



NOMECS Strategy

How can the ARF get involved?

Meredith Westington

Acting Co-Chair of the Interagency Working Group on Ocean and Coastal Mapping (IWG-OCM)

NOAA Office of Coast Survey, Integrated Ocean and Coastal Mapping

Topics to Cover

- Overview of the NOMECS Strategy role, charge, and goals
- Current US ARF involvement
- Opportunities for future US ARF involvement

NOMECS Strategy

“Mapping, exploring, and characterizing the ocean and coastal shoreline advances scientific understanding, safeguards the Nation’s economic prosperity, and promotes the health and security of our people. This knowledge is essential to advancing America’s understanding of the marine environment and addressing sustainable ocean resource management.”

-- National Ocean Mapping, Exploring, and Characterization of the U.S. EEZ (NOMECS)



Plans available at <https://iocm.noaa.gov/about/strategic-plans.html>

NOMECS Statutory Authority

Fiscal Year 2023 National Defense Authorization Act (Pub. L. 117-263, Title CIII; [33 U.S.C. § 3408](#))

- authorized the NOMECS Council and IWG-OEC
- re-authorized IWG-OCM ([33 U.S.C. § 3502](#))

Pursuant to 33 U.S.C. § 3408, the NOMECS Council shall

- 1) update national priorities for ocean mapping, exploration, and characterization; and
- 2) coordinate and facilitate activities to advance those priorities

