard for many years, and the Johnson program is based on best practices gained from benchmarking with them. The discussion groups support the Center's efforts to retain top talent by providing a creative space to focus on the leadership soft skills. In addition, they promote the Agency's core value of Excellence by building balanced leaders.

Johnson "TOP" Pilot. Johnson developed a one-year pilot program called the Transparent Opportunities Pilot (TOP). TOP seeks to advance D&I systemically, increasing transparency of career development opportunities, enhancing employee engagement, and facilitating the discovery of employee potential—for both the employee and his or her supervisor. Five organizations, representing 23 percent of the Center population, are participating in TOP, including both technical and mission support organizations of varying sizes. Each participating organization is identifying developmental opportunities. Examples include serving as Acting Deputy Branch Chief, leading robotics lab tours, job shadowing, and special team assignments. The opportunities are then marketed as broadening and stretch assignments that will potentially enhance leadership and/or technical skills.

To measure the impact of the pilot, the participating organizations have committed to three things: 1) being more purposeful in identifying and communicating about opportunities, 2) tracking the number of opportunities shared with employees throughout the year, and 3) encouraging employees to participate in the pre-, mid-, and post-surveys that capture their perceptions of Johnson's current career development processes. After the pilot is complete, Johnson will have a roadmap of best practices and lessons learned to share across the Center. Johnson believes TOP, in concert with several other D&I related initiatives, will lead to a stronger, more capable NASA-Johnson team and that it advances the Agency Core Values of Excellence, Integrity,



The discussion groups support the Center's efforts to retain top talent by providing a creative space to focus on the leadership soft skills. In addition, they promote the Agency's core value of Excellence by building balanced leaders.

and Teamwork. It advances excellence by promoting career development across the board; it promotes integrity by increasing transparency and ensuring opportunities are made known to a wider array of employees; and it promotes teamwork because it will strengthen skills across a more diverse talent base.

Reasonable Accommodations Centralized Fund. To date, two Centers, Goddard and Armstrong, have centralized funds that provide accommodations to their employees with disabilities. Accommodations provided include sign language interpreters, reading services for the blind, and electronic and information technology adaptive devices not covered under the Agency's CAP agreement. The Goddard centralized fund has played an instrumental role helping to ensure that individuals with disabilities who are employed by or apply for a job at Goddard have effective accommodations. In addition, the centralized fund has helped to facilitate the recruitment and hiring of individuals with disabilities at Goddard. Goddard has consistently led the Agency in representation of individuals with targeted disabilities.

Selection Panel Diversity. Several NASA Centers make extensive use of diverse panels in their selection processes, including selecting employees at all levels of the Agency, providing training and developmental opportunities, and recognizing outstanding performance. NASA Centers, including HQ, encourage both traditional diversity, such as race and gender, as well as more nuanced forms of diversity, such as disciplinary, to make sure its panels reflect a broad spectrum of views and perspectives. For example, a number of NASA Centers and facilities, such as Ames, Goddard, and NSSC, provide supervisory toolkits posted online offering specific guidance on diverse selection panels.



STRETCH Program. Education and retraining are areas that Langley has focused on to expand diversity and enhance employee engagement. The Strategies to REach and TeaCH (STRETCH) program was created to provide skill enhancement workshops in a quick learning environment targeted at the GS-7 through GS-11 grade levels. The pilot program is starting with two workshops on “managing up” and “interviewing skills.” The purpose of this initiative is to provide employees with the skills needed to prepare for new opportunities, as well as to be more successful in their current positions. ●



CHAPTER 4

Serving the American People

INTRODUCTION



As NASA's Strategic Plan states, the Agency's mission is "to drive advances in science, technology, aeronautics and space exploration to enhance knowledge, education, innovation, economic vitality and stewardship of Earth." NASA strives to achieve its mission in many ways, and our work touches the lives of people everywhere. Our interface with the public is often individual in nature, as when people tour our Centers or visit our many Web sites. It is our responsibility under

the equal opportunity laws to ensure that all people have access to NASA facilities and assets. In this arena, too, NASA seeks to go beyond mere compliance to ensure that our environments, whether physical or virtual, are welcoming, enjoyable, and educational for all.

