

Coastal/Marine Hazards and Resources Program

Unlearning Racism in Geoscience (URGE): Summary of U.S. Geological Survey URGE Pod Deliverables



Circular 1515

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By Matthew C. Morriss, Eleanour Snow, Jennifer L. Miselis, William F. Waite,
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Abbreviations

BIPOC	Black, Indigenous, and people of color
CADR	Collaborative Action and Dispute Resolution
DEIA	diversity, equity, inclusion, and accessibility
DOI	Department of the Interior
ERG	Employee Resource Group
OPM	Office of Personnel Management
PSW	Peer Support Worker
STEM	Science, Technology, Engineering, and Mathematics
URGE	Unlearning Racism in Geoscience
URM	underrepresented minority
USGS	U.S. Geological Survey

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Abstract

The U.S. Geological Survey (USGS) is in a unique position to be a leader in diversity, equity, inclusion, and accessibility in the Earth sciences. As one of the largest geoscience employers, the USGS wields significant community influence and has a responsibility to adopt and implement robust, unbiased policies so that the science it is charged to deliver is better connected to the diverse communities it serves. Meaningful and effective improvements in implementation of diversity, equity, inclusion, and accessibility principles made within the USGS will be seen across the geoscience community. Despite this opportunity, however, the community, including the USGS, has struggled to diversify the geoscience workforce, which does not reflect the Nation's diversity. This disparity suggests that the implementation of past policies did not achieve their desired outcomes in sustainable ways.

The persistent lack of diversity across the geosciences and the racial justice protests of 2020 motivated a group of geoscience scholars to launch a global, virtual initiative known as Unlearning Racism in Geoscience (URGE) in the winter of 2021. The 16-week facilitated URGE curriculum was designed to highlight existing literature, share expert opinions,

and foster discussion within groups (pods) around the world to build action plans for affecting change within their home institutions (<https://urgeoscience.org/>). Whereas most of the approximately 4,500 participants were university faculty and students or from professional societies and nonprofit organizations, 6 pods totaling over 120 participants from the USGS joined the program—the largest participation of any Federal science agency.

Summarizing the recommendations of over 100 USGS employees across the USGS who participated in URGE, this Circular represents a grassroots plan for making the USGS workforce more diverse and inclusive. To identify how peer-reviewed best practices could be implemented at the USGS, participants read existing literature, reviewed USGS policies and procedures, explored new and existing demographic data, and listened to and discussed primary interviews with scholars, all facilitated by the URGE program. This Circular leverages the efforts and momentum of the USGS URGE participants to catalyze and support positive, systemic change throughout the organization in a holistic way that represents an achievable departure from past policies that fell short of success. These recommendations are starting points. Reflecting the overall lack of diversity in the USGS workforce, the USGS URGE participants were predominantly White, meaning recommendations in this document can and should continue to evolve to include the lived perspectives and input from the broader USGS community. Finally, this summary document only highlights some of the key findings of these working groups. Additional details that may be more suitable to specific USGS Centers and programs can be found in the primary documents developed by each USGS URGE pod; a list of all registered pods can be found at <https://urgeoscience.org/pods/>.

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Introduction

The geosciences have a long-standing struggle with diversity (Huntoon and Lane, 2007; Velasco and de Velasco, 2010; Bernard and Cooperdock, 2018) and racism (Reynolds and others, 2010; Dutt, 2020). In 1971, the U.S. Geological Survey (USGS) invested in addressing these issues and its

own lack of workforce diversity with an “energetic program to improve the Survey’s record in professional employment for minorities” (Bromery and others, 1972, p. 1). Fifty years later, publicly available data show that the USGS workforce demographics are racially homogenous and still do not reflect the Nation’s diversity (Office of Personnel Management, 2021). The geosciences as a whole have also remained homogenous (Huntoon and Lane, 2007; Bernard and Cooperdock, 2018).

This conspicuous lack of improvement in diversity and inclusion of Black and Indigenous communities, and other communities of color, alongside the racial justice protests of 2020, motivated the launch of a global, virtual, geoscientist led, and National Science Foundation funded initiative known as Unlearning Racism in Geoscience (URGE) in the winter of 2021 (<https://urgeoscience.org/>). The 16-week facilitated URGE curriculum sought to explore the origins and scope of institutional racism and to educate the geoscience community on mechanisms by which it can begin to deconstruct institutional biases by building a culture that fosters diversity, equity, inclusion, and accessibility (DEIA; Wright and others, 2021). The URGE effort encouraged participants to confront the roadblocks encountered by Black, Indigenous, and people of color (BIPOC) and underrepresented minorities (URMs) in the Earth sciences and to develop plans to reduce or eliminate those barriers. To do this, the program highlighted existing literature, presented expert seminars, and promoted discussion within groups (pods) with the goal of building action plans to affect change within the home institutions of participants. URGE recruited participants through professional networks; there was no cost for participation and there were no discipline restrictions, though as the name would suggest, the focus was on the geosciences. Most of the approximately 4,500 URGE

participants were university faculty and students or from professional societies and nonprofit organizations. A smaller percentage of participants were from Federal science agencies; the USGS had the largest agency participation, with 6 pods totaling over 120 participants.

The URGE leadership engaged participants with a specific topic (for example, hiring or accountability) in each of eight 2-week sessions, providing published research and interviews meant to focus pod discussions on creating a session deliverable. Each deliverable contained background data and recommendations for addressing that session’s specific issue within each pod’s home institution. For the USGS pods, these deliverables reflect grassroots explorations and evaluations of the policies and practices of the organization that may not have been possible with a top-down approach. Furthermore, the deliverables represent an opportunity for the USGS to embrace actionable changes identified by employees who may not traditionally be part of decision-making and policymaking discussions. To facilitate this upward communication, deliverables from the six USGS pods were synthesized, and recommendations were provided for action specific to the USGS. The recommendations range from employee-level action items to USGS- and Department-level policy modifications that together can result in near-term and long-term achievements. Recommendations are also intended to support the 2021 government-wide DEIA plan to “cultivate a workforce that draws from the full diversity of the Nation ... [and] advance diversity, equity, inclusion, and accessibility across the Federal Government” (Biden, 2021, p. 1).

Past Efforts and Current Workforce Demographics

USGS diversity statements from the Office of the Director over the past decade recognize that a “talented and diverse workforce is a key asset” (Reilly, 2018, p. 1) and that “to ensure we accomplish our mission in the most effective, efficient and robust way possible ... the USGS is committed to seeking out and retaining a highly skilled and diverse workforce” (Kimball, 2010, p. 1). The USGS diversity vision aligns with decades-old research showing how teams with diverse membership providing divergent perspectives improve problem solving and creativity (Nemeth, 1986; Garcia-Prieto and others, 2009). This is particularly important for organizations like the USGS that rely on creativity and innovation to conduct scientific inquiries that support decision making across the Nation (Sparber, 2009). In addition to the intellectual merit of these proposals, improving access to collaborations and careers for members of underserved communities and populations is the appropriate action to better support racial justice and equity.



To attain its vision, an organization must implement a chosen system of policies and behavioral expectations. It is critical to acknowledge that “the system is optimized to produce what you get” (variously attributed to Don Berwick, W. Edwards Deming, or Dr. Paul Batalden). Figure 1 shows “what we get”: Current USGS workforce demographics fall well below the Federal civilian workforce and National diversity levels, particularly at higher General Schedule levels that mostly represent research scientists with advanced degrees. This, despite the fact that the USGS implemented a diversity program 50 years ago (Bromery and others, 1972). Though the current disparity may, in part, reflect a time lag between hiring and advancement to the highest levels of civil service, it

may also represent an inability to retain and promote recruited talent. The trend in minority participation rates in the USGS workforce is weakly positive for the USGS, though not all minority participation rates are increasing. For example, Black employees represented 5.2 percent of the USGS workforce in 1971 (Gillette, 1972), but only 3.3 percent in 2020 (Office of Personnel Management, 2021), and the percentage in the Science, Technology, Engineering, and Mathematics (STEM) workforce is even smaller (fig. 1). The current system of policies and behavioral expectations in the USGS will need to change if the organization intends to embody the vision articulated by the USGS Office of the Director (Kimball and others, 2020) and President Biden.

