



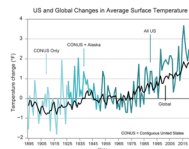
# State of the Services FY 2024 Q1 Report October 2023 - December 2023

## Engagement Events Highlights

### 5th National Climate Assessment Release

National | November 14

- The 5th National Climate Assessment (NCA5) for the U.S. was released November 14. This report is mandated by the U.S. Congress and represents a tremendous coordination effort across the entire country.
- NCEI's Technical Support Unit manages the coordination and production of the NCA5. Additionally, numerous staff served as chapter authors and editors for the assessment.



### Roger F. Wicker Center for Ocean Enterprise

Port of Gulfport, MS | October 13

- NCEI leadership were on hand for the official opening of the Roger F. Wicker Center for Ocean Enterprise at the Port of Gulfport, MS. U.S. Senator Wicker spoke at the ribbon-cutting ceremony, and was joined by U.S. Senator Cindy Hyde-Smith, Governor Tate Reeves, and other dignitaries.
- The facility will provide space for training, offices, laboratories, workshops, a command and control center focused on NOAA's uncrewed systems, and two new NOAA research vessels will be stationed at the Center during sea trials and acceptance.



## Product and Services Highlights



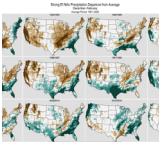
### Where the Water Meets the Land: A Coastal Digital Elevation Model Framework

NCEI released the *Where the Water Meets the Land: A Coastal Digital Elevation Model Framework* StoryMap. Floods are the most common weather-related disasters. Flooding occurs in every U.S. state and territory, but coastal areas are also vulnerable to rising sea levels, which increase the occurrence of coastal flooding and the severity of storm surge. By providing a global, seamless bathymetric and topographic mosaic, regional Coastal Relief Models, and continuously updated Digital Elevation Models, NCEI supports NOAA's mission to understand and predict changes in Earth's environment, and conserve and manage coastal and marine resources to meet our Nation's economic, social, and environmental needs.



### Coral Reef Monitoring

A Guide to Large-Area Imaging for Coral Reef Monitoring, Research and Restoration, was added to the Coral Reef Information System website to highlight two recent publications that were released by the National Centers for Coastal Ocean Science. Large-Area Imaging is a photogrammetric approach which combines thousands of individual, overlapping images together using specialized software to generate photo-realistic 3D representations of topographic surfaces, like the seafloor. This ability to navigate and interact with 3D models in a virtual reality environment promises users entirely new ways of observing and studying coral reefs.



### Historical El Niño Reference Web Tool Update

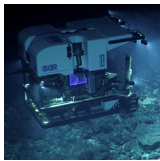
NCEI updated its Historical El Niño Reference web tool to include an up-to-date comparison of historically strong El Niño events and to make use of NCEI's El Niño-Southern Oscillation Normals dataset. Users can interrogate this tool to see how temperature and precipitation vary across the Lower 48 for 11 historical strong El Niño events.



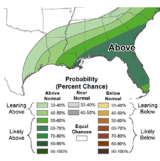
### Billion-Dollar Disasters in 2023

In 2023, the U.S. experienced a record 28 weather and climate events that have exceeded \$1 Billion, which represents the highest number of events experienced in any year since record-keeping began in 1980. The previous record was 22 events set in 2020. The majority of the 2023 events have been Severe Storms, with Drought, Wildfire, Flooding, Winter Storm, Tornado, and Tropical Cyclone events also impacting the U.S. The accumulated losses in 2023 exceeded \$92 Billion.

# Stakeholder Highlights



Stennis Day in the Bay was held on November 11, in Bay St. Louis, Mississippi. NCEI was one of many organizations participating in this event to showcase the great things that happen at Stennis Space Center, and a dedicated group of staff came out to support. NCEI joined with the Northern Gulf Institute to provide an activity with underwater robots that helped explain how the *Okeanos Explorer* uses the remotely operated vehicle (ROV), *Deep Discoverer*, to collect data from the deep ocean. Driving the model ROVs was a big hit with kids and adults alike.