Program Access

AGENCY LEVEL

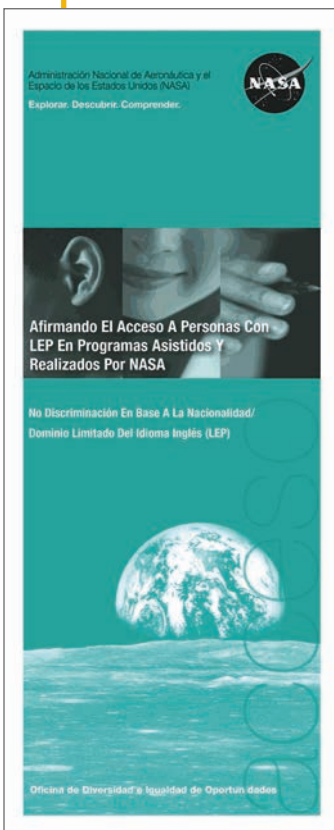
Efficiency in Provision of Interpretation and Translation Services. While NASA Centers are encouraged to be flexible and nimble in how requests are made by limited English proficient (LEP) individuals for language services, it is critical that requests are documented by the Centers so that the effectiveness of NASA's LEP program can be adequately monitored. To that end, NASA has developed and deployed a Service Request Form, NASA Form 1681 or NF 1681, directly to the contracted interpreter/translators services provider. Use of these services is administered by the Office of International and Interagency Relations. The requestor provides the date of service, the language requiring translation or interpretation, a description of the activity requiring the services, and the number of hours required to perform the service. Completing NF 1681 enables NASA and the LEP Coordinators at each Center to more effectively monitor the number and frequency of requests and the languages requested, as well as the programs or services requiring LEP Services.

NASA CENTERS

Bilingual Staff. In its efforts to inform its program participants of its role and unique heritage in spaceflight, Kennedy has developed matrices that are detailed in its Language Assistance Plan. These matrices categorize a number of specific participant contact situations and how language services are to be deployed in those situations. Programs listed in the matrices that may require language assistance for LEP individuals include: Speakers Bureaus, business outreach, Kennedy Web sites, student and faculty summer programs, distance learning, the Educator Resource Center, and events at the Kennedy Visitor Complex. In most situations, Kennedy will respond on a case-by-case basis and rely on bilingual Center staff and bilingual literature in order to provide language services to LEP individuals.

Langley also maintains a list of volunteers who are Center employees that can provide emergency translation and interpretation services. Langley has identified a number of languages that the volunteers speak fluently, and they agreed to volunteer their services for emergency situations. These volunteers tie directly into Langley D&I initiatives, as they may assist in those events.

Prioritization of Interpretation Services. Some Centers, such as Ames, Kennedy, and Johnson, have developed a prioritization scheme that provides support and guidance to organizations in determining interpretation related priorities. Priority consideration for interpretation services is given to LEP persons who are: part of official delegations seeking assistance in badging or other official business onsite; patrons of the Visitors Center; participants in Center tours; participants or potential participants in Center-sponsored educational events; and telephone contacts.



Small Business Alliance Partnership. Agency wide, Centers partner with the Agency Small Business Office to make NASA's supplier diversity program one of the most successful in Government. Armstrong continues to lead the Agency in small business awarded contracts. Marshall also engages in a robust partnership with small businesses, helping to provide all categories of small businesses an opportunity to participate in both prime contracts and subcontracts. A focal point for this partnership is the annual Marshall Small Business Alliance Meeting. Each year, Marshall emphasizes its business case for D&I to approximately 500 small business leaders. The presentation helps to encourage business and community emphasis on D&I, which includes the importance of recruiting and retaining the best talent, and how D&I advances those objectives.

Volunteers for Community Outreach Programs (V-CORPs). In 2013, Johnson launched V-CORPs, which provides an integrated approach to recruiting Johnson volunteers and managing events. It enables all Johnson team members to be ambassadors communicating Johnson messages. V-CORPs allows for Center-wide registration of volunteers; enables users to search for mentors, speakers, and subject matter experts based on specific criteria; sorts/stores large amounts of information on volunteers and events; and develops custom reports to track events and participation.