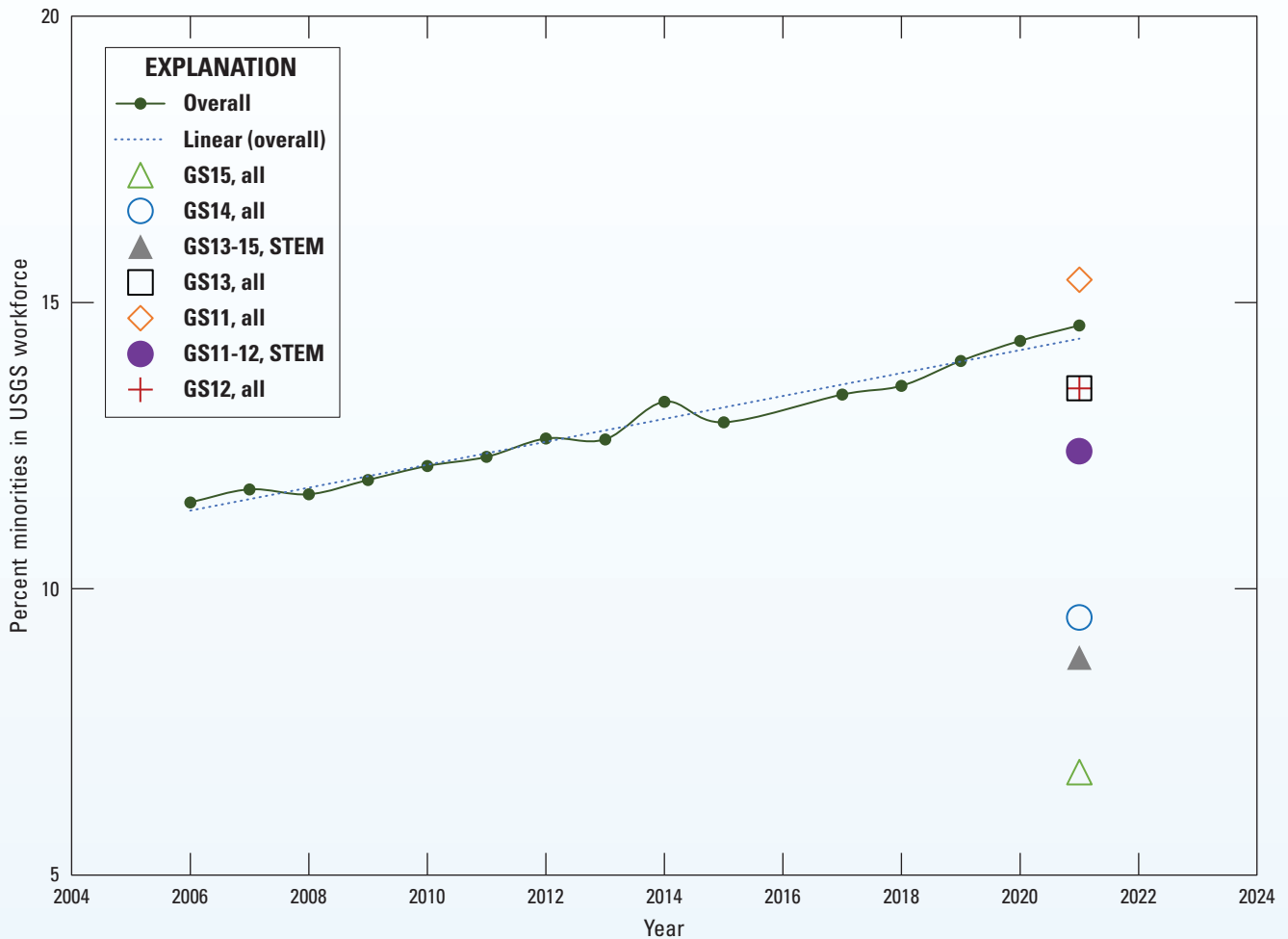


Figure 1. Minority (Black, Indigenous, and people of color and underrepresented minority) participation in the overall U.S. Geological Survey (USGS) workforce (green data points from September 2006–21 in FedScope Federal Workforce Data [Office of Personnel Management, 2021]). USGS workforce diversity lags behind the civilian workforce (33 percent in 2021; U.S. Bureau of Labor Statistics, 2021) and the Nation’s diversity (41 percent in 2020; Census Bureau, 2020). Moreover, minority participation decreases with increasing General Schedule (GS) level and for USGS Science, Technology, Engineering, and Mathematics (STEM) occupations. Data from FedScope Federal Workforce Data (Office of Personnel Management, 2021).

Our Way Forward: An URGE-Inspired Plan for Progress

Before exploring the URGE curriculum, USGS participation in URGE, and USGS demographic data in more detail, the synthesis of USGS URGE pod deliverables is summarized here. The synthesis is organized around recommendations for three connected supporting efforts required to implement and sustain a workplace environment that embodies the USGS vision and the Department of the Interior’s commitment to creating a workplace culture that attracts, develops, and retains outstanding individuals. In the following sections, recommendations associated with three themes for action are described, each with requirements for internal and external engagement, that will allow the USGS to “accomplish our mission in the most effective, efficient and robust way possible” (Kimball, 2010, p. 1). These “Fundamental Pillars of Institutional Change” are shown in [figure 2](#) and include (1) engagement and networking with the diverse communities served by the USGS; (2) recruitment and hiring to attract diverse talent into the USGS workforce; and (3) retention and advancement to support, protect, and motivate the USGS workforce to reach its fullest potential. Note that lasting cultural change requires all three pillars to remain stable, supported by accountability, which provides fundamental support for institutional change.

In the next section, details about the URGE curriculum and USGS participation in the program are provided; additionally, USGS demographic data are explored at the Bureau and Center levels. Having established the current composition of the USGS workforce, the subsequent section describes the summary recommendations of the USGS URGE pods for each fundamental pillar of institutional change and for its base of accountability ([fig. 2](#)), where primary recommendations are listed in tables and secondary recommendations are provided in bulleted lists.

URGE and Diversity at USGS

The URGE curriculum is explicitly antiracist. Emphasis on “antiracist” is important because “not racist” is passive, while “antiracist” is active (Kendi, 2019; Ben and others, 2020). The lack of systemic change within the USGS since 1971 is an indication that new, active, and explicitly “antiracist” approaches could bring about much needed change. URGE challenged its participants, approximately 84 percent of whom were White, to understand why active change is needed and to thoughtfully consider how to use their privilege, in whatever way it might be manifested, within their institutions to affect change (Wright and others, 2021).

The curriculum consisted of eight units delivered over 16 weeks, with required readings, supplemental readings,



Figure 2. Requirements for creating and maintaining equitable workplace culture based on U.S. Geological Survey (USGS) Unlearning Racism in Geoscience pod deliverables. Success requires long-term commitments from the USGS and Department of the Interior for three supporting efforts: engagement and networking; recruiting and hiring; and advancement and retention. These commitments will need to be grounded in a system of accountability to succeed in creating and maintaining culture change. High-level recommendations and objectives for each of the supporting elements are shown in [table 1](#). Figure by Betsy Boynton, St. Petersburg Coastal and Marine Science Center.

author discussions via webinar, pod discussions, and deliverables ([table 2](#)) that asked pods to explore the systems within their organizations and consider recommendations for policy or procedural changes where needed. The readings were primarily curated from the social sciences literature and, as such, exposed the participants to new ideas. Discussions and interviews with the authors helped to stimulate pod conversations while providing opportunities for question and answer sessions with experts on the topic of each unit.

This work was carried out by more than 120 USGS participants organized into 6 pods and 10 discussion groups. They came from 16 States, every USGS Region, multiple Mission Areas, and represented a wide range of USGS job series and career stages. USGS participants joined from the Office of Science Quality and Integrity; St. Petersburg (Florida) and Woods Hole (Massachusetts) Coastal and Marine Science Centers; New York Water Science Center; New Mexico Water Science Center; Geological Hazards Science Center;

Table 1. Summary of goals, recommendations, and objectives for building the inclusive U.S. Geological Survey (USGS) culture embodied in the USGS diversity statements.

[STEM, Science, Technology, Engineering, and Mathematics; BIPOC, Black, Indigenous, and people of color; URM, underrepresented minority; CADR, Office of Collaborative Action and Dispute Resolution; DEIA, diversity, equity, inclusion, and accessibility]

Goal	Recommendation	Objective
Engagement/networking (EN)		
EN1. Create long-lasting relationships and data sharing ¹ arrangements with communities of color.	Support outreach development akin to Tribal Liaison model to engage communities with the USGS science that is relevant to their lives.	Build effective engagement with underrepresented communities to promote geoscience as societally relevant and establish meaningful scientific inquiries for the communities.
	Strengthen existing STEM educational partnerships and expand to additional minority-serving institutions and organizations.	Promote USGS as a viable career option, recruit directly from underrepresented minority populations, and train existing staff to increase familiarity and comfort with diverse external groups.
Recruitment/hiring (RH)		
RH1. Foster equity in the hiring process to increase representation of minority groups in USGS workforce.	Offer centralized job announcement distribution.	Use USGS networking in addition to supervisor networks to widely disseminate announcements early enough for broad applicant response.
RH2. Minimize barriers inherent in current Federal hiring practices.	Remove systematic hiring barriers (for example, self-assessment), add hiring panel diversity/unconscious bias training, develop and use hiring rubrics.	Maximize diversity of applicant pool that reaches the final hiring decision and increase awareness of the value of diversity to the USGS.
	Restart early career hiring programs such as Minority Participation in the Environmental Sciences with long-term support for career development.	Hire from more diverse applicant pools, then support skill building (for example, graduate school) and career advancement through noncompetitive promotion.
Retention/advancement (RA)		
RA1. Improve USGS workplace culture to welcome BIPOC individuals and increase retention.	Promote Employee Resource Groups and mentoring.	Provide community support and individualized guidance for advancement.
RA2. Promote a culture of safety, interpersonal well-being, and accountability.	Prioritize psychological safety alongside physical safety.	Allow employees to focus on their jobs without distraction from psychological safety challenges.
RA3. Facilitate dialogue that leads to an improved working environment for BIPOC and URMs. ²	Promote Ombudsman, CADR, and other resources for conflict resolution.	Create a workplace where people know they are valued and they will be supported if dealing with unwanted behavior.
Accountability (A)		
A1. Update, maintain, and publicize a current compilation of USGS demographics by job series, grade level, Science Center, and geographic location (for example, FedScope).	Include DEIA efforts in performance plans and evaluations to ensure these activities are sustainably included in employee workflows and rewarded.	Empower all USGS employees, from the top down and bottom up, to engage with DEIA activities and feel accountable for promoting DEIA achievements and principles.
A2. Prioritize DEIA work as a value and a responsibility of all USGS employees.		

