An official website of the United States government Here's how you know

The Environmental Justice Scorecard has been updated. Phase Two of the Environmental Justice Scorecard was released on July 24, 2024.

Download the data

Scorecard

Agencies

About

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U.S. National Science **Foundation**

1 office(s), 1 location(s), 1,418 employees, and 18 new hire(s) in Fiscal Year 2023

The U.S. National Science Foundation (NSF) is an independent federal agency that supports science and engineering in all 50 states and U.S. territories, spurring innovation anywhere and opportunity everywhere. NSF was established in 1950 by Congress to promote the progress of science; advance the national health, prosperity and welfare; and secure the national defense. NSF fulfills its mission chiefly by making

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Get Funding & Support

grants. NSF's investments account for about 25% of federal support to America's colleges and universities for basic research: research driven by curiosity and discovery. NSF also supports solutions-oriented research with the potential to produce advancements for the American people.

Find NOFOs, grants, and technical assistance

As part of NSF's mission, NSF fosters environmental justice broadly, and more specifically, through environmental compliance, relationship building, staff training, and knowledge building. Through broader impacts, NSF-funded research activities benefit many communities with environmental justice concerns.

Some examples of well-known NSF offices, bureaus, or agencies are:

 NSF Office of Legislative and Public Affairs

Progress on Advancing Environmental Justice

This section demonstrates key progress on advancing environmental justice at the U.S. National Science Foundation in Fiscal Year (FY) 2023, which is from October 2022 to September 2023.



Key Highlights (showless ^)

Advancing Environmental Justice Research and Training in the Geosciences

The Directorate for Geosciences awarded seven research projects in FY 2023 related to education, undergraduate training, and workforce development that contained an environmental justice component.



CIVIC
Accelerat
es
Transitio
n of
Emerging
Technolo
gies and
Ideas for
Addressin
g Climate
Challenge
s in
Communi
ties

Photo credit: Kannan Thiruvengadam

The Civic Innovation Challenge (CIVIC) program awarded \$19 million from NSF and its partner agencies to 19 pilot projects led by collaborations of

The ACTION (Alaska Coastal Cooperative for Coproducing Transformative Ideas and Opportunities in the North) Project

In FY 2023, through approximately \$9.5 million, the ACTION project supports process-based problem solving through community-driven science and education via partnerships among researchers and Tribal and Indigenous Arctic communities studying increasingly climate-driven coastal hazards and environmental change.

Learn more

researchers and local community partners. The pilots were focused on two research tracks: "Living in a Changing Climate" and "Resource and Service Equity," which focus on disadvantaged communities.

Sociocultural and Place-**Aware Civil and Environmental Engineering Scholars**

An approximately \$1.5 million project supports the retention and graduation of high-achieving, lowincome students with financial need by providing 24 full-time scholarships to students pursuing bachelor's degrees in civil and/or environmental engineering. This five-year project awarded in FY 2022 will develop engineers who have a holistic community and place-based perspective and drive the future civil and environmental engineering workforce to produce solutions that appropriately address justice and equity.



Development of NSF's Language Assistance Plan

NSF developed a Language
Assistance Plan (LAP) to assist in providing translation and interpretation services to limited English proficient individuals who participate in NSF-conducted programs, including on environmental justice.

NSF Program Complaints Discrimination Process

NSF updated the internal tracking portion of its program complaints system to include environmental justice as a characteristic of a discrimination complaint.

Justice40 Initiative

This section demonstrates progress on the implementation of the Justice 40 Initiative at the U.S. National Science Foundation in Fiscal Year (FY) 2023, which is from October 2022 to September 2023.

What is the Justice40 Initiative?

The Justice40 Initiative set

Overview

NSF's approach to resilience explicitly includes the concept of environmental justice, reaching and involving the most atrisk or vulnerable communities to play a lead role in their resilient future through community-driven engagement as agendasetters and active participants in resilience research. Disadvantaged communities will directly build, and benefit from, these NSF-funded activities.

