>>> **NEWSLETTER** <<<

NASA Equity & Environmental Justice

# EEJ NEWS

IMAGE CREDIT: NASA DEVELOP
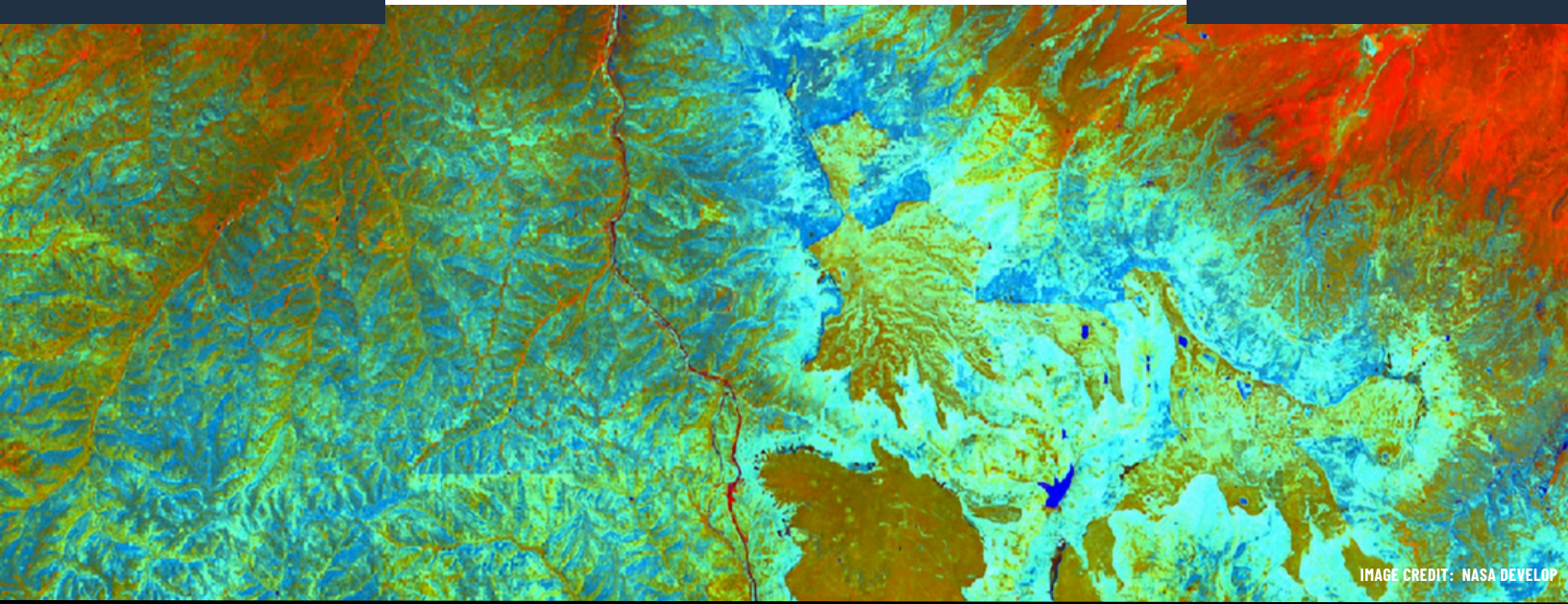
>>> **ANNOUNCEMENTS** <<<

NASA, EPA Tackle NO2 Air Pollution in Overburdened Communities

For the first time, NASA data about nitrogen dioxide (NO2), a harmful air pollutant, is available in the Environmental Protection Agency's (EPA) widely used Environmental Justice Screening and Mapping Tool (EJScreen). This update marks a crucial step in addressing air quality disparities in overburdened communities across the United States.

Previously, EJScreen included data on ozone, fine particulate matter, and various other environmental hazards. But it lacked information on NO2, which has been linked to respiratory issues such as asthma, especially in children.