¹Data sharing specifically denotes a plan to ensure that communities of color are (a) aware of data collected within their community and that (b) data collected on Tribal lands are treated appropriately and with respect in accordance with Tribal, Federal, and USGS regulations for working on Tribal lands.

²Underrepresented minority in the geosciences (for example, people of Asian descent, Hispanic, and Latino; Bernard and Cooperdock, 2018).

Table 2. Unlearning Racism in Geoscience curriculum and deliverables broken down into eight 2-week sessions.

Session topic	Session deliverables
Racism and definitions	Group norms and pod agreements
Racism and individuals	Policies for dealing with complaints
Racism and history	Statistical analyses of program and its history
Racism and justice	Policies for working with communities of color
Racism and accessibility	Admissions and hiring policies
Racism and inclusivity	Laboratory and field codes of conduct
Racism and self-care	Asset map of resources to combat racism
Racism and accountability	Policy booklet with summary

Utah Water Science Center; Geology, Minerals, Energy, and Geophysics Science Center; Astrogeology Science Center; Upper Midwest Water Science Center; Volcano Science Center; Earthquake Science Center; Geology, Geophysics, and Geochemistry Science Center; and the Ohio-Kentucky-Indiana Water Science Center (fig. 3).

One of the key components to resolving the issue of a lack of institutional diversity is access to demographic data. Without a robust understanding of the status quo for employment of minorities within the USGS, it is not possible to track positive or negative changes to overall staff diversity. At the beginning of the URGE curriculum, USGS pods gathered both Center-level demographics and demographics across the USGS to better understand its diversity baseline. URGE pod participants found that the USGS does not represent the overall demographic diversity of the United States (fig. 1). For example, while 12.5 percent of the U.S. population is Black or African American, only 3.3 percent of USGS employees identify as Black or African American (fig. 4). Similarly, people of Hispanic/Latinx ethnicity represent 18.7 percent of the overall U.S. population, but only 4.8 percent of USGS employees identify as Hispanic/Latinx (fig. 4). This is the starting point for all recommendations laid out below, which highlight specific ways to improve on the demographic data presented here.

Because USGS Science Centers are on the front lines of their communities, URGE pod participants also examined Center-level demographic data (when accessible) which showed that the distribution of URMs is heterogeneous across the USGS, highlighting a role for local DEIA activities that complement National, Bureau-level efforts. For example, the Utah Water Science Center URGE Pod presented the following data: in Utah (fig. 5), the Hispanic/Latinx population makes up 14 percent of the population, but there are currently no Hispanic/Latinx USGS employees in the State of Utah. In the fall of 2020, 98 percent of USGS employees in Utah were White, 20 percent more than the population of the State and 13 percent higher than the broader USGS. Moreover, when compared to the applicant pool from which the State's USGS facilities in Utah have recruited/hired from in the past—the student body at the University of Utah College of Mines

and Earth Sciences (including undergraduate and graduate students in M.S. and Ph.D. programs)—the USGS in Utah is less diverse. This is consistent with the findings from Bernard and Cooperdock (2018) showing that the relatively diverse student body studying geoscience is not transitioning into geoscience careers.

Later in this document, recommendations to address possible systemic contributors to the data as they are will be discussed, but here the focus is on what can be learned from the demographic data themselves. Certainly, these baseline numbers provide a benchmark to improve upon; however, the Center-level example highlights that the communities around USGS Science Centers reflect the National demographics to varying degrees. An effort could be made to annually collect and make public Center-level demographic data to track Center-level progress. In addition to providing longitudinal metrics on the efficiency of certain networking, recruitment, and retention policies, annually reported Center-level demographic information could help identify local successes or policies that could be implemented more broadly across the USGS.

The authors recognize that sharing demographic information representing only the Center level may inadvertently identify individual employees, thus preventing the release of that information. Nonetheless, localized demographic information offers opportunities for directly linking hiring strategy changes with hiring outcomes. As noted in table 3, a recommendation is to elevate these Center-level results to higher level human resource groups or committees with authority to view demographic information. These approved groups could aggregate findings on effective practices and broadly share recommendations for effective Center-level engagement strategies. Presented below are two possible actions that could take place when Center-wide demographics are available:

1. Using the example from Utah, an assessment could be made of where engagement with the University of Utah is not yielding the needed results. For example, do recruiters meet with a diverse selection of students? Is the initial applicant pool for USGS positions diverse?

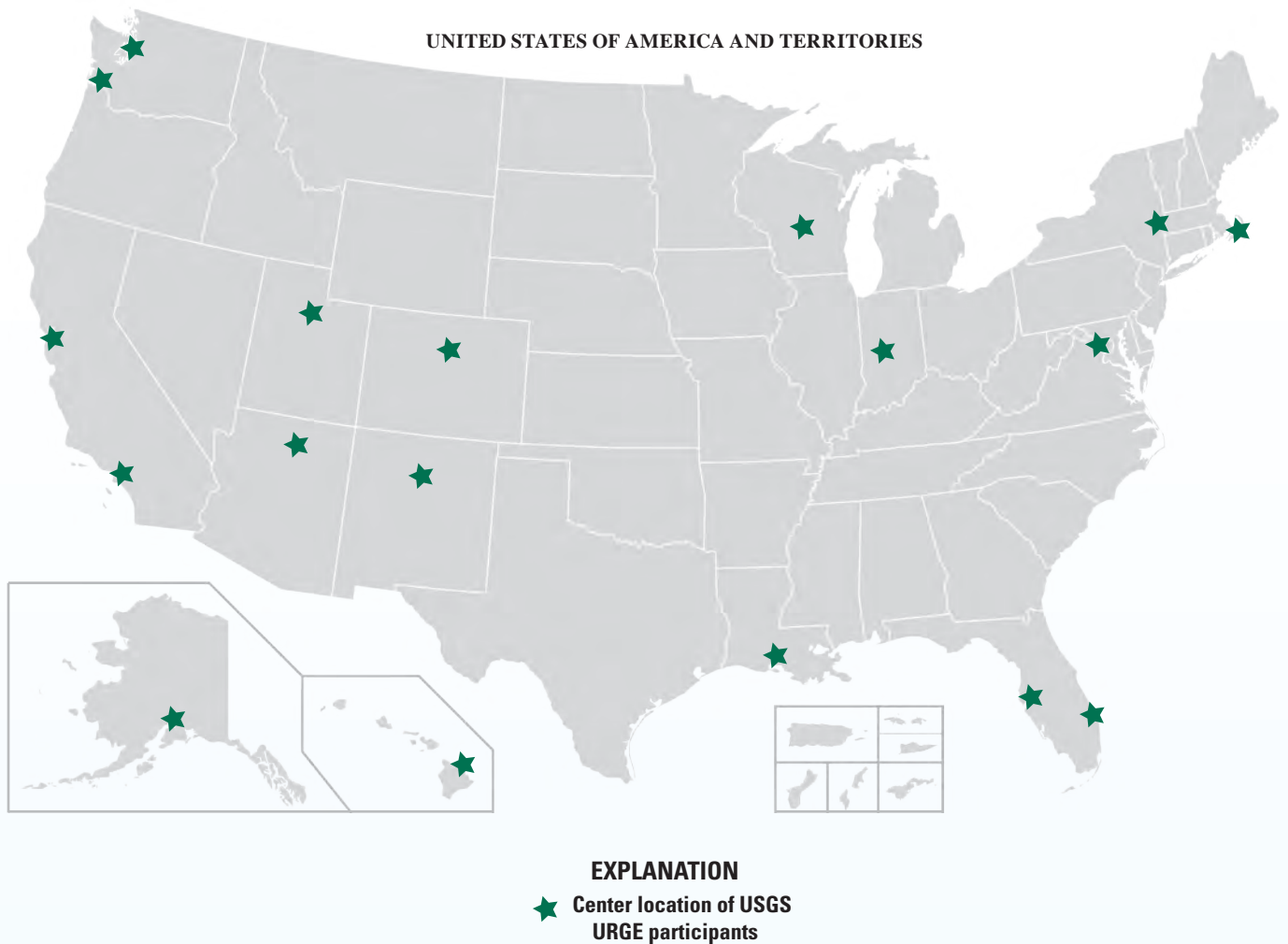


Figure 3. Distribution of U.S. Geological Survey (USGS) Unlearning Racism in Geoscience (URGE) participants indicated with stars. Map of the United States is available in the public domain.