For more information on NSF's Justice40 covered programs, please visit the NSF's website for the <u>Civic Innovation Challenge</u> (CIVIC), the <u>Coastlines and People Hubs for Research</u>

and Broadening Participation
(CoPE), and
Smart and Connected Communities
(S&CC).

For more information on NSF's Justice40 covered programs, please contact info@nsf.gov ✓

Justice40 Covered Programs (show less ^)

The U.S. National Science Foundation has:

• 3 Justice40 covered program(s)

the goal that 40 percent of the overall benefits of certain federal investments flow to disadvantaged communities that are marginalized by underinvestment and overburdened by pollution.

Progress on the Justice 40 Initiative

Through President Biden's <u>Investing</u> in <u>America</u> agenda and other sources, **NSF** has:

approximately

\$46 million

in funds available to obligate (i.e., to spend) in Fiscal Year (FY) 2023 through its Justice40 covered programs.¹

Initiative , **NSF** is working to deliver benefits to disadvantaged communities. Each program that is part of the Justice40 Initiative delivers benefits in at least one of seven investment categories , and many programs are delivering benefits to communities across multiple categories of investment. The **3** covered program(s) at **NSF** working to deliver benefits for communities include:

- 3 program(s) protecting communities from the impacts of climate change
- 2 program(s) advancing clean and affordable energy for communities

- 2 program(s) delivering and advancing clean transportation options for communities
- 1 program(s) advancing affordable and sustainable housing
- 2 program(s) delivering training and workforce development benefits
- 2 program(s) addressing the remediation and reduction of legacy pollution
- 2 program(s) delivering critical clean water and wastewater infrastructure benefits

Overall, agencies are making concrete, tangible improvements to benefit disadvantaged communities across America through the Justice40 Initiative. These investments are resulting in cleaner air and water, more affordable clean energy, goodpaying jobs, and other results that people are seeing and feeling today and into the future.

¹In the Phase Two Scorecard, the Justice40 Initiative section contains information about federal investments that Congress has funded through both discretionary and mandatory appropriations, as well as supplemental appropriations, such as those that Congress made in the Bipartisan Infrastructure Law (Pub. L. 117-58) and the Inflation Reduction Act (Pub. L. 117-169). The Phase Two Scorecard includes information on each agency's budget authority (that is, the total amount of funds that Congress has appropriated to the agency to spend on Justice40 covered programs) and the period of availability (that is, the period of time over which Congress has authorized the agency to spend the funds).

In some cases, agencies may not yet have the authority to spend the full amount indicated, such as when Congress has appropriated funds that will only become available in future Fiscal Years. Agencies provided the data presented here in spring 2024, and therefore the data does not reflect the annual appropriations for Fiscal Year 2024 that Congress made in March 2024.

Thus, the information that the Phase Two Scorecard presents in this section includes what the agency has available to spend in its Justice40 covered programs (i.e., its budget authority). These figures represent the total funding amount for all Justice40 covered programs, not only the portion that benefits disadvantaged communities.

Justice40 Covered Program Highlights (showless ^)

The U.S. National Science Foundation is delivering benefits, or is projected to deliver benefits, for disadvantaged communities through grants or awards made through its Justice40 covered programs, such as:

Strengthening Resilience of Ojibwe Nations Across **Generations (STRONG)**

In FY 2023, through the Smart and Connected Communities (S&CC) program, the STRONG project partners with Indigenous Peoples to synthesize traditional and scientific knowledge to advance innovations in resilience research and guide development plans by deploying state-of-the-art sensors to continuously measure water and ecosystems conditions.



Kickstarting A Youth-Centered Green Economy for the Disadvantaged Community of East Boston, Massachusetts

In FY 2023, through the Smart & Connected Communities (S&CC) program, the STRONG project creates a local, accessible green workforce development program for youth in East Boston, Massachusetts teaching biological and social science research skills, hands-on training in a zeroemissions greenhouse, and implementing green infrastructure solutions in their community to advance environmental justice.



