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## WARMING TEMPERATURES YIELD A SURPRISING FIND ALONG THE SOUTHEASTERN COAST

National Park Service (NPS) coastal ecologist Ches Vervaeke recently made a surprising discovery—a handful of [black and red mangrove trees](#) thriving around **Cumberland Island National Seashore** in southeastern Georgia.

“Mangrove” is a collective term applied to several botanically distinct tree species that share a tolerance for coastal habitats, saline waters, and warm, tropical climates. As such, they are historically associated with the shores of south Florida.

But over the past two decades, rising temperatures have fueled an explosive growth of mangroves along the eastern fringe of the Sunshine State, leading experts to wonder when—not if—the “walking trees” would finally make their way to the Peach State.

The natural expansion of mangroves in response to unnatural climatic conditions muddies the waters between unwanted invasion and understandable inevitability. And while mangroves are prized in Florida for their ecologic function, it remains to be seen how they might transform the salt marshes of their new northerly frontier.

Long-term monitoring holds the key to understanding the ramifications of Georgia’s newest coastal dwellers. If the passage of time reveals a net benefit to shoreline habitat, we may find ourselves a bit less “salty” about their arrival. —*Larry Perez, NPS Climate Change Response Program*

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](mailto:climate_change@nps.gov)

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Above: The red mangrove—like this one found in Everglades National Park—has greatly expanded its range along the Atlantic coast due to a sharp decline in the frequency of freezing temperatures. NPS Image.

# PARK-SPECIFIC CLIMATE FUTURES SUMMARIES

## THE REPORT SERIES

The NPS Climate Change Response Program recently developed [a series of park-specific climate futures summaries](#) (NPS network/VPN access required) for all NPS units in the conterminous United States. These summaries describe both observed climate changes and plausible climate futures that help inform park responses to climate change. The reports help managers navigate uncertainty and promote short- and long-term actions that avoid potential surprises and costly mistakes.

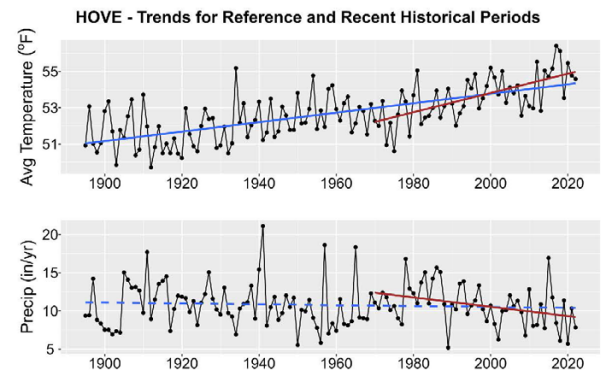


## LEARN MORE & ASK QUESTIONS

Although currently accessible only to NPS employees, the entire series *will be published publicly on Friday, July 12*. In preparation, report authors will provide NPS employees an orientation to the contents and utility of the climate futures summaries during a one-hour webinar to be held at 1:00 PM MT on July 10, 2024. [Advance registration](#) is required.

In addition, report authors and subject matter experts will host a series of open Q&A sessions to answer additional questions regarding the climate futures summaries. Interested individuals are encouraged to attend one or more sessions to learn how parks can leverage climate futures in management efforts. Sessions will be held on:

- Q&A Session: Tuesday, July 23, 11 AM MT ([Register Here](#))
- Q&A Session: Thursday, August 1, 1 PM MT ([Register Here](#))
- Q&A Session: August 14, 1PM MT ([Register Here](#))



Each climate futures summary includes an overview of historical trends in annual average temperature and total annual precipitation, such as this figure from the Hovenweep National Monument report. The upcoming webinar and Q&A sessions provide opportunities to become familiar with the interpretation and applications of similar findings for your park.

## HISTORY & HOPE TOOLKIT

NPS interpreters and communicators help audiences form deep personal connections with our nation's most treasured places. Often, these connections offer new perspectives on critical issues in our world—including climate change. And all units of the National Park System have a climate story to tell.