NCEI collaborated with the Southern Regional Climate Center (SRCC) to respond to user needs for a comprehensive look at climate impacts and outlooks for the Gulf Coast region. Up until now, the quarterly reports divided the U.S. States bordering the Gulf of Mexico into two separate reports, with the SRCC covering Texas, Louisiana, and Mississippi, and the Southeastern Regional Climate Center (SERCC) covering Alabama and Florida. Constituents interested in understanding the Gulf-wide impacts and outlook were hard-pressed to assimilate the information from the two separate reports. Publishing a single, comprehensive Gulf-wide report meets these use needs. The new Gulf Coast Climate Impacts and Outlook is prepared by the SRCC with cooperation from the SERCC, and will be published quarterly.



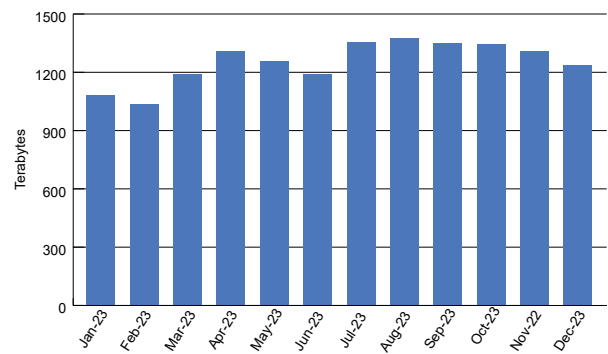
On October 26th, NCEI hosted members from the South Carolina State Climate Office, including the State Climatologist and the Assistant State Climatologist. Staff met with leadership and subject matter experts to share examples of activities within their office, their use of NCEI data and information, and data needs. Discussion topics included data, metadata, climate monitoring and drought, and various weather hazards. In addition to serving a wide variety of climate sensitive users throughout the state, the Office engages with constituents on the development of their hazard mitigation plans.

Upcoming Engagements	
2024 American Meteorological Society Annual Meeting: NCEI Town Hall	Feb. 1
Gulf of Mexico Conference 2024	Feb. 19-22
American Geophysical Union - Ocean Sciences Meeting: NCEI Town Hall	Feb. 21
21st Climate Prediction Applications Science Workshop	Mar. 26-29

# Customer Reach

## NCEI Makes Data Accessible

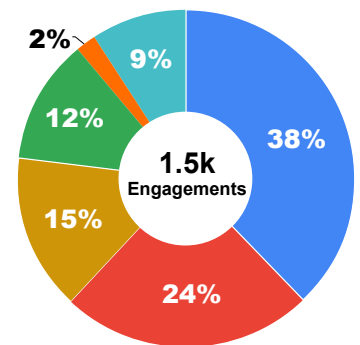
- 0.9 billion web hits and 3.8k TB of data delivered online\*



\*Analytics include model & satellite data; data statistics may not be comprehensive across NCEI (e.g. CLASS)

## U.S. Sectors Served

- Top Sectors
- Professional, Scientific, and Technical Services
- Other Services (except Public Administration)
- Educational Services
- Public Administration
- Finance and Insurance
- Others (Combined)



# Unique Customer Requests

## Tropical Cyclone Data for the U.S. Treasury

The U.S. Department of the Treasury reached out to NCEI about the use of the International Best Track Archive for Climate Stewardship (IBTrACS) in their data hub. The Department is developing the Joint Analytical Data Environment (or JADE) as a data hub for several financial regulators and will include IB-TrACS tropical cyclone data for their research and applications.

## Offshore Structures and Submarine Cables Study

A consultant from the Argonne National Laboratory's Energy Systems Division contacted NCEI to acquire Marine Geology data sets from the Index to Marine and Lacustrine Geological Samples database. He hopes to build a regional model of storm-induced particle motion in erosive settings around channels and sand waves for the Atlantic shelf, to examine impacts on structures and submarine cables. He is also examining ranges for sands, silts, and mud, as well as compaction relationships with aggregates of shell and shell fragments.