Leveraging Existing Infrastructure to Identify and Manage Urban Environmental Hazards in Pittsburgh, Pennsylvania

In FY 2023, through the Smart & Connected Communities (S&CC) program, this project is developing and deploying sensors, which interpret vibrational signals from existing underground telecommunication fiber-optic cables to detect and pinpoint hazards such as sewer leaks and landslides in real-time across Pittsburgh, Pennsylvania.

Learn more

Funding Announcements (show less ^)

The U.S. National Science Foundation has:

- 2 funding announcement(s) covered under the Justice40 Initiative
- \$65,450,000 available through

 Justice40 covered program(s) funding
 announcements²

Smart & Connected Communities

The Smart & Connected Communities (S&CC) program encourages researchers to work with community stakeholders to identify and define challenges they are facing, enabling those challenges to motivate use-inspired research questions. The S&CC program supports integrative research that addresses fundamental technological and social science dimensions of smart and connected communities and pilots solutions together with communities.



Civic Innovation Challenge

The Civic Innovation Challenge (CIVIC) is a research and action competition that accelerates the transition to practice of foundational research and emerging technologies into communities through civic-engaged research. By addressing priorities at the local scale that are relevant across the United States, CIVIC is laying the foundation for a broader and more fluid exchange of research and technology capabilities and civic priorities through joint partnerships involving civic stakeholders and the research community.



²Further, this section also includes funding that was made available through an agency's Justice40 covered programs in FY 2023. The funding was made available through various

mechanisms, like grants, loans, agreements, contracts, notices of funding opportunity, and other funding announcements. These funding announcements were from Justice40 covered programs that were funded through discretionary and mandatory appropriations, as well as supplemental appropriations, such as those enacted under the Bipartisan Infrastructure Law (Pub. L. 117-58) and the Inflation Reduction Act (Pub. L. 117-169).

Covered Program Design or Modification (showless ^)

The U.S. National Science Foundation made program or design modifications to maximize benefits and/or remove barriers or constraints for disadvantaged communities, such as:

Civic Innovation Challenge: Track on Resource and Service Equity

The Civic Innovation Challenge (CIVIC) includes a new research track, under which FY 2023 awards were made, designed for projects bridging the gap between essential resources and services and community needs, including addressing environmental justice challenges.

Civic Innovation Challenge: Track on Living in a Changing Climate

The Civic Innovation Challenge (CIVIC) also includes a new research track, under which FY 2023 awards were made, designed to address predisaster action around adaptation, resilience, and mitigation, especially focusing on working directly with disadvantaged communities.

Smart & Connected Communities

The Smart & Connected
Communities program, which
removed proposal deadlines,
advances foundational research on
smart technologies addressing
climate and environmental
resilience, food and agriculture,
education and workforce
development, and many other
priorities areas relevant to
disadvantaged communities.

Justice40 In Action (show less ^)

The U.S. National Science Foundation is delivering benefits, or is projected to deliver benefits, for disadvantaged communities through the Justice40 Initiative, including:

Reimagining Urban Resilience and Education Hubs Using a Community-Engaged, Equity-Centered Approach in Central Florida

In FY 2023, through the Smart & Connected Communities program, the University of Central Florida is building and deploying an equity-centered, portable resilience hub, codesigned with its community partners, to provide pre- and post-disaster necessities and connectivity for disadvantaged communities in Central Florida. The solar-powered, modular hub also serves as a handson STEM education center during non-emergency times.

Learn more





NSF CIVIC: Smart Kids and Cool Seniors

Photo credit: Clint Andrews

A legacy of pollution and poverty challenges the abilities of disadvantaged communities to cope with heat stress and poor air quality. Through the **NSF Civic** Innovation Challenge (CIVIC) program, this project, in partnership with the community

Creating the West Virginia Flood Resilience Framework for Comprehensive Disaster Response and Long-Term

In FY 2023, through the Smart & Connected Communities program, in response to a devastating history of flooding, the project is collaborating with West Virginia's resiliency office, local governments, flood plain managers, and non-profits to create the West Virginia Flood Resilience Framework, an online toolkit with flood visualizations, tools, and exercises for building capacity in communities and local governments to better prepare for future floods.