Virtual Access

AGENCY LEVEL

Ciencia@NASA (Science@NASA). NASA's Spanish language Web site, Ciencia@NASA, is maintained by the Science Mission Directorate at NASA Headquarters. Spanish was selected based on the demand expressed by visitors to the NASA Web site and the size of the potential national population that would benefit. The stories are aimed at an adult science-attentive audience and are written at the high school senior/first year college level. The stories focus on some of the more exciting aspects of NASA science and are available in both written and audio versions.



The Space Place. NASA Web site maintains a Web site, called the Space Place, for students in elementary through middle school (8 to 13 years old) and their teachers. This Web site is a project of NASA's New Millennium Program and joint collaboration of NASA Office of Education, Jet Propulsion Laboratory, California Institute of Technology, and the International Technology Education Association. Information from NASA is integrated into games, projects, animations, and articles that explain concepts in space and Earth science. For example, The Space Place offers hands-on projects that demonstrate science using everyday materials. It also offers animations that explain a variety of phenomena, such as how satellites send images and

information back to Earth. The site also contains “Space Place Live!,” an animated talk show featuring interviews with real NASA scientists. Teachers can use projects and articles as homework and reading assignments. They can also have students play interactive games or view animations, read the accompanying texts, and then summarize what they have learned.

The Space Place also has a Spanish-language counterpart site with similar content as the English Web site. It is accessed at a Spanish language link on the English page (users click on “Vea en Español”), which provides the entire Web site in Spanish. As part of its commitment to explaining the results of NASA programs to the entire American public, the Spanish version of Space Place is dedicated to reaching Spanish speaking students who may not be fully proficient in English, yet have a desire to learn about NASA and how they can apply NASA program information into their schoolwork and classroom activities. ●

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CHAPTER 5

Advancing the STEM Pipeline

INTRODUCTION



NASA is committed to advancing the Nation's STEM education pipeline by engaging students, teachers, and faculty in NASA's missions and unique assets. NASA works in collaboration with other Federal agencies to improve the quality of STEM education in the United States and to develop and deliver activities and programs that support the growth of NASA's mission and serve to educate the public about STEM. The activities highlighted in this section seek to go

beyond compliance with applicable equal opportunity laws to advance diversity and inclusion in the academic program environments that form the STEM pipeline to NASA's doors. All of these steps are necessary to advance a pipeline that can support our next generation missions. They also ensure that the knowledge gained by NASA in furtherance of its mission serves to benefit all humankind.

Colleges and Universities

AGENCY LEVEL

Minority University Research and Education Program Small Projects (MSP). The MSP is an umbrella term for minority STEM education initiatives that are part of NASA's Minority University Research and Education Program (MUREP) portfolio. Under the aegis of the NASA Office of Education and managed for the Agency by Armstrong, MUREP's goal is to fund innovative STEM projects that address NASA's MUREP priorities, with an emphasis on identifying gaps or areas where funding of innovative projects will enhance the Higher Education portfolio and strengthen its ability to meet Agency objectives. Recurring funding of projects may be limited to projects meeting critical Agency needs and exemplary performance assessment. Historically, MSP supports a variety of activities for students, teachers, faculty, and researchers from underrepresented and underserved communities in NASA-related STEM fields.

MissionSTEM Web Site. The MissionSTEM Web site is designed to assist NASA grant recipients with their civil rights compliance efforts. The Agency strives to provide a broad scope to its technical assistance in this arena. As with NASA's civil rights technical assistance publications, MissionSTEM focuses on university and college STEM education programs; however, the Web site is also inclusive of the great variety of NASA recipients outside of the higher education context. This includes the many museums, planetariums, science centers, and space camps nationwide that benefit from NASA dollars. In turn, these recipients provide year-round cultural and informal educational opportunities for their communities and for visitors traveling nationally and internationally.

MissionSTEM seeks to look at the wide range of civil rights related issues that play a part in the daily operations of these very different kinds of entities. This includes the efforts of some of NASA's recipients to ensure meaningful access to their programs and services for LEP persons and improved access for individuals with disabilities. MissionSTEM also examines issues of race and gender in STEM education, for example, efforts to recruit and retain women and minority students in STEM, but here too NASA has expanded the STEM emphasis to include issues relating to

non-traditionally aged students in NASA funded educational programs. An important feature of MissionSTEM is its video series and virtual sessions, covering topics of interest and concern for NASA's grantee institutions, their beneficiaries, and other stakeholders. These series and sessions will seek to address common challenges through the active involvement of NASA leadership and subject matter experts, as well as leadership and experts from respective



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communities. MissionSTEM also continues to highlight and emphasize the many promising practices of its grant recipients and stakeholder organizations for creating greater diversity and inclusion in STEM.

