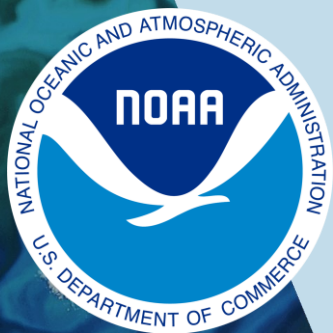# NOAA NCEI Bathymetry Team: Data Contribution, Sharing, Accessibility and Archive Overview

Jessica Nation
National Centers for Environmental Information (NCEI)

National Centers for Environmental Information (NCEI)

October 25, 2023
Alaska GeoSummit - Anchorage, Alaska

Who We Are

- The National Oceanic and Atmospheric Administration or NOAA's National Centers for Environmental Information (NCEI) is responsible for hosting and providing access to one of the largest archives of atmospheric, coastal, geophysical, and oceanic data in the world.

- As such, it is the Nation's leading authority for environmental information.

Proper stewardship of ocean & coastal mapping data maximizes the use & re-use of valuable data.

NCEI Multibeam Bathymetry Data Archive

- Archive includes raw and processed multibeam bathymetry data, survey metadata, and supporting ancillary data and products for some surveys.

- Contains over 3,700 surveys spanning 43 years.

- 58 different data sources.

- Total size: 69 TB uncompressed.

- U.S. National Bathymetry Archive and host of the IHO repository for ocean data.
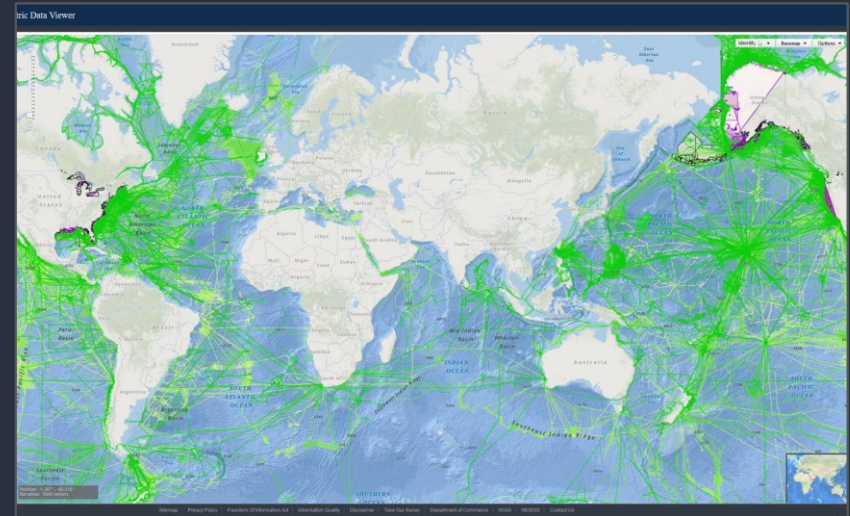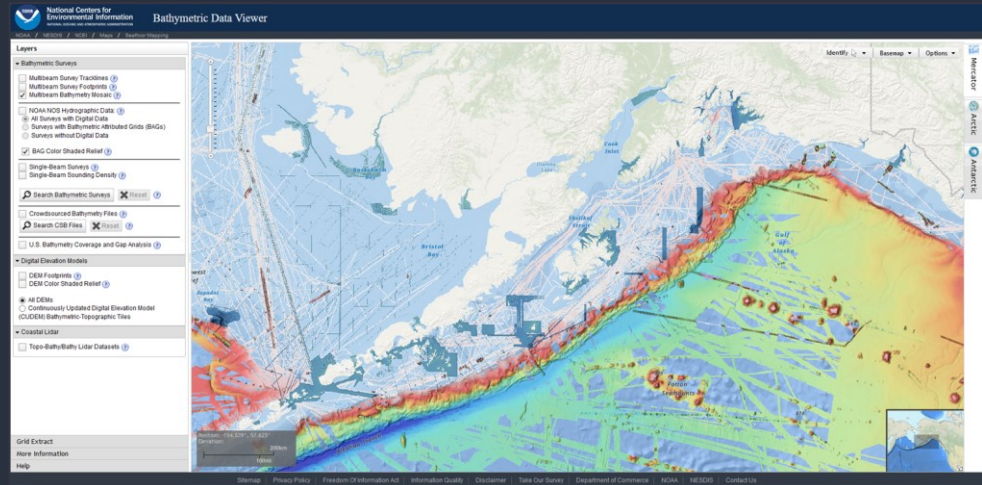

www.ncei.noaa.gov/maps/bathymetry/

NCEI Multibeam Bathymetry Data Archive

- All data displayed on the Bathymetric Data Viewer are publicly available to download.