When underrepresented individuals are hired, are they retained? An additional step could be taken to evaluate whether recruitment efforts are connecting to a broader group of schools across the State.

2. The heterogeneous distribution of underrepresented minorities implies that there are Centers in which one or more minority groups are more heavily represented. An assessment of these Centers could determine how the Centers are engaging differently. For example, do they specifically advertise openings in a way that more effectively engages minority communities? Do they provide guidance on navigating USAJOBS, the primary hiring point of entry for Federal positions, or other hiring pathways?

Regardless of whether evaluating Bureau- or Center-level data, it is clear that the demographics of the USGS are not representative of the Nation or, in many cases, the communities in

which Centers are located, and that new, sustainable institutional and local policies are needed to achieve better outcomes.

Recommendations

The following sections are a result of the work of the USGS URGE pod participants who systematically explored USGS Bureau- and Center-level demographic data, policies, and practices through the lens of URGE. Here, key consensus recommendations are presented, organized by the three fundamental pillars of institutional change illustrated in [figure 2](#): engagement and networking; recruitment and hiring; and retention and advancement—supporting these pillars is accountability. Each section’s introduction provides context for the issues addressed by the URGE pod recommendations. The primary recommendations of the USGS URGE groups

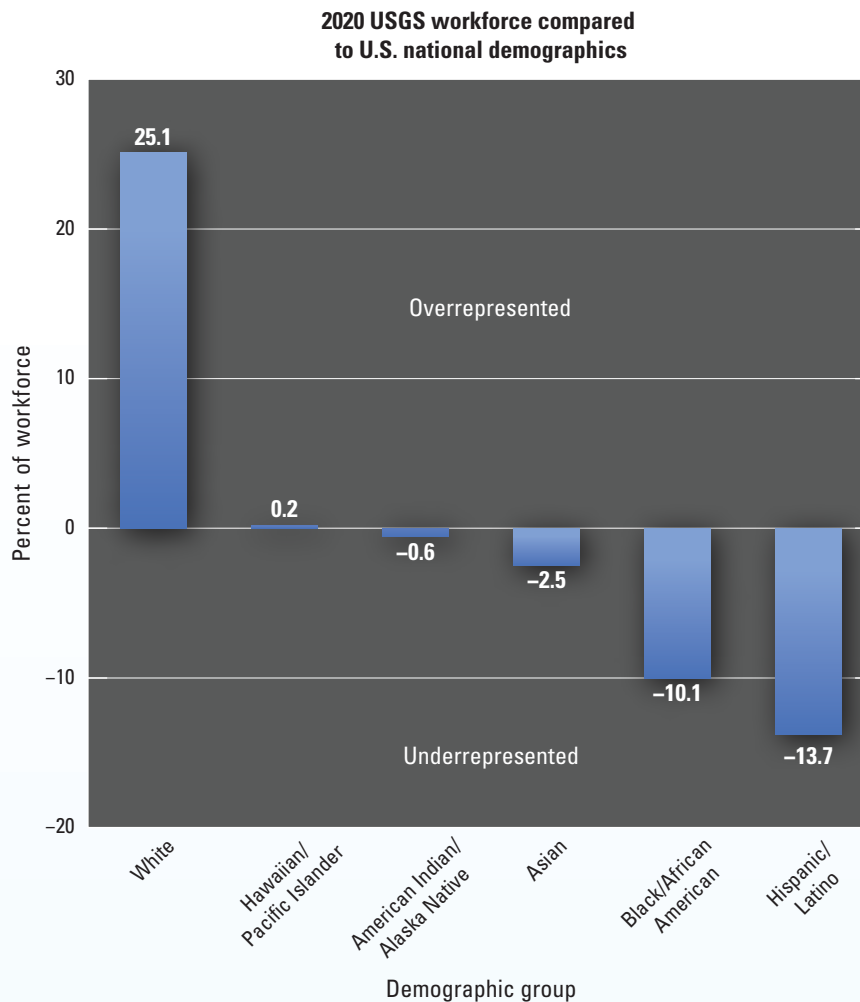


Figure 4. Demographic comparison between U.S. Geological Survey (USGS) employees and the U.S. population using data from FedScope (Office of Personnel Management, 2020) and the Census Bureau (2020).

are summarized in tables 4–12. Certain sections also contain a bulleted list of secondary recommendations relevant to the inclusive workplace culture structure. This framework seeks to answer the following questions in each section:

- Will achieving this goal represent progress toward the USGS mission?
- Does this goal advance equity and inclusion in outcomes and (or) processes?
- Was input received from people who will be impacted by the processes or the outcomes?
- Are the measures for success clear for this goal?
- What is the timeframe for this goal? How often will progress be reevaluated?
- Is there capacity to achieve this goal?

Fundamental Pillar of Institutional Change 1: Engagement and Networking

Policies and Support for Working With Communities of Color

Anecdotal evidence collected by the six URGE pods indicates that the USGS Mission Areas rarely provide guidance or support for effectively engaging with BIPOC and URM communities. Yet, the USGS researches many topics (for example, geologic hazards and climate change) that disproportionately impact communities of color (Jerolleman, 2019). Because USGS and Science Center demographics include only very small percentages of these populations, effective engagement and collaboration with these communities is often a challenge, reducing the efficacy of USGS endeavors in these research areas.

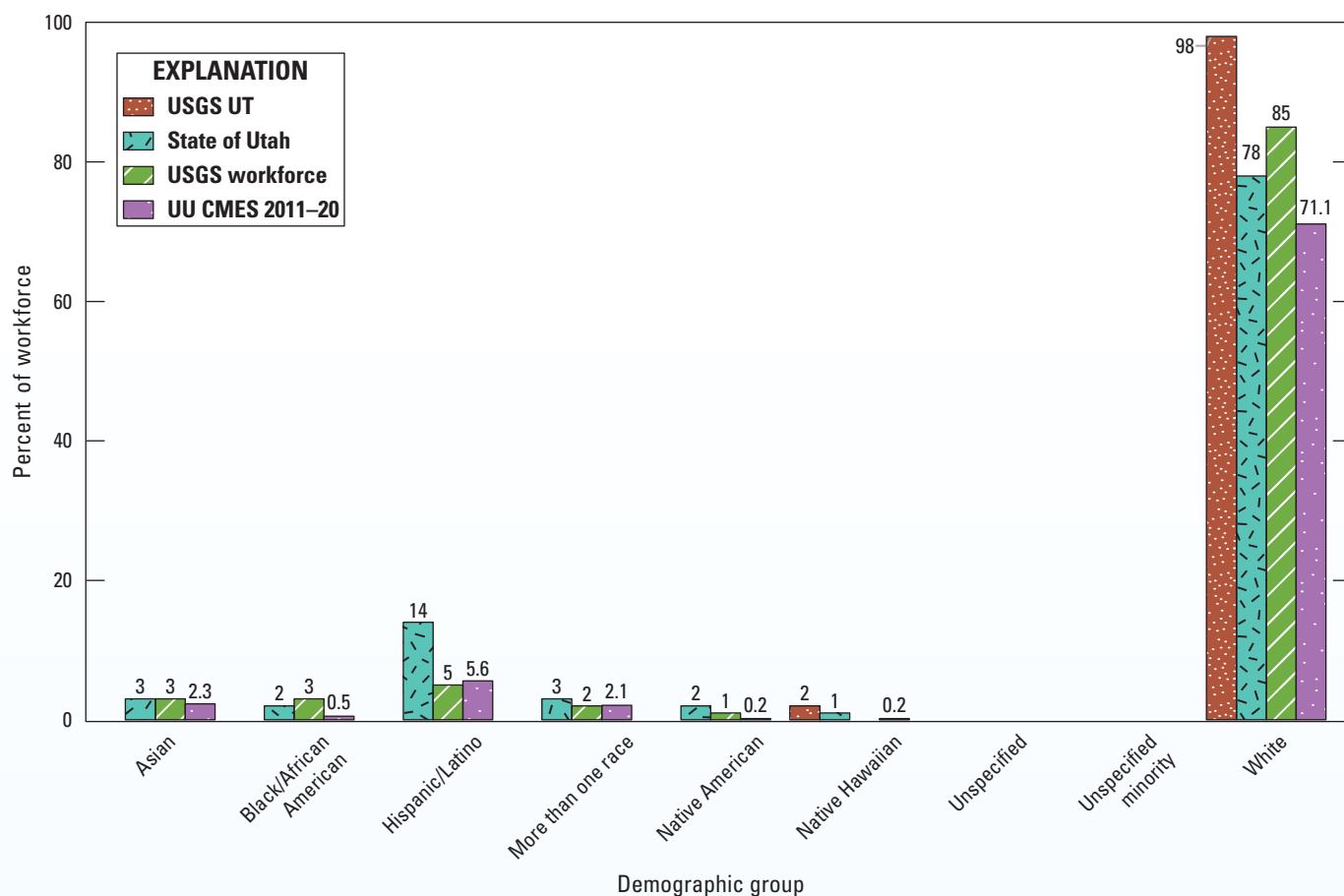


Figure 5. Demographic breakdown of U.S. Geological Survey (USGS) employees in Utah (UT) and across the USGS from the Office of Personnel Management, the State of Utah, and the University of Utah College of Mines and Earth Sciences (UU CMES). The UU CMES numbers and percentages displayed omit the approximately 16–18 percent of students who are from outside of the United States.