NOMECS Statutory Authority



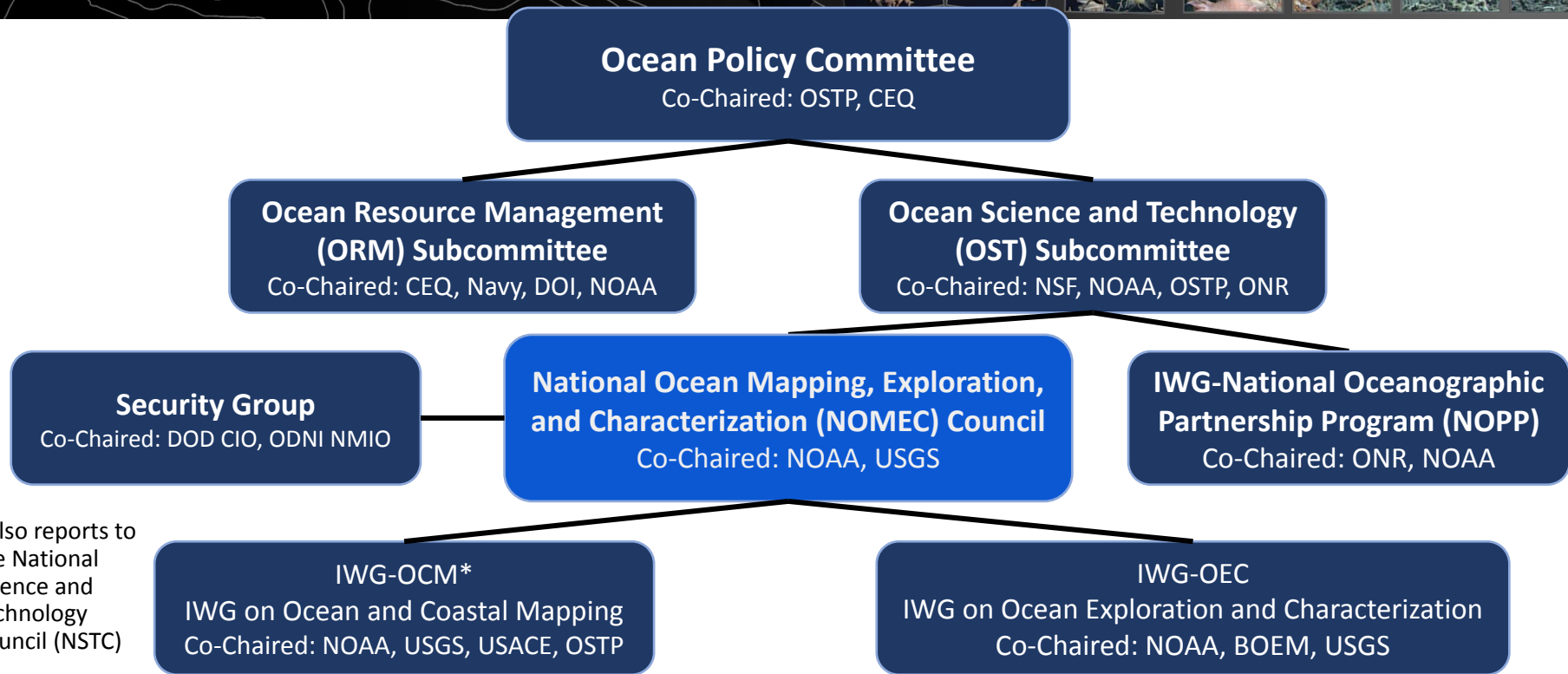
The NOMECS Council with its IWGs shall

- 1) Set **national priorities and strategies**;
- 2) Cultivate **sustained partnerships**, including with **academia**;
- 3) Coordinate **improved data management, access, and visualization**;
- 4) Encourage **education, workforce training, and public engagement**;
- 5) Coordinate activities with **domestic and international initiatives**; and
- 6) Establish and monitor metrics to **track progress**

In practice, this results in:

- 1) Coordinating Federal agency policy and actions for advancement of ocean mapping, exploration, and characterization (MEC);
- 2) Collaborating with non-Federal partners and stakeholders;
- 3) Implementing multi-disciplinary, collaborative, and coordinated MEC efforts

NOMECC Council Structure



*Also reports to the National Science and Technology Council (NSTC)

Goals of the NOMECS Strategy

GOALS

- 1 Coordinate Interagency Efforts and Resources to Map, Explore, and Characterize the United States EEZ
- 2 Map the United States EEZ
- 3 Explore and Characterize Priority Areas of the United States EEZ
- 4 Develop and Mature New and Emerging Science and Technologies to Map, Explore, and Characterize the United States EEZ
- 5 Build Public and Private Partnerships to Map, Explore, and Characterize the United States EEZ

MEC
Campaigns!

