Climate Change Response Newsletter

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Climate Change Response Program
National Park Service
U.S. Department of the Interior

UNDERSTAND | ADAPT | MITIGATE | COMMUNICATE

$195 MILLION FOR CLIMATE RESTORATION AND RESILIENCE PROJECTS ACROSS THE NATIONAL PARK SYSTEM

The Department of the Interior recently announced a $195 million investment toward climate restoration and resilience projects over the next decade. National parks across the United States will use this funding to prepare for the impacts of climate change, protect species, restore ecosystems, and invest in conservation jobs. The full list of projects includes:

- Promote climate resilience in forests from the West coast to the East coast;
- Prevent the extinction of Hawaiian forest birds using innovative technology to suppress the population of non-native mosquitoes in key habitats of East Maui;
- Strategically manage abandoned mine lands, such as in **Mojave National Preserve**, to improve visitor and wildlife safety;
- Prioritize coral health and resilience to climate change in the Southeast region;
- Mitigate the impacts of climate change and improve food security for subsistence users through co-stewardship arrangements with Tribal Nations; and
- Support the expansion of the Community Volunteer Ambassador youth program, focusing on increased volunteerism and community engagement.

The National Park Service (NPS) Climate Change Response Strategy provides a servicewide blueprint for meeting the challenge of climate change. This monthly newsletter captures notable developments, publications, and successes to inform and inspire similar action across the National Park System and beyond.

This newsletter is published by the NPS Climate Change Response Program. If you experience any difficulty accessing the information in this newsletter, please contact us at:
climate_change@nps.gov

Above: As warming temperatures invite non-native mosquitoes to higher elevations, native Hawaiian forest birds—like the kiwikiu—are threatened by the spread of avian malaria. New funding supports the use of innovative technology to suppress mosquito populations in key habitats of East Maui. Image by Zach Pezzillo, Maui Forest Bird Recovery Project (used under creative commons)

NEW PUBLICATIONS

A pair of recently published reports describe methods and share outputs from a scenario-based climate change vulnerability assessment and adaptation strategy development process focused on **Wrangell-St. Elias National Park and Preserve**. The highly participatory process involved numerous organizations and focused on a broad suite of natural and cultural resources, as well as on subsistence harvest, infrastructure, and access. The scope and complexity of the effort was unique, but innovations from this process are already being applied elsewhere.

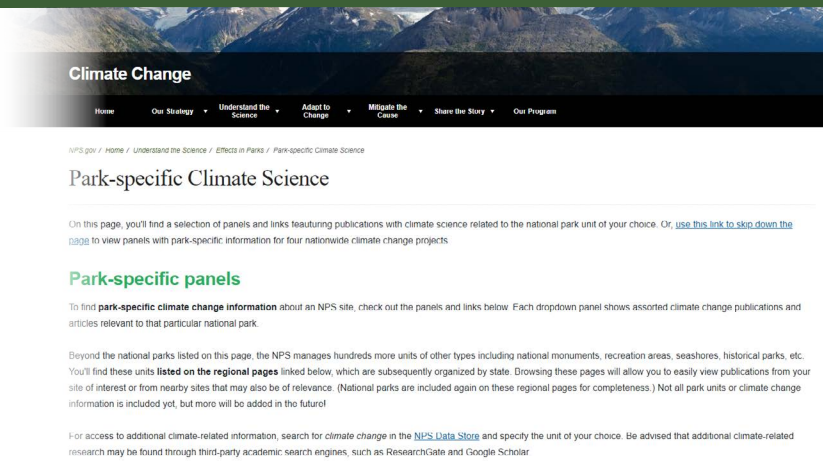
Right: Wrangell-St. Elias National Park and Preserve. NPS Photo.

The recently published report Historical and Projected Climate Change for Grand Canyon National Park and Surrounding Areas details how temperature has risen dramatically since 1970. This warming already affects soil moisture, river flows, wildfire activity, and forest health, and discussed what impacts climate change might bring in the future. This report helps prepare park managers for additional impacts and think proactively about how to adapt to anticipated changes.

Left: Grand Canyon National Park. NPS Photo.

Interested in finding similar climate-related science for your unit? The climate change subject site on NPS.gov can help. The park-specific climate science page provides easy access to a curated collection of resources for nearly every unit of the National Park System. Collections are searchable by unit name and region.

Additional climate-related information can be found by searching the NPS Data Store and third-party academic search engines, such as ResearchGate and Google Scholar.



LAKE SUPERIOR PARKS WORK TOWARD NET-ZERO

In early 2023, the **national parks of Lake Superior** unveiled a comprehensive plan to reduce carbon emissions through net-zero strategies. Decarbonization efforts are already underway across all five parks thanks to support from the National Parks of Lake Superior Foundation (NPLSF). "Lake Superior's five national parks are proud to be early movers in achieving the National Park Service's Green Parks Plan goals, thanks to our exciting collaboration with NPLSF and others," said Isle Royale National Park Superintendent Denice Swanke.