A lack of diversity in USGS employees distances USGS research from, and reduces its relevance to, BIPOC and URM communities. By not connecting with these communities until the late stages of study development or even deployment (if at all), the USGS is deprived of valuable input and collaborative opportunities. Lack of initial community buy-in can also limit the relevance of any USGS research results to these communities. With more direct efforts to connect with BIPOC and URM communities, the USGS can (1) improve working relationships with these communities, (2) potentially increase recruitment from these communities, and (3) improve USGS science, since undervalued or unseen challenges facing these communities will become new avenues to pursue high-impact research.

The authors acknowledge that there are existing trainings and funded partnership programs with Tribal communities (for example, the Office of Tribal Relations trainings on consulting with Tribal Nations and improving and sustaining Tribal relations) that seek to help employees to avoid repeating past mistakes in how the USGS and Department of Interior conducted work on Tribal land (Clinton, 2000; Haaland, 2021). The authors drew inspiration from these existing programs and include some recommendations they believe will augment engagement across Tribal and other minority communities in table 4.



Table 3. Utilizing demographic information.

Concept	Target
Goal	Create long-lasting relationships with communities of color
Action level	Bureau, Region, and Center level
Facilitators	Human resources, Executive Leadership Team, ¹ Center management, scientists
Format of product, outcome, or plan	Center-level demographic information is channeled to Bureau-level human resources personnel and consolidated. Executive Leadership Team (or an appointed committee) reviews demographic information, interviews “bright spot” Centers about successful engagement activities, and releases a best practices document summarizing productive engagement strategies.
Implementation resources/trainings	Best practice updates are disseminated to the Centers to replace/improve Center engagement policies that a Center’s demographic trends indicate do not effectively grow the Center’s network within minority communities.
Inclusivity/diversity contribution	Increasing demographic diversity requires growing the U.S. Geological Survey’s network of minority communities with which it is productively engaged.
Success criteria	Increased numbers of internships and collaboration projects that engage minority communities (see also “Goal EN1,” table 4). Increased diversity in the job applicant pool (see also “Goal RH1,” table 5).
Review/update interval	Biennial

¹The Executive Leadership Team (ELT) of the USGS is composed of the Director, the Deputy Directors of Operations and Administration and Policy, the Chief Scientist, all Associate Directors in science mission areas, all Regional Directors, the Associate Chief Information Officer, the Associate Directors of the Office of Administration, the Office of Budget, Planning, and Integration, the Office of Communications and Publishing, the Director of the Office of International Programs, the Director of the Office of Science Quality and Integrity, the Chief of the Office of Diversity and Equal Opportunity, the Department of Interior Science Advisor, and the Director’s Chief of Staff. It is a deliberative body that provides advice and recommendations to the USGS Director on a wide-ranging set of topics that include strategic, scientific, operational, and administrative issues.

Table 4. Primary recommendations for building relationships with underrepresented minority communities.

[EN, engagement/networking; DEO, Office of Diversity and Equal Opportunity; USGS, U.S. Geological Survey; BIPOC, Black, Indigenous, and people of color]

Concept	Target
Goal EN1	Create long-lasting relationships and data sharing arrangements with communities of color
Action level	Bureau, Mission Area, and Center level
Facilitators	DEO and potentially USGS Office of Tribal Relations
Format of product, outcome, or plan	Outreach and community of practice to engage communities of color will include <ol style="list-style-type: none"> 1. A code of conduct for working with communities of color (for example, figure 6 and the “Secondary Recommendations: Engagement and Networking” section below) 2. Training for working with BIPOC communities (for example, data sharing, history of exclusion from science, etc.), expanding existing trainings on working with Tribal Nations 3. Increased support (time, funding, and personnel) to establish relationships with BIPOC communities 4. Develop mechanism for community partners to provide feedback on collaboration with USGS partners
Implementation resources/trainings	Improve employee confidence through new training on working with BIPOC communities
Inclusivity/diversity contribution	BIPOC communities are some of the most exposed communities to geologic hazards, yet are poorly represented in project discussions (from ideation to publication)
Success criteria	Increased number of internships and collaborative projects with BIPOC communities; positive feedback from community partners
Review/update interval	Biennial

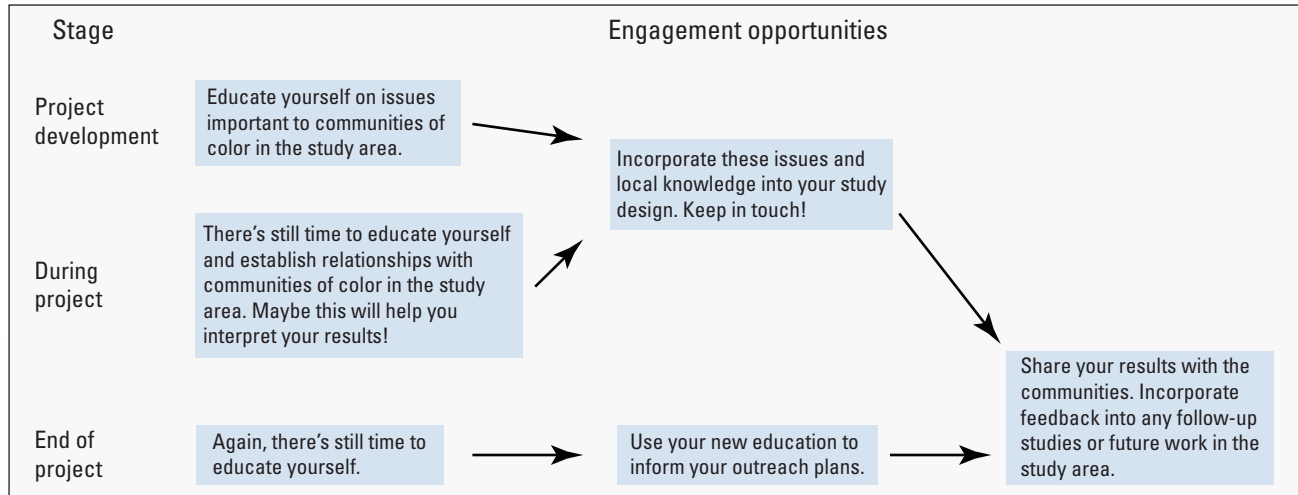


Figure 6. Conceptual model for connecting scientific goals with Black, Indigenous, and people of color communities. Ideal workflow initiates contact at the “Project Development” stage. Note: Tribal relations are guided by specific policies and mandates that go beyond the details highlighted within this document.

Secondary Recommendations: Engagement and Networking

- Expand cooperative agreements and memorandums of understanding with minority-serving institutions to support networking and connect students to internships within the USGS (for example, STEM Educational Partnerships Program).
- Develop formal policies for land acknowledgements for research documents (papers, reports, etc.) and online public-facing web pages, including, but not limited to the lands on which research was conducted or land offices are located within the scope of existing laws, USGS Fundamental Science Practices, and the needs of Tribal Nations across the United States.
- Make more USGS content available in languages other than English (for example, Spanish).
- Establish a code of conduct: Several tenets have been identified by USGS employees as keys to a code of conduct for working with BIPOC communities. This recommended code is intended to include all project partners and to be developed at the start of a project to define the following:
 1. The objectives of the work
 2. How decisions will be made and how data will be shared
 3. How best to share information amongst all collaborators

4. How to resolve disputes

5. Timelines for responding to stakeholders and collaborators

Fundamental Pillar of Institutional Change 2: Recruitment and Hiring

The Federal hiring process through USAJOBS has multiple steps to minimize the opportunity for implicit bias; however, the demographic data comparison (figs. 1, 4, and 5) suggests that the hiring process likely does not effectively attract minority applicants and adds barriers to reaching the diversity goals outlined in the “USGS Equal Employment Opportunity Policy Statement” (<https://www.usgs.gov/eo-policy-statement>). The URGE pods developed several recommendations that can be implemented at the Center level (table 5) and the Bureau level (table 6) to broaden the applicant pool and reduce hiring barriers for potential BIPOC and URM applicants. These recommendations include diversifying opportunities in the types of hiring pathways used, how job advertisements are distributed, and how applicants are assessed.

These recommendations are developed with the understanding that the authors work for the Federal Government and that the Office of Personnel Management has authority over the USAJOBS website functionality. The authors therefore structure most policy recommendations around USAJOBS but recognize that there is latitude in how hiring managers can help individuals find and secure jobs with the USGS.