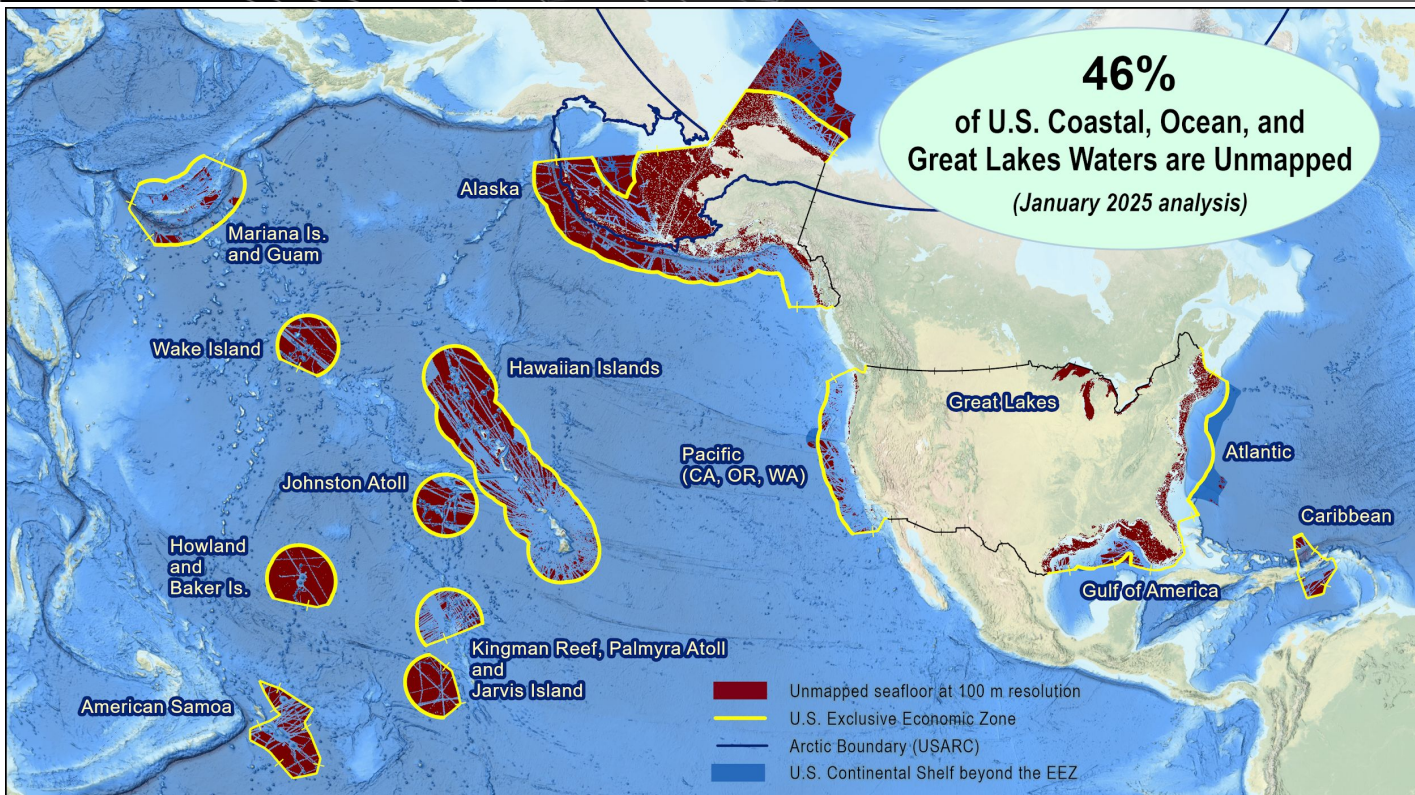
Tracking Progress

Released in March!

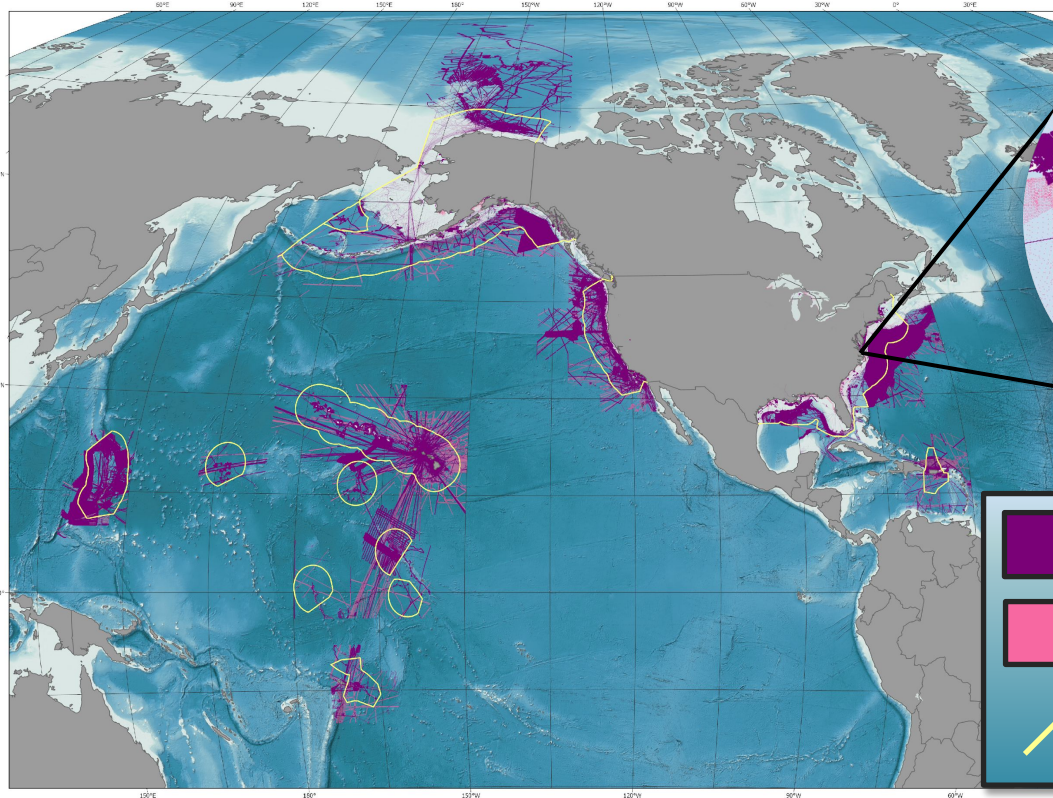
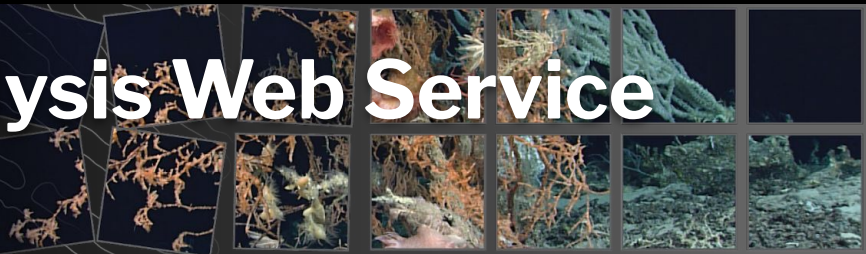
6th annual report
covering progress up
to ~ December 2024