NASA Days at Minority Serving Institutions (MSIs). The purpose of this initiative is to build relationships with MSIs and provide NASA managers insight into the institutions' technologies and students' capabilities. This is a three-day event that consists of: 1) multiple offerings of student workshops on NASA's student intern recruiting programs, including its One-Stop-Shopping Initiative and the Pathways Program; 2) NASA managers and faculty networking opportunities, campus and lab tours, and NASA managers sharing what NASA does with students; and 3) onsite interviews of students.



NASA Student Ambassadors Virtual Community (NSAVC). NSAVC is an online community network designed to foster greater interaction and mentorship among outstanding interns of NASA's higher education projects. The goal is to provide participants with access to tools needed to serve as a NASA Student Ambassador, increase retention throughout the NASA educational pipeline into the STEM workforce, and provide strategic communication opportunities. Each year, NASA selects a group of interns and fellows from NASA Centers across the country and Headquarters to serve as student ambassadors. Interns who are selected for the NASA Student Ambassador Program engage their fellow undergraduate and graduate students in NASA STEM, as well as participate in research and immersion opportunities. These students collaborate with and inspire their peers, make professional connections, and represent NASA to the public.

AGENCY AND CENTERS

Pre-Service Teacher Institute (PSTI). NASA developed the Pre-Service Teacher Institute to provide in-depth experiences for preservice teachers. At the PSTI, preservice teachers spend two weeks in an intensive experience where they are exposed to problem-based learning, mathematics, science, and technology enrichment activities. Preservice teachers are able to interface with NASA personnel and tour NASA facilities. The educators learn to incorporate NASA's cutting-edge research into lesson plans for elementary and middle school students. The institute culminates with the preservice teachers developing and teaching problem-based lessons to children from local schools. PSTIs are held at Ames, Johnson, Kennedy, Langley, Marshall, and Stennis.

For example, the NASA/Jackson State University PSTI is a two-week residential institute held on the Jackson State campus in Jackson, Mississippi, with a one-day visit and workshops at Stennis. The PSTI is for college students who attend a



minority-serving university and are preparing to teach middle school. Students from Jackson State University, Miles College-Fairfield, the University of Arkansas at Pine Bluff, Hinds Community College, and Boise State University have attended the PSTI at Stennis.

NASA CENTERS

Ames Community College and Students with Disabilities Job Shadow Day. The Ames Office of Diversity and Equal Opportunity partners annually with the Center's Education Office, HR, advisory groups, and its employees serving as mentors to conduct Job Shadow Days. Job Shadow Days are designed to provide an internal look at what Ames has to offer community college students, veterans, and individuals with disabilities pursuing careers in STEM. Many students and individuals have participated in this annual event which consists of providing information on applying through USA Jobs, navigating OSSI, and concludes with shadowing of an Ames employee. To date, over 40 Ames employees have participated as mentors, including IT Specialists, HR Specialists, Research Scientists, Physicists, and Business Specialists.

Goddard Earth Sciences Technology & Research (GESTAR). Goddard awarded Universities Space Research Association and partners (Morgan State University, I.M. Systems Group, Johns Hopkins University, Ball Aerospace & Technologies, and the Institute for Global Environmental Strategies) a five-year Cooperative Agreement for GESTAR in May 2011. NASA GESTAR conducts research collaboratively, mainly within Goddard's Earth Sciences Division, but also with the Solar Systems Exploration Division, Office of Education, and Office of Public Affairs. Scientists and staff at GESTAR, in collaboration with NASA and other investigators, conceive and develop new, space-based missions; provide mission requirements; conduct

research that explains the behavior of Earth and other planetary systems; and create engagement media that tell NASA's story of exploration and discovery on Earth and beyond. GESTAR aims to supply students with end-to-end support from their first day as graduate students to the day they receive their doctoral degrees. Morgan State University plays a major part in the research as part of a four-member team selected for the GESTAR Studies and Investigations.