Table 5. Primary recommendations for recruitment and hiring (RH): Center level.

[USGS, U.S. Geological Survey; DEO, Office of Diversity and Equal Opportunity; PSW, Peer Support Worker; URGE, Unlearning Racism in Geoscience; BIPOC, Black, Indigenous, and people of color]

Concept	Target
Goal RH1	Foster equity in the hiring process to increase representation of minoritized groups in USGS workforce.
Action level	Center level
Facilitators	DEO, PSWs, URGE alumni
Format of product, outcome, or plan	<ol style="list-style-type: none"> 1. Advertise positions to an established and widely circulated list of (a) universities, minority serving institutions, and community colleges, (b) professional society list serves, and (c) BIPOC Earth science organizations then distribute listings promptly after posting to USAJOBS. 2. Create a point person at each Center to advertise a given posting and support this person with paid hours to answer applicant questions regarding the position and hiring process. 3. For each job posting, require development of a hiring rubric to reduce bias during the candidate evaluation process.
Implementation resources/trainings	Require implicit bias training for all hiring committee members.
Inclusivity/diversity contribution	Hiring is the only way to bring in new talent and diversify the USGS workforce.
Success criteria ¹	<ol style="list-style-type: none"> 1. Increased number of underrepresented minority applicants at the initial and final stages of the hiring process 2. Increased USGS employee diversity
Review/update interval	Biennial

¹Requires tracking of applicant demographics, as discussed in the section entitled “Fundamental Support for Institutional Change: Accountability.”

Table 6. Primary recommendations for recruitment and hiring (RH): Bureau level.

[OPM, Office of Personnel Management; DEO, Office of Diversity and Equal Opportunity; HR, human resources; BIPOC, Black, Indigenous, and people of color; USGS, U.S. Geological Survey]

Concept	Target
Goal RH2	Minimize barriers inherent to current Federal hiring practices.
Action level	Bureau level/OPM
Facilitators	DEO, OPM, HR
Format of product, outcome, or plan	<ol style="list-style-type: none"> 1. Offer timely and direct assistance to applicants struggling with USAJOBS. 2. Remove self-assessment system. Women and BIPOC applicants usually rate themselves lower than White men (Flanagan, 2017). 3. Support HR to reduce interval between position advertisement and acceptance.
Implementation resources/trainings	Development of clear guidance on navigating USAJOBS for potential job applicants. Training on how to communicate with potential job applicants.
Inclusivity/diversity contribution	Current hiring mechanisms favor those who are already networked with other Federal employees and who currently have the resources to wait for an extended period (potentially several months between application and acceptance); revising these practices and diversifying Federal employee networks will aid in increasing employee diversity.
Success criteria	<ol style="list-style-type: none"> 1. Increased number of underrepresented minority applicants at the initial and final stages of the hiring process 2. Increased USGS employee diversity 3. Increased resources for HR to process applications
Review/update interval	Biennial

Secondary Recommendations: Center-Level Recruitment and Hiring

- Share job advertisements with the entire Center to improve the reach of job postings; USGS may need to develop policies for sharing job postings on social media
- Directly hire individuals from the community through the 180-day field assistant program, which could be scaled up into a more formal internship program
- Utilize existing programs to onboard more diverse candidates directly (for example, STEM Educational Partnerships Program, Cooperative Summer Fellowship Program, Mendenhall Research Fellowship Program, and National Science Foundation Internship Program)
- Advertise job postings for longer periods of time, casting a wider net beyond those who already have prepared a Federal resume (see “USGS Data Science” example). This will help to eliminate any perception that all Federal jobs are posted with an internal candidate in mind
- Participate in job fairs, give seminars to local universities/community groups, and invite seminar speakers to Science Centers to raise awareness about the work done there
- Join societies and attend conferences for BIPOC geoscience groups (for example, Society for the Advancement of Chicanos/Hispanics and Native Americans in Science, American Indian Science and Engineering Society, and National Association of Black Geoscientists) and enable at least a limited number of “on the spot” direct hiring opportunities at these venues. Meetings also provide a venue to list current and upcoming positions and offer networking opportunities with scientists, staff, and human resources personnel regarding those openings
- Add statement about the value of diversity on Science Center websites and job advertisements

Secondary Recommendations: Bureau-Level Recruitment and Hiring

- Reduce use of term positions and examine existing use of term positions across the USGS.
- Encourage employee career development and growth, especially for early career employees (for which there is a larger pool of URM)s).
- Pay relocation expenses. Not paying for relocation favors affluent applicants.

Fundamental Pillar of Institutional Change 3: Retention and Advancement

Inclusivity by Intention Rather Than Default

To truly harness employee enthusiasm, creativity, and support for achieving the USGS stated commitment “to seeking out and retaining a highly skilled and diverse workforce” (Kimball, 2010, p. 1), the USGS must include DEIA activities directly into Employee Performance Appraisal Plans and Research Grade Evaluation criteria. DEIA activities must be part of the promotable portion of an employee’s workday if the USGS is to uphold Executive Order No. 14035 (Biden, 2021, p. 1), which is intended to “cultivate a workforce that draws from the full diversity of the Nation ... [and] advance diversity, equity, inclusion, and accessibility across the Federal Government.” Rather than defaulting to a reliance on a few extraordinary individuals being willing to work overtime to complete their official duties and to champion DEIA initiatives (a practice that often exploits members of minoritized groups; see Padilla, 1994; Ginther and others, 2018; Gewin, 2020), the USGS needs to intentionally include DEIA activities into the expected efforts of all employees, then reward those efforts in the same fashion that administrative, technical, and scientific productivity has traditionally been rewarded (table 7). For example, elevate DEIA awards such as the “Rufus D. Catchings Diversity Outreach Award” or the annual “Diversity Award” to highlight people and groups who go above and beyond their position descriptions to advance DEIA efforts.

Secondary Recommendations: Recruitment and Advancement—Incentivizing DEIA

- Ensure that DEIA tasks and services are supported as activities leading to career advancement and promotions (see also table 12).
- Add specific questions to exit interviews to evaluate if workplace culture issues (for example, microaggressions, hostile work environment, not enough community support) were part of the reason for leaving.

Creating and Maintaining a Safe Working Environment

Challenges with retention in the USGS and narratives from URMs in all fields (Demery and Pipkin, 2021) suggest that workspace safety is crucial to retention of talent and for fostering feelings of inclusion. Although the USGS has clear safety guidelines establishing protection from harassment and physical harm, less overt threats such as microaggressions, which undermine feelings of security within an

Table 7. Primary recommendations for retention and advancement (RA): Incentivizing diversity, equity, inclusion, and accessibility (DEIA) efforts.

[USGS, U.S. Geological Survey; DEO, Office of Diversity and Equal Opportunity; PSW, Peer Support Worker; URGE, Unlearning Racism in Geoscience]

Concept	Target
Goal RA1	Improve USGS workplace culture to welcome underrepresented individuals and increase retention
Action level	Bureau, Region, and Center level
Facilitators	DEO, PSWs, URGE alumni
Format of product, outcome, or plan	<ol style="list-style-type: none"> 1. Revise Employee Performance Appraisal Plans and Research Grade Evaluation scoring criteria to include service in support of DEIA principles: mentorship, networking, peer support, etc. 2. Create mentoring program for new employees within USGS Centers, pairing new employees with more experienced USGS personnel in their Center. This senior person can help with onboarding, exposure to the resources of the USGS and Center, and provide vital early career networking opportunities. 3. Standardize pay grades across Centers of similar position descriptions and education requirements.
Implementation resources/trainings	Require annual DEIA training and seminars highlighting how DEIA principles allow individuals and the USGS to “accomplish our mission in the most effective, efficient, robust way possible” (Kimball, 2010, p. 1).
Inclusivity/diversity contribution	Diversity decreases with increasing pay in the USGS, indicating barriers to retention and promotion. Focusing on improving workplace culture and biases in assessment may reduce these barriers.
Success criteria	Positive trends in demographic data regarding retention and promotion of underrepresented employees
Review/update interval	Biennial

organization, seldom rise to the level of a reportable offense and instead go unchallenged. Research shows that people who feel threatened (physically or psychologically) operate with reduced cognitive capacity because they focus on perceived threats or uncertainty rather than on the primary task at hand (Dieterich and others, 2016). Over time, a sustained sense of threat or uncertainty leads to disengagement (Steele, 2011). Improving a culture of safety thus drives productivity and innovation at the USGS by supporting effective cognitive effort and overall employee retention. Note that emphasizing a culture of physical and psychological safety (table 8) shifts the burden of enforcement from a programmatic level (for example, investigations by the Anti-Harassment Program or the Office of Diversity and Equal Opportunity) to the grassroots level of individual employees. For grassroots behavioral approaches to work, a system of training and incentives is required to create an intrinsic employee capacity and desire to support the norms of an inclusive workplace. A series of recommendations is summarized in table 9 to transform safety from a mandatory set of activities added to existing obligations (extrinsic), to a culture of expected behaviors within daily work routines (intrinsic).