NASA uses a variety of instruments on satellites, aircraft, and ground stations to continually gather data on key air pollutants. Scientists supported by NASA and other researchers monitor the origins, levels, and atmospheric movement of these pollutants. Their research offers crucial Earth-observation data that can guide air quality standards, shape public policies, and inform government regulations, ultimately aiming to enhance economic and human welfare. **Read more HERE.**
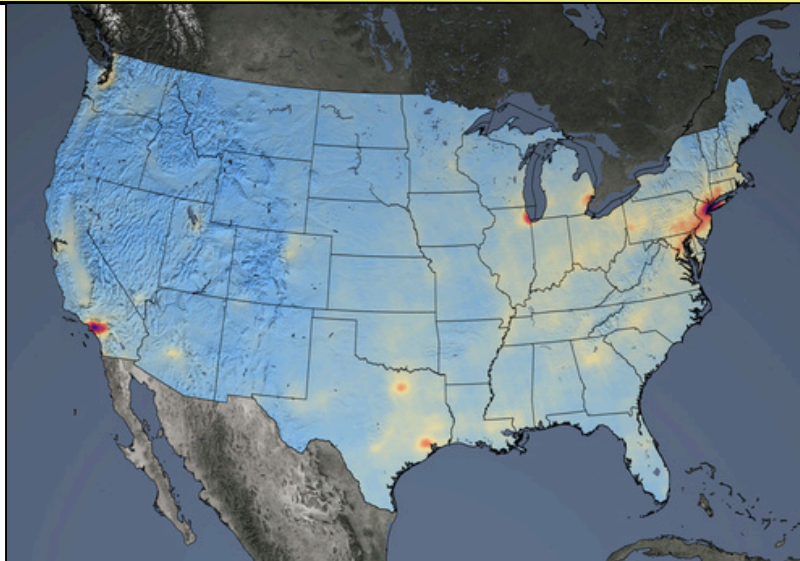
Biden-Harris Administration, NOAA issues National Heat Strategy, provides $200K for extreme heat preparedness

The Department of Commerce and NOAA announced $200,000 in funding to support extreme heat preparedness and response planning as part of the Biden-Harris Administration's Inflation Reduction Act. This funding is supporting communities at a critical time — 2023 was the hottest year on record globally, and July 22, 2024, was Earth's hottest day on record. **Read more HERE.**

NASA Equity & Environmental Justice (EEJ) Webinar Series - EEJ Implications of Wildfires
Tuesday, August 20
2:00-3:00pm ET
Register HERE!

NASA Data Shows July 22 Was Earth's Hottest Day on Record

July 22, 2024, was the hottest day on record, according to a NASA analysis of global daily temperature data. July 21 and 23 of this year also exceeded the previous daily record, set in July 2023. These record-breaking temperatures are part of a long-term warming trend driven by human activities, primarily the emission of greenhouse gases. As part of its mission to expand our understanding of Earth, NASA collects critical long-term observations of our changing planet.

This preliminary finding comes from data analyses from Modern-Era Retrospective analysis for Research and Applications, Version 2 (MERRA-2) and Goddard Earth Observing System Forward Processing (GEOS-FP) systems, which combine millions of global observations from instruments on land, sea, air, and satellites using atmospheric models. GEOS-FP provides rapid, near-real time weather data, while the MERRA-2 climate reanalysis takes longer but ensures the use of best quality observations. These models are run by the Global Modeling and Assimilation Office (GMAO) at NASA's Goddard Space Flight Center in Greenbelt, Maryland.

Daily global average temperature values from MERRA-2 for the years 1980-2022 are shown in white, values for the year 2023 are shown in pink, and values from 2024 through June are shown in red. Daily global temperature values from July 1 to 23, 2024, from GEOS-FP are shown in purple. The results agree with an independent analysis from the European Union's Copernicus Earth Observation Programme. While the analyses have small differences, they show broad agreement in the change in temperature over time and hottest days.

Read more HERE.

NATIONAL TRIBAL & INDIGENOUS CLIMATE CONFERENCE
Dates: September 9-12, 2024, Anchorage, Alaska

The Institute for Tribal Environmental Professionals (ITEP) is pleased and excited to convene the third Biennial National Tribal and Indigenous Climate Conference (NTICC). The theme for this year is Shared Responsibility for Indigenous Climate Resilience.