K-12 Programs

AGENCY LEVEL

NASA and the Boys and Girls Clubs of America (BGCA) Partnership.

This partnership helps NASA to diversify the STEM workforce of the future. The Boys and Girls Clubs have complementary mission statements while both organizations see education as a pathway to success. BGCA had an organizational priority and interest in broadening club program offerings to include hands-on, engaging STEM activities. Since NASA seeks to cultivate a diverse and highly-qualified STEM workforce for NASA and the Nation, it was determined that the Agency should pursue execution of an umbrella Space Act Agreement with BGCA. Marshall has management of the Agreement for NASA and BGCA to strategically plan how to integrate NASA STEM content into BGCA programming. To date, Marshall's Academic Affairs' staff has developed a strategic plan and "NASA Club" model; compiled activity implementation time and cost estimates for approximately 300 hours of instruction; participated in telecons regarding strategic planning, namely utilizing a train-the-trainer approach; and assisted in outlining NASA's responsibilities concerning the NASA Club model.



NASA CENTERS

Ames Exploration Encounter (AEE). AEE is an educational program designed to inspire positive attitudes about STEM for all students in the 4th through 6th grades. Located in a renovated 6' x 6' supersonic wind tunnel building at NASA Ames, the AEE makes math and science curriculum come alive. Students experience science in action and come to realize its connection to their lives in the four hands-on stations. AEE embraces NASA's guiding principles, which value diversity in its mission to increase

underrepresented minority students who aspire future careers as astronauts, aerospace engineers, and research scientists. Teaching is done by a diverse group of docents who volunteer their expertise in the areas of science, technology, engineering, and math. The effective use of intergenerational teachers has had a positive effect on the students served.

Astro Camp. The Astro Camp Stennis-based program is built around a series of weeklong summer camps, one-day Saturday camps, and special events for children ages 7–15 that inspire future astronauts and engineers to learn about space and STEM. Astro Camp presents math and science principles through fun hands-on activities, teaching teams of campers to work together to complete missions. Astro Camp sessions inform children about manned space flight, NASA's Space Launch System, the Space Shuttle, and Stennis propulsion testing.



For Inspiration and Recognition of Science and Technology (FIRST) Robotics Competition. NASA Stennis continues to support the FIRST Robotics Competition, a national robotics contest immersing high school students in the exciting world of engineering. Stennis supports four teams: Team Fusion, Gulfport, Mississippi; Choctaw Central High School, Choctaw, Mississippi; Picayune Memorial High School, Picayune, Mississippi; and Northshore High School, Northshore, Louisiana. Engineers team up with businesses and universities to give area students a hands-on look at the engineering profession.

Glenn High School Internship Project. The Glenn High School project engages students in an intensive internship experience in a research and development environment while under the guidance of a Glenn scientist, engineer, technician, or administrative professional who serves as the student's mentor. The project expands the student's understanding of possible career choices available at NASA. The schedule includes oral presentations and a variety of enrichment activities. The Glenn High School Internship educational project provides opportunities for paid summer internships lasting eight weeks. The internships are available to current 10th- and 11th-grade students attending high school within a 50-mile radius of Glenn.

High School Aerospace Scholars. High School Aerospace Scholars, or HAS, is an interactive online learning experience highlighted by a week-long internship. Selected students are encouraged to study mathematics, science, engineering, and computer science by interacting with engineers at NASA Johnson. The project includes preliminary interactive Web-based activities, distance learning, and a residential experience during the summer at Johnson. From across the state of Texas, students are selected to participate by their state legislator through a competitive process. Selected students are Texas residents and U.S. citizens currently in their junior year of high school (rising seniors) with an interest and aptitude for mathematics, science, engineering, or computer science.

NASA HQ Adopt-a-School Program. This program was developed in line with the HQ Diversity and Inclusion Plan and is designed to generate student interest in and exposure to STEM through fun learning experiences. Now in its first year, the program involves two classrooms of 4th and 5th graders at a local elementary school in an underserved community. Using the *NASA's Beginning Engineering, Science and Technology* (BEST) modules, a Program Scientist from the Office of Education, with assistance from a group of HQ employee volunteers, leads two activities over a six-week period: building a satellite and a rover. Students learn the principles of engineering and then apply the practical application in their design, building, and testing exercises. Students are grouped in teams for both activities, which culminate in launching their satellites on fishing wire with balloon rockets, and testing their rovers on a ramp to measure the distance traveled. This is a hands-on approach to getting kids excited about science and math. The effect on the students is positive. Their curiosity, eagerness, and interest in learning science and math are obvious early in the activities. The goal is to get students interested in exploring the possibilities of a career in the STEM field.