Safety includes both physical safety and psychological safety. Many USGS training modules are structured to allow an employee to answer “yes” to the physical safety

questions in table 8 (for example, how to safely cross a stream or what to do in the field during a lightning storm); however, fewer trainings are available for those questions found in the psychological safety column. Both physical and psychological safety are supported by the employee-supervisor relationship. Without training, it is likely that supervisors may not recognize what is or is not considered safe by an employee from a different background. Table 8 offers generalized examples of physical and psychological safety questions for which all employees must work toward answering yes. Critically, the USGS URGE pods concluded that USGS employees are most likely to encounter public hostility during field work, and field-based training is a critical resource for the USGS to develop (for example, how to help make a person from a URM feel safe in the field; Demery and Pipkin, 2021). The USGS StepUp! Employee Empowerment Strategies (SEES) group is currently developing a field-based bystander intervention training. Additional field-based support resources such as field safety checklists are also recommended. The driving idea behind many of the recommendations below is to shift perspectives that see safety as a list of mandated activities that takes time away from an employee’s duties to seeing a comprehensive safety plan as a series of strategies for optimizing employee potential.

Table 8. Physical and psychological safety.

The challenge for supervisors/project managers—answering “yes” to the question “Do your employees/group members”	
Physical safety	Psychological safety ¹
... understand what the physical dangers and limitations will be in a particular workplace environment?	... feel comfortable being themselves in their workplace?
... understand what will be required of them while in a particular workplace environment?	... understand the expectations and the requirements for growth/career development?
... agree their personal requirements for feeling safe and supported in a particular work environment have been voiced and satisfactorily addressed?	... feel they have the agency and support to carry out the expectations and requirements for growth/career development?
	... feel encouraged to speak up, even when voicing ideas that are novel or that challenge existing ideas?
Does my supervisor/project manager understand threats to my physical and psychological safety?	

¹Hardie and others (2022).

Table 9. Primary recommendations for retention and advancement (RA): Safety.

[DEO, Office of Diversity and Equal Opportunity; PSW, Peer Support Worker; SEES, StepUp! Employee Empowerment Strategies; BIPOC, Black, Indigenous, and people of color; DOI, Department of the Interior; URM, underrepresented minority; USGS, U.S. Geological Survey]

Concept	Target
Goal RA2	Promote a culture of safety, interpersonal well-being, and accountability.
Action level	Bureau and Center level
Facilitators	DEO, PSWs, supervisors
Format of product, outcome, or plan	1. Redefine safety to include both physical and psychological safety. 2. Encourage SEES Bystander training, including the field safety module where applicable. 3. Develop a specific safety plan for a given project that is inclusive of all employee concerns (for example, BIPOC employee working in rural western United States).
Implementation resources/trainings	DOI Talent or similar training platforms In-person trainings Centralized repository of field safety checklists
Inclusivity/diversity contribution	BIPOC and URM employees more likely to stay in the USGS when they feel safe and their concerns around safety are recognized.
Success criteria	Employees are prepared with knowledge and tools to behave safely and respond to unsafe situations on behalf of themselves and their coworkers.
Review/update interval	Annual

Secondary Recommendations: Retention and Advancement—Safety

- Introduce new hires to workplace and facilities staff (for example, security).
- Highlight the annual “Equity, Diversity, and Inclusion Pledge.”
- Develop project specific codes of conduct and incorporate all non-USGS or contractor employees in project code of conduct.
- Encourage research groups, often the first line of exposure to situations that lack psychological safety, to develop codes of conduct for office and field (if appropriate) situations.
- Implement training for effective mentoring that is inclusive of BIPOC identities and frames the mentor as a “learner.”
- Require annual or biennial unconscious bias training.
- Add more Employee Resource Groups (ERGs; USGS-wide and at Center level), introduce all new employees to these groups, and support ERG organizers to advance programming related to the ERG. Moreover, provide support for employees’ time to participate in ERG activities.

USGS Complaints and Reporting Policy

The USGS provides avenues for employees to report physical or psychological harassment, complaints, or conflicts that may require mediated resolutions. The specific details of these avenues are beyond this document; however, it is important for all employees to be aware of the different avenues available to them (for example, the bottom-up approach) and for the USGS to reduce barriers to utilizing support programs (for example, placing points of contact in accessible positions in each Region and Center; the top-down approach). Complaints and reporting data indicate that many incidents are witnessed (17 percent of respondents) or experienced (28.4 percent of respondents) yet are not reported (80.2 percent of people who experienced harassment did not report; [fig. 7](#)), suggesting that the USGS has an opportunity to better implement and support resources with low barriers of entry (for example, resources that are confidential; [table 10](#)). Progress and development in the complaints and reporting structure of the USGS will not only aid and support existing USGS employees, but the benefits will have disproportionately positive impacts on already vulnerable and marginalized groups within the USGS.

Secondary Recommendations: Retention and Advancement—Complaints and Reporting

- Create easy to understand resource flyers, providing information and contacts for Peer Support Workers, the Office of Collaborative Action and Dispute Resolution, and Ombudspersons.
- Provide a USGS online portal to report unwelcome behavior, or more clearly highlight how reports can be filed online through the Department of the Interior Office of the Inspector General, which has separate forms for reporting confidentially, anonymously, or when one feels they have been retaliated against.
- Create and grow a USGS Civil Rights Special Emphasis Program Advisory Council to coordinate and expand existing Special Emphasis Programs. The USGS approach could be modeled on the efforts of the U.S. Department of Agriculture’s National Civil Rights and Diversity Advisory Committee.

Fundamental Support for Institutional Change: Accountability

Even if implemented, none of the recommendations highlighted in this document will be sustained without a systematic framework of accountability. An accountability cornerstone is the tracking of USGS demographic data. Without gathering and reviewing data at regular intervals ([table 11](#), “Goal A1”), the USGS cannot and will not be able to know if efforts implemented are affecting change. In addition, accountability requires elevating time spent on impactful institutional change to time spent on impactful scientific contributions ([table 12](#), “Goal A2”).

Linking each of the goals highlighted above is a system built to foster accountability. The USGS builds and supports accountability by (1) periodically reviewing the progress and success of each recommendation and (2) involving multiple stakeholder groups as facilitators for implementation, ensuring that a broad array of people are aware, motivated, and rewarded for work to achieve the stated objectives. A review and reporting framework will ensure that there is a formal process and timeline for reevaluating the steps that have been taken should progress toward achieving a goal slow or stagnate or if resources being devoted to the fundamental pillars of institutional change are inequitable (leading to an imbalance in how USGS culture is supported). This review process also ensures that regular conversations around these initiatives will continue regardless of shifts within the USGS or changes in leadership. Ultimately, these accountability measures will enshrine a culture of positive change toward DEIA goals within the USGS.

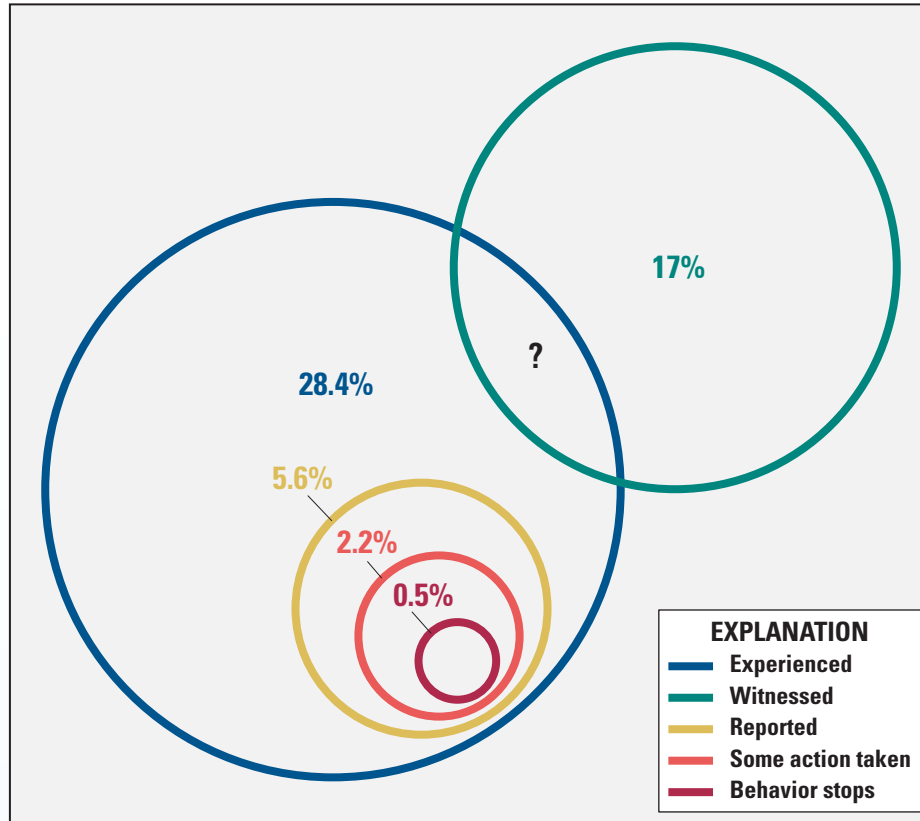


Figure 7. Percentages of total respondents (represented by the gray box) that experienced (blue circle) and witnessed (green circle) harassment in a U.S. Geological Survey workplace in the 12 months preceding a voluntary, anonymous survey conducted in 2017. It is unclear to what extent these groups overlap. Nested circles inside the blue circle are proportional in area to the percentages of people that reported harassment (yellow circle), saw some action taken to address the harassment (orange circle), and found that the behavior stopped (red circle). Of the 28.4 percent of people who experienced harassment, 19.8 percent reported it, or 5.6 percent of survey respondents. Of the 19.8 percent of people that reported harassment, 39.5 percent responded that some action had been taken, or 2.2 percent of survey respondents. When action was taken, the harasser stopped the behavior in 22.3 percent of situations, or for 0.5 percent of the survey respondents. In general, all people who reported harassment were disappointed with the outcome of the actions taken. Data from “Workplace Environment Study Reports” (U.S. Department of the Interior, 2017). Pairing graphics like this with contact information for confidential resources (for example, Ombudsman or Office of Collaborative Action and Dispute Resolution) and informal support (for example, Peer Support Workers) lets people know that they are not alone when they have to cope with unwelcome behavior.