This event will convene relatives, partners, and colleagues from across Mother Earth to share their knowledge about their efforts to address the climate impacts on their communities, natural environment, and non-human relatives. This includes the sharing and honoring of Traditional and Indigenous Knowledges while ensuring that these knowledges belong to the Indigenous communities and people from where and who they came from.

As they have done in previous years, they welcome all who are interested in participating or attending to listen, learn, and share the important work being done.

Learn more and register HERE.

2024 National Tribal and Indigenous Climate Conference (NTICC)
September 9-12, 2024
Anchorage, Alaska

Registration is Open!

Registration Fees:
$250 in-person / $50 virtual
Deadlines:
In-person: August 19th
Virtual: September 6th

# 2024 SACNAS NATIONAL DIVERSITY IN STEM (NDISTEM) CONFERENCE
Dates: October 31 - November 2, 2024, Phoenix, AZ

The largest multidisciplinary and multicultural STEM diversity event in the country, SACNAS' premier conference is a gathering which serves to equip, empower, and energize participants for their academic and professional paths in STEM.

Over the course of the event, college-level through professional attendees are immersed in cutting-edge STEM research, professional development sessions, motivational keynote speakers, and the Graduate School & Career Expo Hall, as well as multicultural celebrations and traditions, and an inclusive and welcoming community of peers, mentors, and role models.

Simply put, the NDiSTEM Conference is a broadly inclusive space where you are encouraged and empowered to bring your whole self to STEM.

Learn more and register HERE.
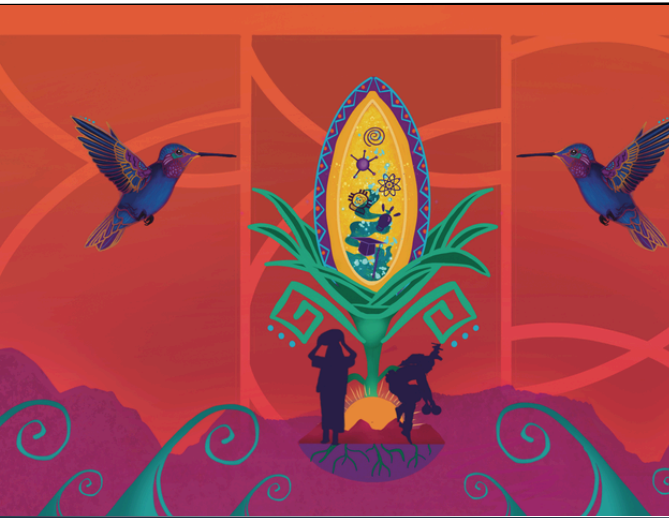
PROJECT HIGHLIGHTS

Designing for Just Green Enough: A Data Integration Tool for Informing Community Green Space Planning
Team: Dr. Michelle Stuhlmacher (DePaul University), Dr. Winifred Curran (DePaul University), Dr. Marynia Kolak (University of Illinois, Urbana Champaign), Dajoin Williams (DePaul University), Christopher Impellizeri (DePaul University), Aisha Syed (University of Illinois, Urbana Champaign), Sparsh Singh (University of Illinois, Urbana Champaign), Dr. Christian Braneon (CUNY Institute for Demographic Research)

