State of the Services
FY 2022 Q3 Report
April - June 2022

Engagement Events Highlights

'Going Green with Al Roker'

Sirius XM | April 22

- NCEI staff were interviewed by Al Roker for his Sirius XM TODAY show radio program, *Going Green with Al Roker* on April 22, 2022.

- NCEI discussed attribution science and what attribution tells us about the impacts of human-caused climate change and extreme weather and climate events.

Climate Prediction Applications and Sciences Workshop

East Lansing, MI | May 24-26

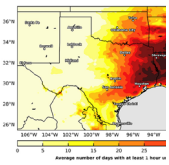
- NCEI helped plan and participated in the Climate Prediction Applications and Sciences (CPASW) Annual Meeting. CPASW is hosted by the National Weather Service (NWS) and brings together users and partners from across the country who use climate predictions.

- NCEI presented on regional weather and climate services and value of the data as well as on a panel on engaging users and co-production of climate services.

Product and Services Highlights

Hurricane Ida's Impact on Socially Vulnerable Communities StoryMap Release

On May 3, 2022, NCEI published *In Harm's Way: Hurricane Ida's Impact on Socially Vulnerable Communities*. This StoryMap looks at the regions and people impacted by Hurricane Ida and how the most vulnerable populations weathered the storm and continue to recover from its impact. Information used included NCEI's Billion Dollar Disaster data and interviews from National Weather Service, Regional Climate Service Directors, and other industry/academia experts.



Wet Bulb Globe Temperature Tool Expansion

The Southeast Regional Climate Center recently completed an expansion of the Wet Bulb Globe Temperature tool for the eastern half of the Continental United States. The data are now available from North Dakota to Texas and everywhere eastward. Wet bulb globe temperature is used to estimate heat stress and is used for planning safe outdoor activities.

New Version of SOCATv2022 Database

The new version of the Surface Ocean Carbon Atlas (SOCATv2022) database is now available via NCEI. The ocean absorbs a quarter of the global carbon dioxide (CO_2) emissions from human activity. SOCAT is used for quantification of ocean CO_2 uptake and ocean acidification and for evaluation of climate models and sensor data. The SOCAT synthesis products are crucial links in the value chain based on in situ inorganic carbon measurements of the ocean, which provides policy-makers with vital information in climate negotiations.

Billion-Dollar Disasters Update

Nine billion-dollar weather and climate disasters took place in the U.S. from January to June 2022, the fifth-highest disaster count in the 43-year record for this year-to-date period. These disasters were due to eight severe weather events in the South and Central U.S. and one broad-area drought event in the West.

New GOES-R Ephemeris Data Product

The NCEI Space Weather Team released a new GOES-R Level-2 Data Product which provides the location of the GOES-R satellites in multiple coordinate systems at a 1-minute cadence. This information can be used in conjunction with measurements from the space weather instruments aboard GOES-R to more easily study the impacts of solar ultraviolet irradiance on the atmosphere and the flow of energetic particles along magnetic fields around the Earth.

Stakeholder Highlights

The Northeast Regional Climate Center (NRCC) completed its first season as the central repository for snow survey reports in New England. Data were collected this season using the NRCC's new snow survey data entry website, as well as automated scripts to obtain data from other partners. Snow survey reports were then disseminated over the NWS Advanced Weather Interactive Processing System (AWIPS) during the snow survey collection periods. NRCC staff received a commendation letter for their efforts from the Director of the NWS Eastern Region Headquarters.

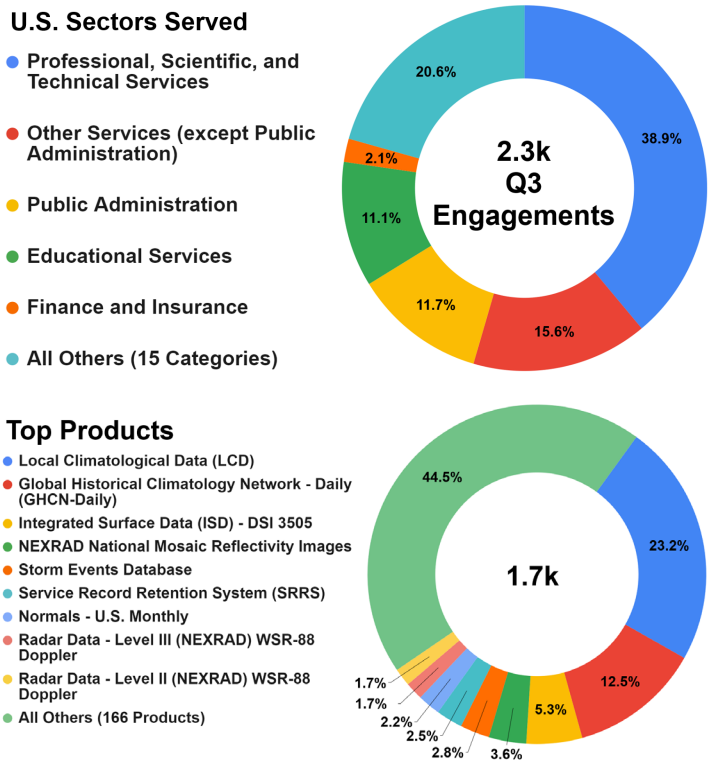
NCEI hosted the 2022 World Magnetic Model (WMM) Annual Review Meeting. The event gathered WMM scientists, sponsors, and stakeholders from NCEI, the National Geospatial-Intelligence Agency, and the British Geological Survey. The WMM is the standard model used by the U.S. government, including the Department of Defense, NOAA, and the Federal Aviation Administration, for navigation, altitude, and heading referencing systems using the geomagnetic field. It is also widely used by industries such as aerospace, energy, and consumer electronics.

NCEI, NWS, and the Western, Northeast, and High Plains Regional Climate Centers are collaborating to capture data from the new NWS cellular Cooperative Observer Network stations. Work is ongoing to identify the appropriate data feed, capture the observational data, and make the data available through the Applied Climate Information System. Once NWS begins feeding the data into their local climatological data, the new stations will become part of the official climate record.

NCEI hosted the NOAA Ocean Exploration Director and Ocean Exploration Cooperative Institute (OECI) Coordinator on June 15-16, 2022. The purpose of the visit was to increase familiarization with Gulf of Mexico regional ocean exploration activities, particularly those associated with the OECI, NOAA Uncrewed Systems, and the New Blue Economy.

Upcoming Engagements	
Illinois State Climate Roundtable	Sep. 8-9
NOAA Environmental Data Management Workshop	Sep. 12-16

Customer Reach



Unique Customer Requests

Supporting Marine Seep Exploration

A geoscientist with Fugro published a study in the journal, *Interpretation*, investigating a technique for accurately identifying seafloor seeps using high-resolution acoustic data. Sonar data from a survey conducted on the NOAA Ship *Okeanos Explorer* in the Gulf of Mexico, accessed from NCEI's Water Column Sonar Data and Bathymetry Data Archives, was used to support the analysis in this study. The scientist is currently analyzing all NOAA datasets from the Gulf of Mexico to locate active seeps in the region. Seeps are areas where hydrocarbon-rich fluids "seep" out of the ocean floor changing the chemistry surrounding the area.

Stanley Black & Decker

A data steward with Stanley Black & Decker, Inc., reached out to NCEI for assistance finding severe weather occurrences across the U.S. The company has developed a model that predicts market demand and weather data has been found to be a contributing factor. NCEI provided information from the Storm Events Database to help inform their in-house model.

Fans:

94.5k 62.2k 6.1k