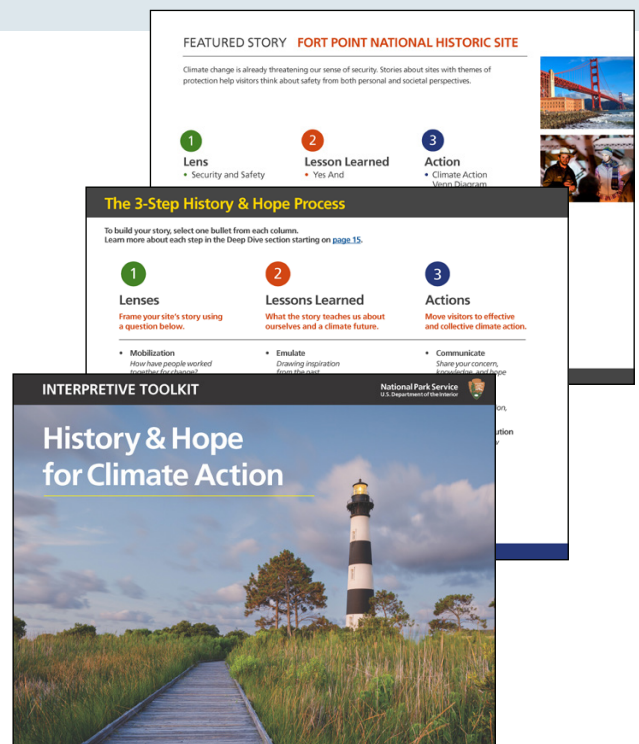
*History & Hope for Climate Action: An Interpretive Toolkit* provides a process by which heritage interpreters can discover and develop site-relevant, people-centered stories that effectively engage audiences on climate change.

On July 24, the creators of *History and Hope* will deliver a one-hour introduction to the new toolkit on July 24. Presenters will provide an overview of the 3-step storytelling process and introduce real-world examples from across the NPS:

**Expanding Climate Narratives via Storytelling:  
A New NPS Climate Change Interpretive Toolkit**

Wednesday, July 24, 12 PM MT

[\(Register Here\)](#)



## MORE CLIMATE-RELATED NEWS OF INTEREST

The **Department of the Interior** recently released [an updated Climate Action Plan](#) to guide our efforts to prepare for and adapt to climate change in the coming years.

Rivers in **Arctic Alaska** are abruptly turning bright orange. [This recent paper](#) from O'Donnell et al. in the journal *Nature* helps explain the climate change link.

Around the world, lakes are generally experiencing shorter durations of ice cover due to climate change. But [a recent study from Tronstad et al.](#) provides insight into why Yellowstone Lake in **Yellowstone National Park** is—so far—bucking the trend.

What do 9 years, 26 oak trees, and hundreds of visual observations tell us about climate change at **Grand Canyon National Park**? We'll let [Gearries, Pilkington, and Kilby](#) explain.

For threatened parks like **Timucuan Ecological and Historic Preserve**, **Fort Matanzas National Monument**, and **Cumberland Island National Seashore**, oysters hold [a special value beyond just pearls](#).

*Right: A tributary of the Kugororuk River runs bright orange. USGS Photo by Josh Koch.*



## CLIMATE CHANGE ON THE WEB



More than one-third of NPS units currently interpret the site-specific relevance of climate change [on their respective websites](#). This month, two more units join [our steadily growing list](#) of those with a dedicated climate change web page.

The team at **Niobrara National Scenic River** recently published [this page](#) deftly exploring climate change through the long lens of local stewardship. And the team at **Hampton National Historic Site** recently published [a suite of pages](#) leading visitors from global to local climate change concerns.



## GOT CLIMATE NEWS?

Do you have a climate-related project, publication, or update you'd like to share? Email your suggestions to [climate\\_change@nps.gov](mailto: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.