NASA Summer Institute in Science, Technology, Engineering and Research (SISTER). The SISTER program, sponsored by Goddard's Equal Opportunity Programs Office and the Education Programs Office, is designed to increase awareness of and provide an opportunity for female middle school students to be exposed to and explore nontraditional career fields with women engineers, mathematicians, scientists, technicians, and researchers at Goddard. The objectives of the program include introducing young women to a technical working environment; acquainting students with Goddard missions; providing an awareness of educational programs and internships available

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during high school, undergraduate, and graduate study; and providing observations and experiences with real hands-on projects researched and developed by women at Goddard. The SISTER program components include such activities as mentoring, multicultural experiences, facilities tours of facilities, hands-on science experiments, written communication experiences, and interpersonal and human relations skills building. Approximately 60 percent of the participants are members of racial/ethnic minority groups.

Saturday Academy. Saturday Academy (SA) is sponsored by the NASA Education STEM Engagement Office under the Kennedy Educate to Innovate (KETI) program. SA reaches underrepresented students in grades four through nine with an age range of 9–14 years. The workshops are conducted by educators of the Educator Resource Center and Kennedy KETI volunteers. This opportunity is held in the morning on the third Saturday of each month (excluding December) at the Center for Space Education building located at Kennedy’s Visitor’s Center. This experience encourages studies in STEM and enables students to participate in a variety of hands-on activities utilizing aerospace hardware that compliments the teaching of rocketry, spaceflight, and exploration. Currently, SA services three units from the Boys & Girls Clubs of Central Florida (Mims, Florida; Volusia and Flagler Counties, Florida; and, Cocoa, Florida); Big Brothers Big Sisters of Central Florida; and the Orlando Walt Disney World & Universal Boys & Girls Clubs.

Space Academy Programs. NASA has Space Academy programs at five Centers (Ames, Armstrong, Glenn, Langley, and Marshall). These are intensive educational programs designed for graduate and undergraduate students from across the country. The programs emphasize group activities, teamwork, research, leadership, and cre-

ativity. The curricula balance direct contact with science and engineering research and development with an awareness of the managerial, political, financial, social, and human issues faced by aerospace professionals. Included are seminars, informal discussions, evening lectures, supervised research, visits to other NASA Centers and facilities, group projects, tours, posters/presentations, and assessment. Additionally, most weekends are filled with group activities, team building, and off-site trips. One free weekend is typically scheduled. The Ames Space Academy specifically aims at addressing the interdisciplinary nature of research at NASA, as well as how current space policy and politics play a role in NASA decision making.

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Targeted Outreach to Minority Students to Increase STEM Participation and Engagement. Goddard’s Applied Engineering and Technology Directorate, Equal Opportunities Program Office, and the Office of Education partner annually for a joint African American History Month program and National Engineers Week. The

program features engineers visiting local underserved and underrepresented elementary and middle schools, delivering NASA unique hands-on activities, and making presentations about careers at NASA. Ninety-three percent of Goddard personnel visiting the schools are minority individuals. Over 900 students have participated, 90 percent of whom are minority.

Tech Trek. Armstrong has supported a Tech Trek tour for the last five years. The Tech Trek program is sponsored by the California branch of the American Association of University Women. The program is designed to develop interest and excitement about math and science and self-confidence among middle school girls. Armstrong supports the program with a Tech Trek tour annually during the summer. Approximately 25 seventh-grade girls from several area middle schools participate. The girls are representative of the diversity of the local area. The girls and their adult chaperones are treated to a variety of activities during their trip, including tours of Armstrong's main aircraft hangar and several specialized research and support aircraft. The girls also learn how a high-altitude pressure suit works and have the chance to test their piloting skills in one of the flight simulators. In addition to the aircraft and facilities tours, the students participate in a career panel of female employees from the Center. They also interact with female engineers and college students who are interning at Armstrong. These engineers and students encourage the participants to pursue their science and mathematics interests through high school and college.