Learn more



of Elizabeth, New Jersey, deploys an environmental sensor network that provides senior public housing communities with actionable data insights to enact change for the communities. It also provides **STEM** educational programming on environmental sensing to help youth gain employment skills.

Smart and Safe Prescribed Burning for Rangeland and Wildland Urban Interface Communities

In FY 2023, through the Smart & Connected Communities program, this project has developed community sensing, planning, and learning infrastructure using a novel data-driven burn condition and fire behavior model on a cloud-based platform, to support smart and safe prescribed burning for communities that use these practices. Prescribed burning is a powerful landmanagement tool, but it has significant safety and environmental concerns.

Environmental and Civil Rights Protection

Federal agencies are advancing environmental justice by carrying out their responsibilities under the law to identify and address disproportionate and adverse public health and environmental, climaterelated, and cumulative impacts on communities with environmental justice concerns. Agencies are working to ensure that all communities experience the protection of our country's bedrock environmental laws. The following information reflects some of the environmental and civil rights work at the U.S. National Science Foundation has done in Fiscal Year (FY) 2023, which is from October 2022 to September 2023.

National Environmental Policy Act (NEPA) and Environmental Justice (showless ^)

This section demonstrates progress on environmental protections, such as the National Environmental Policy Act, at the U.S. National Science Foundation in Fiscal Year (FY) 2023, which is from October 2022 to September 2023.

Existing policy documents include the Proposal and Award Policies & Procedures Guide

(PAPPG) and the Proposal and Award Manual. These policy documents describe

What is NEPA?

The
National
Environmental
Policy Act
(NEPA)
requires
federal
agencies to
consider
and disclose

need for compliance with federal environmental laws such as NEPA, which includes environmental justice considerations. Current instructions for NSF's

<u>environmental impact screening tool</u>

highlight areas of potential environmental justice concern (e.g., potential impacts on Tribes, children, and minorities).

Training

- 6 agency training(s) on how to consider environmental justice considerations during NEPA reviews
- 128 employees trained on how to consider environmental justice during NEPA reviews

For example, through formal training, NSF continues to highlight, especially to new staff, the importance of potential environmental impacts in areas related to environmental justice concerns.

Civil Rights and Environmental Justice (showless ^)

This section demonstrates progress on civil rights related to environmental justice, for example, the Americans with Disabilities Act, the Rehabilitation Act of 1973 or relevant laws other than Title VI of the Civil Rights Act at the U.S. National Science Foundation in Fiscal Year (FY) 2023, which is from October 2022 to

the environmental health and community impacts of certain decisions or actions before taking them.

September 2023.

During FY 2023, NSF proposed new language in its

<u>Proposal and Award Policies & Procedures</u> <u>Guide</u>

(PAPPG) regarding proposals that may impact Tribal resources and interests, taking effect in 2024. NSF issued

STEM Access for Persons with Disabilities and

Workplace Equity for Persons with Disabilities in STEM and STEM Education

. These initiatives advance civil rights protections for persons with disabilities, including those within communities with environmental justice concerns. NSF also provides reasonable accommodations. NSF developed a Language Assistance Plan to assist providing translation and interpretation services to limited English proficient individuals who participate in NSF conducted programs such as public involvement events, including on environmental justice. NSF updated the internal tracking portion of its program complaints system to include environmental justice as a characteristic of a discrimination complaint.

NSF can investigate Title VI environmental justice complaints and initiate Title VI environmental justice pre-award and post-award compliance reviews of awardee organizations.

Institutionalizing Environmental Justice

This section demonstrates progress to institutionalize environmental justice at the U.S. National Science Foundation including to implement

Executive Order 14008 and

Executive Order 14096, in Fiscal Year
(FY) 2023, which is from October 2022 to September 2023.

Overview

NSF continues to review and evaluate its policies, tools, and training to enhance awareness and knowledge of environmental justice issues. Through enhanced awareness, the agency is better poised to fulfill its mission and optimally serve its customers. All NSF proposals are reviewed according to two merit review criteria: Intellectual Merit and Broader Impacts. Broader Impacts are defined as the potential to benefit society and contribute to the achievement of specific, desired societal outcomes. Examples of desired outcomes include both inclusion and societal well-being, each of which dovetails with environmental justice. In addition, NSF staff routinely work to advance equity and outreach to communities with environmental justice

concerns and populations that have been underserved.