Table 10. Primary recommendations for retention and advancement (RA): Resources for responding to unwelcome behavior.

[BIPOC, Black, Indigenous, and people of color; URM, underrepresented minority; PSW, Peer Support Worker; CADR, Office of Collaborative Action and Dispute Resolution; DOI, Department of the Interior; FEV, Federal Employee Viewpoint Survey]

Concept	Target
Goal RA3	Facilitate dialogue that leads to an improved working environment for BIPOC and URMs.
Action level	Bureau and Center level
Facilitators	PSWs, CADR, and DOI Ombuds Service
	At least one PSW in each Center
Format of product, outcome, or plan	Mechanism for BIPOC and URM employees to report barriers and disparate treatment without fear of retribution
Implementation resources/trainings	1. Training on inclusive language and conflict resolution 2. Publicizing confidential resources that center on the reporting individual
Inclusivity/diversity contribution	More effective reporting avenues protect all employees especially those most vulnerable (BIPOC and URMs).
Success criteria	Improvement in annual workplace climate evaluations, differentiable by demographic categories, building off the FEVs and Workplace Environment Study Reports
Review/update interval	Biennial

Table 11. Primary recommendations for accountability (A): Demographic data.

[USGS, U.S. Geological Survey; DEO, Office of Diversity and Equal Opportunity; URGE, Unlearning Racism in Geoscience; OPM, Office of Personnel Management]

Concept	Target
Goal A1	Update USGS demographic data by job series, grade level, Science Center, and geographic location annually. Make those data publicly available and easy to access.
Action level	Bureau and Center level
Facilitators	DEO, URGE alumni (can identify priority data)
Format of product, outcome, or plan	Public-facing web page with data web application dashboard, likely drawing from FedScope
Implementation resources/trainings	Center-wide surveys may require training and approval. Otherwise, data appear available through OPM and DEO.
Inclusivity/diversity contribution	Only through data collection can the USGS (1) identify and quantify its challenges and (2) track improvement.
Success criteria	Timely, publicly available reports on demographic makeup of the USGS and internal assessments at the Center level
Review/update interval	Annually

Table 12. Primary recommendations for accountability (A): Establishing diversity, equity, inclusion, and accessibility (DEIA) as an intrinsic employee activity.

[USGS, U.S. Geological Survey; ELT, Executive Leadership Team; BIPOC, Black, Indigenous, and people of color]

Concept	Target
Goal A2	Establish DEIA work as a value and a responsibility of all USGS employees.
Action level	Bureau, Region, and Center level
Facilitators	ELT, Regional Directors, Center Directors
Format of product, outcome, or plan	<ol style="list-style-type: none"> 1. Make USGS leaders accountable to DEIA goals by including them in performance plans. 2. Encourage and reward USGS employees who spend time working to make USGS a more diverse and inclusive organization. 3. Hire people in Centers, Regions, and (or) Mission Areas whose job is to facilitate DEIA efforts.
Implementation resources/trainings	Clear statement from leadership that work in this area is valued and important. Include DEIA efforts into the job descriptions of leaders and other employees.
Inclusivity/diversity contribution	Holding leaders accountable and empowering employees will result in a more diverse and inclusive USGS.
Success criteria	Overall positive change in USGS demographics, and workplace satisfaction, especially among BIPOC employees
Review/update interval	Biannual (for example, during 6-month and annual reviews of performance plans)*

*Recommendation can be linked to existing goals and is not an additional burden.

Secondary Recommendations: Accountability

- Obtain and analyze applicant demographic data at every stage (recruitment, application, certification, interview, and hiring) from the Office of Personnel Management to identify areas where improvements can be made and where investments and new policies are making a positive impact.
- Track demographics of recipients of opportunities and awards at the Center level, such as invited seminar speakers; workshop speakers; and fellowship, award, and internship recipients (if non-Federal speakers are invited, this may require the use of a Paperwork Reduction Act clearance).
- Provide Federal Employee Viewpoint Survey results broken down by demographic groups and identities.

Progress toward the stated diversity vision of the USGS will require acknowledgment of a previous lack of progress and a commitment to changing policies and behavioral norms from the highest levels of leadership within the USGS to Center Directors, and ultimately, to all employees. These changes are possible. In this document, USGS URGE participants have combined knowledge gained through the facilitated URGE program with their own knowledge and experiences with USGS policies and practices to lay out a detailed strategy and framework of recommendations for revising the ways in which this organization

1. Gathers and disseminates data regarding the demographic composition of the USGS,
2. Works and establishes relationships with communities of color,
3. Implements inclusive hiring and retention policies,
4. Creates and sustains a safe working environment for all employees, and
5. Institutes a clear pathway for complaints and reporting centered on supporting alleged victims.

Conclusion

Despite USGS leadership commitments to improving diversity over the past few years (Reilly, 2018), the past decade (Kimball, 2010), and even the past half century (Gillette, 1972), the USGS has remained far less racially diverse than the Nation and its civilian workforce. It is important to recognize in what ways the system is not optimized to increase diversity and where it may, in fact, erect obstacles for BIPOC and URM individuals (Berhe and others, 2022).

Changes recommended herein are supported by peer-reviewed literature curated for the 16-week URGE program curriculum. However, the topics for change and the implementation strategies are drawn from only a fraction of the relevant employee perspectives and represent only a single snapshot in time of how the USGS can respond to positively affect change moving forward; in fact, over the course of the preparation and internal review of this document, the USGS

has already made progress on some of the recommendations, which is a good start. The work is just beginning. Increasing the racial diversity of the USGS workforce and bringing change to the geoscience community to create a safer and more enjoyable working environment for all USGS employees will require a long-term sustained effort, enhanced vigilance, a commitment to incorporating wisdom from the lived experiences across the entire USGS, and accountability at all levels (for example, Bureau, Mission Areas, Regions, Centers, and work groups). The authors hope that this document and more detailed URGE pod deliverables ([appendix 1](#)) will encourage purposeful, inclusive action at all levels of the USGS. Only with collective action at all organizational levels can the USGS move toward fulfilling meaningful advances in diversity, equity, inclusion, accessibility, and ultimately, justice.

Acknowledgments

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Appendix 1. U.S. Geological Survey Unlearning Racism in Geoscience Pod Deliverables

Each U.S. Geological Survey (USGS) Unlearning Racism in Geoscience (URGE) pod developed a suite of deliverables throughout the URGE curriculum which were intended to be posted on the URGE website. Since these documents were not official USGS publications, some pods were unable to upload their deliverables whereas others added disclaimers to the documents so that they could be submitted. In the case of the USGS-St. Petersburg Coastal and Marine Science Center Pod, for example, the following disclaimer was included

on all deliverables: “Any opinions or recommendations are those of the URGE pod members only and do not necessarily represent the view of the USGS or the United States Government. Deliverables and any recommendations therein will be presented to USGS leadership for consideration.” Since not all ideas could be captured in this final, USGS-approved document, links to the websites that house the deliverables for each USGS URGE pod are available in [table 1.1](#).

Table 1.1. U.S. Geological Survey (USGS) Unlearning Racism in Geoscience (URGE) pods and links to informal deliverables.

[PSW, Peer Support Worker; SPCMSC, St. Petersburg Coastal and Marine Science Center]

USGS URGE pod name	Link to USGS URGE pod deliverables
Einstein	https://urgescience.org/pods/einstein-pod/
USGS-Hazards	https://urgescience.org/pods/usgs-hazards/
USGS-PSWs	https://urgescience.org/pods/usgs-psws/
USGS-SPCMSC	https://urgescience.org/pods/usgs-spcmsc/
USGS-Woods Hole	https://urgescience.org/pods/usgs-woods-hole/
Utah Water Science Center	https://urgescience.org/pods/utah-water-science-center-pod/



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