Tennessee School for the Blind and Alabama School for the Blind. In this program, participating students spend the day working with Marshall engineers and scientists, participating in hands on activities related to the current Center projects. The students learn about jet propulsion and other STEM related activities. The engineers allow for full student interaction with visual and touch demonstrations. The purpose of the program is to encourage students with disabilities to consider the STEM fields for future careers and to consider NASA as a potential employer. The Indian Creek High School and the Indiana School for the Visually Impaired also visited Marshall for a similar program in 2014. The Indian Creek High School is for sighted students who interact and work with the students from the Indiana School for the Visually Impaired, focusing on STEM related projects at the Center.

Virginia Summer Residential Governor's Schools. The goal of this partnership between NASA Langley and the Virginia Summer Residential Governor's Schools is to provide opportunities for gifted high school students from public and private schools from across the Commonwealth of Virginia to explore professional and university

The goal of the Governor's Schools is to provide students with opportunities for artistic and intellectual, as well as social and emotional, growth. In the company of dedicated, highly skilled professionals representing a variety of careers, students are encouraged to establish their own goals and move toward the fulfillment of those goals.

environments through academic enrichment and mentoring programs tailored to their aspirations, level of ability, and depth of experience. Twelve 10th and 11th grade students are selected each year to participate in this month-long residential program, and each is assigned to a research mentor at Langley, while an additional six students are selected for the Virginia Institute of Marine Science, in Gloucester. Such opportunities formerly would have been reserved for college-age students or to a limited number of high school students who were fortunate enough to live near such facilities. The goal of the Governor's Schools is to provide students with opportunities for artistic and intellectual, as well as social and

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STEM Educators and Students

AGENCY LEVEL

NASA Distance Learning Network. NASA's Digital Learning Network (DLN) provides free, interactive video- and Web-conferencing events for educators interested in enhancing their STEM classes by connecting directly with NASA education specialists and subject matter experts. This initiative, maintained under the aegis of the NASA Office of Education, strives to reach under-served populations while providing access to appropriately equipped members of the general education community. NASA's DLN maintains a catalog of events hosted by NASA Centers that provide a variety

of interactive learning experiences and programs, such as "Daring Women in Space Exploration" and "Moon Math." Recently, the DLN launched the STEM-in-Sports Online Series through which students can learn the science behind scoring a touchdown, throwing a slam dunk, or hitting a home run. Part of a new distance-learning program



called NASA STEM Mania, the program gives educators and students from kindergarten through 12th grade the opportunity to interact virtually with NASA subject matter experts on a variety of topics such as the science of race car driving, using STEM to succeed in football, and using basketball as an engineering example in the classroom. Sample highlights from the various sessions include: sports clips from the International Space Station; a special astronaut appearance; and how to become an Orion virtual crew member.

New York City Research Initiative (NYCRI) at the Goddard Institute for Space Sciences (GISS). The New York City Research Initiative is a summer research internship program for high school students, undergraduate students, and high school teachers. Student and teacher interns are partnered with NASA scientists or university professors in the New York metropolitan area, for 6–8 weeks, to conduct research on climate change, remote sensing, autonomous robotics, aerospace engineering, astrophysics, and other STEM projects. The NYCRI encourages men and women of color to apply and works hard to create a diverse summer research experience for student and teacher interns. Summer enrichment experiences include content and research seminars, team oral research reports, visits to various research laboratories and informal education institutions, participation in local and national research summits, and a final research summit with participants from other Government agencies, such as the National Science Foundation (NSF), the National Oceanic and Atmospheric Administration, the U.S. Department of Education, and the U.S. Department of Defense. Partnerships include NASA (lead), NSF, New York City and New York State Departments of Education, ten colleges/universities, and various informal education institutions. The City University of New York serves as the NYCRI lead institution. Diversity statistics show that 54 percent of the participants are minority and 21 percent are female.