Training

- **6** agency training(s) for staff on environmental justice
- **128** employee(s) trained on environmental justice

For example, through formal and informal training, NSF continues to highlight, especially to new staff, the importance of potential environmental impacts in areas related to environmental justice concerns.

Advancing Environmental Justice Policy (showless ^)

 Has issued or updated policy, guidance, or directives related to environmental justice (internal or external) Dear Colleague Letter on CO2 Removal and Solar Radiation Modification Strategies: Science, Governance, and Consequences

NSF encouraged proposal submissions on fundamental understanding and assessment of environmental processes, and/or social, cultural, and ethical impacts of CO2 removal and solar radiation modification strategies, including environmental justice issues.

Dear Colleague Letter on Updates to the Navigating the New Arctic Program

NSF issued updates to the Navigating the New Arctic Program that highlighted the importance of empowering local and Tribal voices in Arctic research and new ways of knowing through meaningful Arctic community engagement.



- Has assesed barriers and obstacles related to regulations, policies, or practices, including historical inequities
- For more information on how the U.S. National Science Foundation has removed barriers for communities with environmental justice concerns, please visit https://nsf-govresources.nsf.gov/files/nsf24_1.pdf? VersionId=1kJf1ldESF8i4HjouuJ7Q6A0oJD3ClK3
- Over the past four years is working to create an Environmental Justice Strategic Plan pursuant to **Executive Order 14096**

Advancing Environmental Justice Tools or Resources

(show less ^)

 4 tool(s) or resources that advance environmental justice, including access to health, environmental or other impacts, such as:

Organization Environmental Impacts Checklist

NSF's data collection and screening tool includes environmental justice areas of concern to help inform of potential impacts from proposed activities as part of the agency decisionmaking process.

Interagency Arctic Research Policy Committee Website on Planned Research Vessel Movements through Alaska and Arctic Waters

NSF contributed to the development of a public-facing website of research expeditions (dates, planned routes, research goals, mooring locations) to enhance communication and coordinate activities with local communities and Tribes.

Learn more



Website on Arctic Community Engagement

NSF maintains a website with information on Arctic programs, initiatives, external collaborations, and other resources to facilitate sustained effective and respectful engagement with local, Tribal, and Indigenous Peoples.



Interagency Collaboration (show less ^)

NSF participates in the National Science and Technology Council's Environmental Justice Subcommittee, launched in 2023 by President Biden's executive order on environmental justice. The purpose of the Environmental Justice Subcommittee is to address the need for a coordinated federal strategy to identify and address gaps in science, data, and research related to environmental justice.

NSF staff are actively working to design interagency guidelines on environmental justice applications to federal activity regarding data and research collection, access, and stewardship.

NSF participates in meetings to learn and become informed about environmental justice related activities, including opportunities to improve agency practices. Additionally, NSF participates in federal interagency activities focused on environmental justice related to the geosciences.

The U.S. National Science Foundation worked side-by-side with other federal agencies to advance a whole of government approach to environmental justice, including:

Ocean Climate Action Plan

Through its participation on the Ocean Policy Committee, NSF played a key role in developing the Ocean Climate Action Plan (OCAP), which was released in March 2023. During implementation of OCAP, agencies will incorporate environmental justice principles, reaffirming the importance of minimizing impacts of ocean climate action to communities already facing disproportionate burdens.



Chairing the Interagency Arctic Research Policy Committee

The Director of NSF serves as
Interagency Arctic Research Policy
Committee (IARPC) Chair,
supporting IARPC's five-year Arctic
Research Plan (2022-2026), which
includes principles to respect
Indigenous Knowledge and
culture as well as to build and
sustain relationships with state,
local, and Tribal authorities,
research institutions, and
nonprofit, private sector, and
international organizations.

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