This project expands the functionality of ChiVes, a Chicago-based, multi-institution open-source geospatial dashboard (https://chichives.com/). ChiVes integrates neighborhood-level information from Earth Observation (EO) data, environmental indicators, and socioeconomic factors to support green space planning and related decision-making processes in Pilsen, an environmental justice community. The project has four objectives: 1) Identify, construct, and integrate data products needed for community participatory processes. 2) Integrate and maintain EO, environmental, and socioeconomic indicators in an interactive web-based geospatial platform. 3) Add functionality to ChiVes that allows users to dynamically create customized indices. 4) Train residents on the tool and build capacity for ongoing use. Learn more HERE.
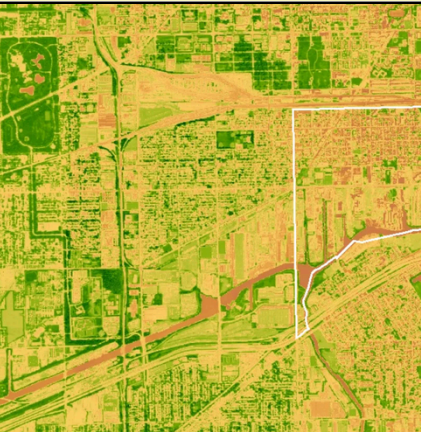
## Spatial decision support for fire management in Indigenous cultural and stewardship practices
Team: Megan Jennings (SDSU), Doug Stow (SDSU), Amber Pairis (CSA), Matthew Twyman (SDSU), Krista West (SDSU), Diane Foote (SDSU), Althea Walker (CSA), Mary Jane Andreas (CSA)

The Spatial Decision Support for Fire Management in Indigenous Cultural and Stewardship Practices project has been designed to provide support to Indigenous communities through the integration of data on fire potential, community vulnerability, shifting fire regimes, and landscape condition to complement Traditional Ecological Knowledge (TEK). This collaborative research partnership with Indigenous communities leverages data and deliverables from previous and ongoing work on climate-readiness, adaptation, and climate resilience initiatives in southern California. Learn more HERE.
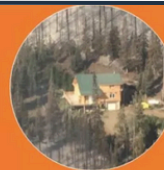
Community Preparedness
• Home hardening
• Fuel treatments
• Emergency management planning
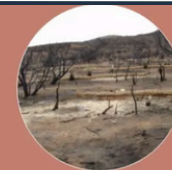
Post-fire Management
• Protection of water resources
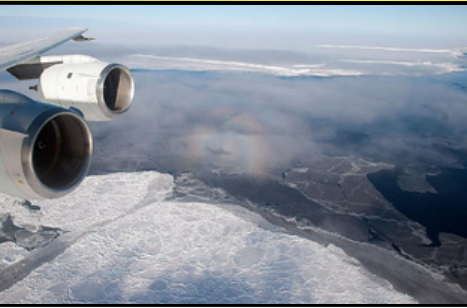• Erosion control
• Restoration of important habitats and species

Cultural Burning
• Promote growth of food, fiber, medicine
• Cultural practice
• Support community

NEPA/CEQA analysis; Grant applications; Climate adaptation plans; Other planning documents

A.16 CRYOSPHERIC SCIENCE

The Cryospheric Sciences Program supports investigations of polar ice, including the Antarctic and Greenland ice sheets, polar glaciers, and sea ice in the Arctic and Southern Oceans, that are based on satellite and airborne remote sensing. The program seeks to improve our understanding of cryospheric processes, link the cryosphere to the global climate system, and/or advance predictive capabilities. This opportunity seeks proposals that enhance our capabilities of remote sensing of the cryosphere. **Proposals are due by October 16, 2024 . Learn more HERE.**

A.24 WEATHER & ATMOSPHERIC DYNAMICS

The Weather and Atmospheric Dynamics Focus Area (WADFA, https://science.nasa.gov/earth-science/focus-areas/earth-weather) supports research to obtain accurate measurements of the atmosphere that help improve the understanding and prediction of weather at local, regional, and global scales. Weather includes meteorological phenomena ranging from localized microphysical processes that occur in minutes, to global-scale phenomena that can last an entire season.

This ROSES element solicits proposals for participation in the North American Upstream Feature-Resolving and Tropopause Uncertainty Reconnaissance Experiment (NURTURE). The scientific targets of NURTURE are described in the white paper under "Other documents" on the NSPIRES page for this program element.