- NCEI has developed tools to assist with data visualization, making archived multibeam data more useful and accessible to a broader community of users.

NCEI Multibeam Bathymetry Data Archive

NCEI is the primary repository for several regional, national, and global seafloor mapping campaigns.

Data contributed to NCEI directly supports these campaigns and the creation of fundamental bathymetry products such as:

- General Bathymetric Chart of the Ocean (GEBCO) grid

- Updates and improvements to NOAA navigation products.
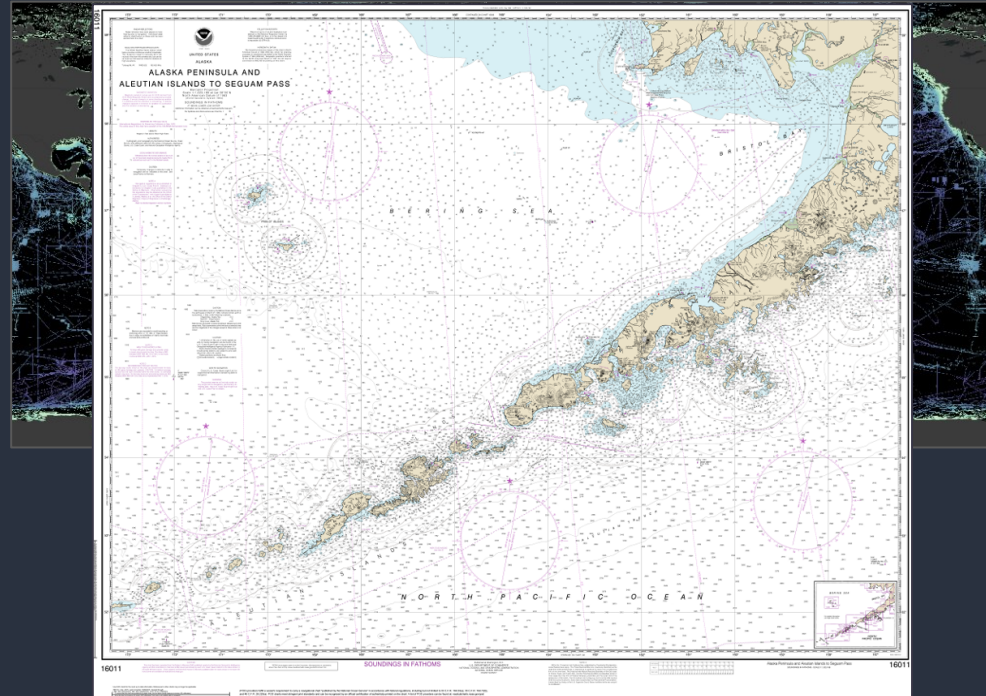
Involvement in Mapping Campaigns

NCEI's Bathymetry Data Management team is involved in mapping campaigns to:

- ○ Establish and document best practices for data stewardship

- ○ Support data providers

- ○ Assist data users with data access and discovery

- ○ Collaborate with the community to improve archive procedures and our data access tools

- ○ … And more!

Seascape AK: Data Management Technical Team

Established August of 2021

General Purpose

- *Identify bathymetry data needs for Seascape Alaska*

- *Review the Bathymetry Gap Analysis (BGA) and identify data that can fill gaps*

- *Create footprints for any data missing from the BGA that should be accounted in support of planning Mapping, Exploration, and Characterization projects*