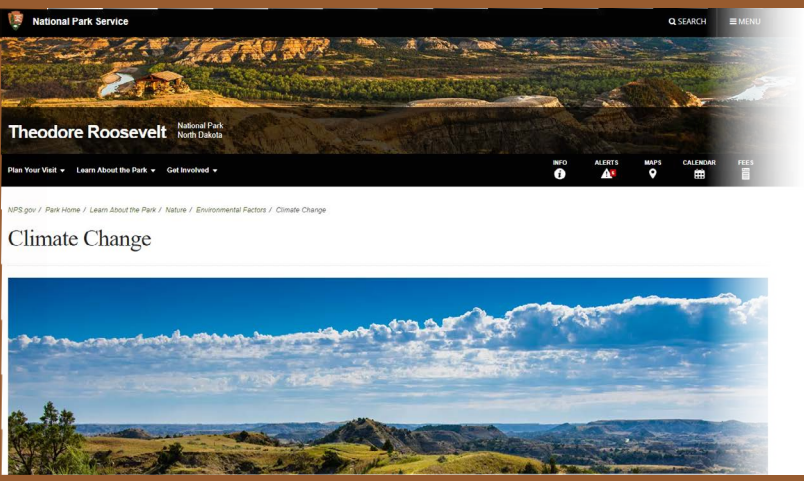
Left: Pictured Rocks National Lakeshore. NPS Photo.

UPCOMING EARTH TO SKY ACADEMY

The Earth to Sky Academy trains teams of regional leaders to conduct subsequent climate communication courses for interpreters, educators, and other target audiences. Academies are typically offered annually through a partnership between NASA, NPS, and FWS.

The next Academy will be held November 18–22, 2024. Experienced interpreters, informal educators, and science communication leader with a strong commitment to place-based climate communications are encouraged to apply by May 24.

Right: Earth to Sky attendees at the NASA Goddard Space Flight Center. NASA Photo.



More than one-third of NPS units currently use their websites to interpret the site-specific relevance of climate change. This month, we're tipping our cap to our colleagues at **Theodore Roosevelt National Park** who recently published this excellent page exploring the implications of climate change on the landscapes of North Dakota. The park joins a steadily growing list of units with dedicated climate change web pages.

CLIMATE-RELATED ARTICLES OF INTEREST

A recent study by Wilkins et al. found tourism to **Yellowstone National Park** produces an estimated 1.03 megaton (1.03 billion kg) of CO2-equivalent emissions annually, with an average of 479 kg CO2 per visitor. Almost 90% of these emissions were attributable to transit to and from the destination, while 5% were from transit within the park, 4% from overnight accommodations, and about 1% from other park operations.

Study results from Chiquoine et al. provide insight into the feasibility of maintaining perennial grasslands in the face of climate change at **Guadalupe Mountains National Park**.

A new paper by Bustos et al. chronicles incredible paleontological discoveries made at **White Sands National Park**, and urgent efforts to document information before these resources disappear due to persistent, climate-driven drought.

An article published by Reynolds et al. recounts the history and evolution of climate change scenario planning in the NPS as an important tool for addressing uncertainties in planning processes.

Right: Cars pile up along the road near Tower Ranger Station at Yellowstone National Park. NPS photo.

NEW CLIMATE CHANGE LEADS

Dr. Koren Nydick joined the NPS Climate Change Response Program in early April as the Climate Change Science and Adaptation Coordinator. She comes from Rocky Mountain National Park where she led the Resource Stewardship Division, including natural and cultural resource programs, fire and fuels management, planning and compliance, and the Continental Divide Research Learning Center. Prior to joining Rocky Mountain, Koren served as the Science Coordinator at Sequoia & Kings Canyon National Parks, Executive Director of the non-profit Mountain Studies Institute, postdoctoral associate at Utah State University, PhD student at Colorado State University, and public school teacher in New Mexico. Along the way, she led and participated in a variety of climate change science and adaptation initiatives and partnerships. Koren and her husband have two children, live in Estes Park, CO and are active in many outdoor activities.

Jenny Parker recently moved to the position of Program Manager for the NPS Cultural Resources Climate Change and Appeals Program. Jenny has 17 years of prior experience with the NPS, where she developed guidance related to the Secretary of the Interior's Standards like the Guidelines on Flood Adaptation for Rehabilitating Historic Buildings. She also reviewed applications for the Federal Historic Preservation Tax Credit Program. In her new role, Jenny is coordinating and leading projects to develop resources and guidance related to the stewardship of cultural resources with vulnerabilities to climate change.

Monique LaFrance Bartley recently moved to the position of Coastal Geomorphologist within the NPS Water Resources Division (WRD). Monique first joined WRD in 2019 as a Marine Ecologist, where her work explored physical processes impacting coastal and marine systems. Her new position allows Monique to expand on this work in collaboration with the Climate Change Response Program. Her primary role is to provide technical assistance that advances park and resource stewardship for coastal, ocean, and Great Lakes NPS units. Monique strives to work across disciplines to bring a more holistic perspective to addressing complex coastal management needs.

GOT CLIMATE-RELATED NEWS?

Do you have a climate-related project, publication, or update you'd like to share? Email your suggestions to climate_change@nps.gov.

Submissions received by the 15th of each month may be published the following month, or held for future newsletters as necessary to meet our editorial calendar. Submissions may be edited to meet length requirements or adhere to editorial style.

This newsletter is distributed primarily—but not exclusively—to employees, volunteers, and partners of the National Park Service.