Proposals are due November 8, 2024. Learn more HERE.
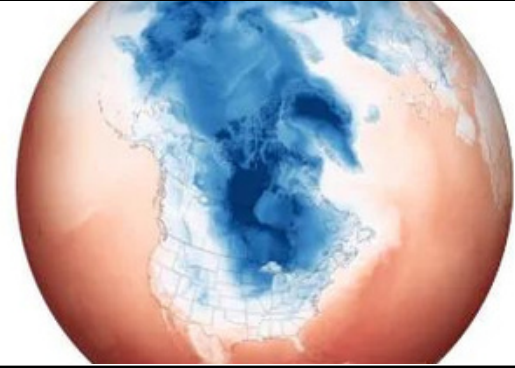
SABRINA DELGADO ARIAS

Sabrina Delgado Arias is a research scientist specializing in Earth science applications for decision-making. She has been at NASA Goddard since 2013 and an employee of Science Systems and Applications, Inc. since 2014.

Within NASA, she has created, developed, and maintained relationships nationally and internationally to identify how NASA data can support decision-making processes and varied applications benefitting society.

Sabrina is currently the applications liaison for the Ecological Conservation Program, and associate program manager for the NASA Equity and Environmental Justice Program. Before this, she was the mission applications lead for the ICESat-2 mission.

Sabrina earned a master's degree in Science and Technology Policy from the Consortium for Science, Policy & Outcomes at Arizona State University.

CLIMATE WEEK NYC

September 22-29, 2024 | New York, NY

Climate Week NYC is the largest annual climate event of its kind, bringing together over 600 events and activities across the City of New York – in person, hybrid and online. Each year, business leaders, political change makers, local decision takers and civil society representatives of all ages and backgrounds, from all over the world, gather to drive the transition, speed up progress, and champion change that is already happening.

Climate Week NYC is hosted by Climate Group, an international non-profit whose purpose is to drive climate action, fast. Climate Group hosts the official program during the week that brings together the most senior international figures from business, government, civil society and the climate sector.

This year, Climate Week NYC is being held from September 22-29, 2024. The event takes place every year in partnership with the United Nations General Assembly and is run in coordination with the United Nations and the City of New York.

Learn more and register for events HERE.

Resilient Nation Partnership Network (RNPN) – 2024 Partnership Forum
Stories of Resilience: Voices That Inspire

The Partnership Forum is hosted by FEMA and a different partner organization each year. During this event, they discuss topics across resilience and mitigation. By convening experts who represent all facets of the Whole Community, the Forum is a chance to discuss some of the most complex challenges facing our nation; share lessons learned, best practices and personal stories; and work together on innovative ideas to advance natural hazard resilience.

The Resilient Nation Partnership Network (RNPN) represents a diverse network of voices united in their commitment to help communities act and become more resilient toward natural disasters and climate-related events. What started as a handful of like-minded individuals has flourished to over 1,600 organizations represented.

Watch the Forum recordings and learn more HERE.

BIDEN-HARRIS ADMINISTRATION DELIVERS ENVIRONMENTAL JUSTICE WITH CLEANER AIR, CLEAN WATER, AND HEALTHIER COMMUNITIES

On July 24, 2024, at the first-ever White House Summit on Environmental Justice in Action, the Biden-Harris Administration released detailed progress reports from 24 federal agencies showcasing how the President is delivering for communities that have faced longstanding environmental injustices and inequities.

The second annual Environmental Justice Scorecard describes the impacts and benefits of more than $600 billion in federal investments that President Biden has secured over Fiscal Years 2022-2027, including through his Investing in America agenda, for programs that are part of the Justice40 Initiative. The goal of the President's Justice40 Initiative is to deliver 40 percent of the overall benefits of certain federal investments to disadvantaged communities that are marginalized by underinvestment and overburdened by pollution. Learn more HERE, and watch the recording HERE.

The Equity and Environmental Justice Program (EEJ)

The EEJ program aims to advance progress on equity and environmental justice. One part of this effort is to help build the community of practice around the application of Earth science information to inform action in EJ communities by monitoring and measuring environmental factors. This newsletter is one of the program's strategic communication efforts for engaging those working in the space. It will continue to evolve, so please share your thoughts for what information is useful to you!

Learn more about the EEJ Program and access our previous newsletters by visiting our website HERE.

CONTACT US:

Contact us with "EEJ newsletter" in the subject line with any comments, questions, or feedback!

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