U.S. Bathymetric Gap Analysis
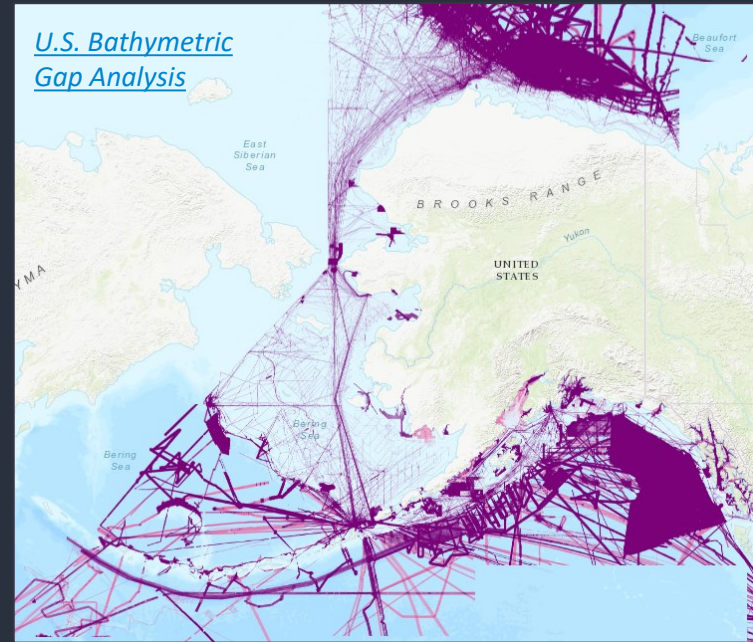
Successful Collaboration Outcomes

NCEI's involvement in Lakebed 2030 has led to:

- First Great Lakes MB survey on the Bathy Viewer!

- A first-time partnership with USGS, slated to bring 20 TB of public data to the Great Lakes

- Helping a data collector in the region establish data stewardship best practices
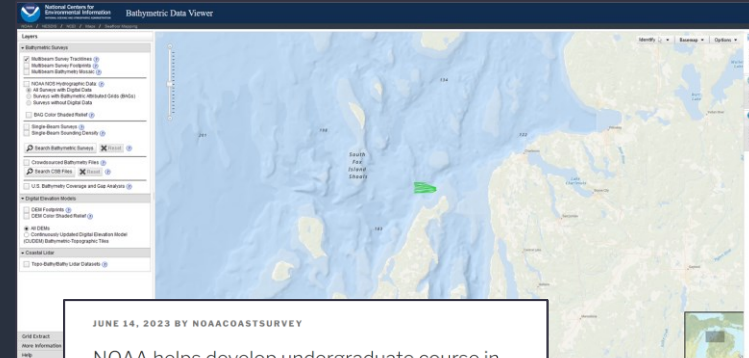
JUNE 14, 2023 BY NOAACOASTSURVEY

NOAA helps develop undergraduate course in lakebed mapping

As the New Blue Economy grows along with demands for a climate-ready workforce, NOAA is connecting the dots between climate resilience and the need for a workforce skilled in science and technology supporting ocean and coastal mapping. Exposure to key disciplines, from geodesy, oceanography, and science data management to modeling, hydrography and GIS-based cartography, is critical to building robust interest, opportunities and expertise in the government and industry geospatial careers supporting climate resilience. NOAA works with a variety of partners to advance workforce development in these foundational geospatial areas. In particular, hydrography – measuring water depths, locating hazards, and describing the seafloor – is a challenging but exciting field dependent on skilled technicians, surveyors, and scientists to acquire mapping data using state-of-the-art technologies. With only 50% of U.S. coastal, ocean and Great Lakes waters mapped, there is a lot of work to do! Read on to learn about a hydrographic

Submitting Data to NCEI

- Data Provider Responsibilities:
    - Data Processing (optional)
    - Data Packaging
    - Metadata Creation
    - File Transfer Protocol (FTP) or hard drive delivery to NCEI

- NCEI Responsibilities:
    - Confirm successful submission
    - Archive and publish data to the NCEI Bathymetric Data Viewer and the IHO DCDB Viewer within 90 days of submission
    - Publish an ISO Metadata Record for each dataset

Submitting Marine Sonar Data to NCEI
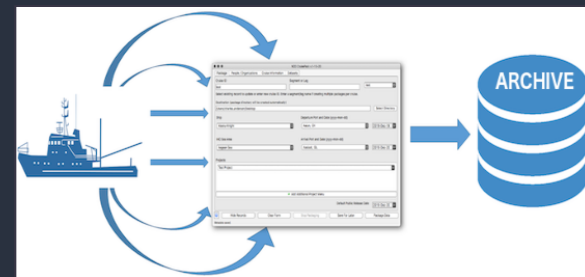
CruisePack Data Packaging Tool

Final Thoughts

Map Once, Use Many Times!

1. Make your data and/or map services available to the public!

2. How can we help you…

    a. **Contribute** data to NCEI

    b. Find and **access** data from NCEI?

    c. How can we better support the needs of the AK Mapping Community?

Thank you!

jessica.nation@noaa.gov

mb.info@noaa.gov