Summer of Innovation. NASA Summer of Innovation (SOI) is a solicitation-driven project designed to support learner interest in STEM by strengthening the capacity of community and school-based organizations that inspire and engage middle school learners in STEM content during the summer. The SOI project leverages NASA funding and content to expand both the school and community-based collaborators' ability to provide meaningful, educational, and exciting STEM experiences to under-represented learners entering grades 4–9. SOI also supports projects seeking to strengthen current STEM education efforts through the use



of NASA content resources. Over 2,900 learners and 350 educators, both certified and informal, received no less than 30 hours of NASA-unique/SOI content. Each program had a family component in which parents/guardians were engaged in NASA STEM activities.

NASA CENTERS

Girl Scouts Partnership. Ames Women's Influence Network (WIN) Advisory Group has an ongoing partnership with the Northern California Girl Scouts Chapter to provide multiple activities throughout the year. Activities include a one-day hands-on exploration fair with over 150 STEM exhibits for 1,200 girls ages K–12 and a weeklong video game design camp for 3rd- through 8th-graders. Girls discover the many facets behind the creation of a video game and are introduced to basic coding skills.



Goddard Big Explosion Strong Gravity (BESG). Big Explosions and Strong Gravity (BESG) is a one-day Girl Scout event during which girls have the opportunity to learn about astronomy firsthand from actual scientists and engineers. The program was originally developed in 2004 in cooperation with the Girl Scouts of Central Maryland council as an event where Girl Scouts could spend a day doing a series of activities on spectroscopy, cosmic abundances, supernovae, and black holes, and then receive an activity patch. Since that time, the curriculum has been refined, evaluated, and put through NASA's product review, and is now available nationwide. The curriculum utilizes recognized best practices in teaching STEM for girls, and events are designed to bring girls and female scientists together for mentoring and role modeling. This program was originally developed in the Johns Hopkins University Department of Physics and Astronomy, with participation from members of Goddard and the Space Telescope Science Institute, as well as Girl Scouts of Central Maryland. Diversity statistics of this program are encouraging, with 100 percent of participants being female, and 22 percent of these being members of racial/ethnic minority groups.

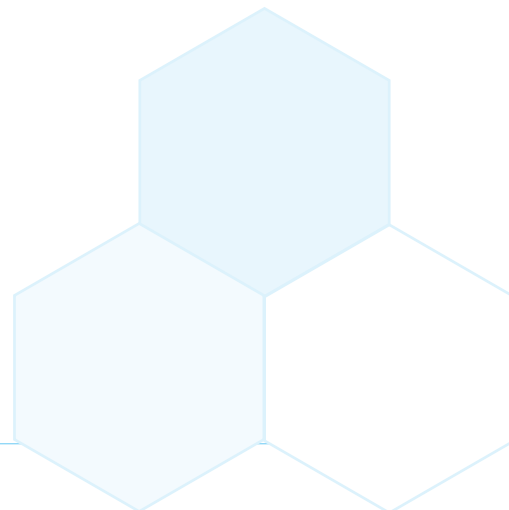
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Goddard NASA Internships, Fellowships and Scholarships (NIFS) Program. Goddard NIFS provides and supports competitive awards to support educational work opportunities that provide NASA-related experiences for educators and high school, undergraduate, and graduate students gaining real-world experience while contributing to the operation of a NASA facility or the advancement of NASA missions. Goddard NIFS provides and supports competitive awards to highlight independently conceived or designed research or senior design projects by faculty, undergraduate, and graduate student participants in disciplines NASA needs to advance its missions.

NIFS is a ten-week hands-on STEM research experience. Each intern is placed with a mentor and research opportunity matching educational interests and background as provided in the application. Many projects are at the cutting-edge of science and technology and are important to NASA's future research efforts. Over 450 high school, undergraduate, and graduate students, 49 percent representing minority and inclusion, participated in Goddard's 2013 NIFS program.

Goddard Partnership with Howard University. Goddard's Dynamic Response of Environments at Asteroids, the Moon and moons of Mars (DREAM2) team, a member of NASA's Solar System Exploration Research Virtual Institute, is partnering with Howard University, a Historically Black University, to provide: a) summer internships for undergraduate students from the Department of Physics and Astronomy, b) professional development on DREAM2-related science topics for preservice teachers in the Department of Curriculum and Instruction and in-service teachers at Howard's on-campus Middle School of Mathematics and Science, and c) outreach to students at the Middle School of Mathematics and Science. ●



National Aeronautics and Space Administration

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