**Last year, we were at
48% unmapped.**

Reports located at
[https://iocm.noaa.gov/
seabed-2030-status.html](https://iocm.noaa.gov/seabed-2030-status.html)

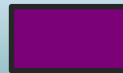


U.S. Bathymetry Gap Analysis Web Service

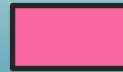


See NOAA's
GeoPlatform

Also, linked from
<https://iocm.noaa.gov/seabed-2030-bathymetry.html>



3 or more soundings per ~100 m cell



1-2 soundings per ~100 m cell



U.S. EEZ / Maritime Boundaries

Bathymetric Coverage Report Tool



National Oceanic and
Atmospheric Administration
U.S. Department of Commerce

Bathymetric Coverage Report - U.S. Waters

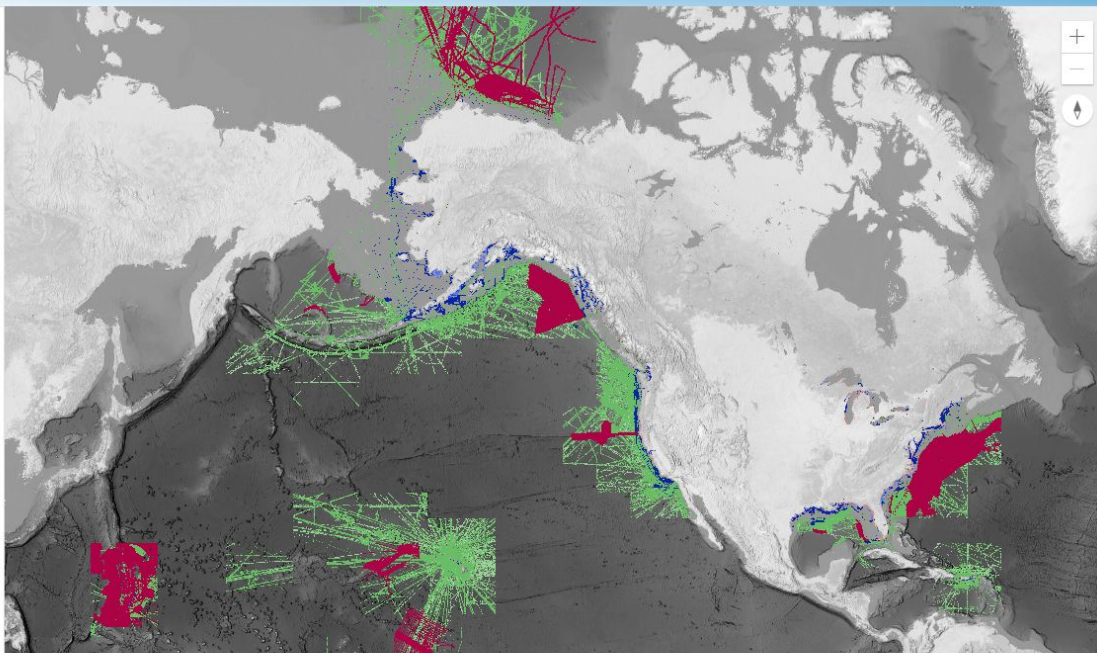
App Info

Layers

1.) Add AOI/Transit

2.) Summarize AOI

3.) Coverage Results



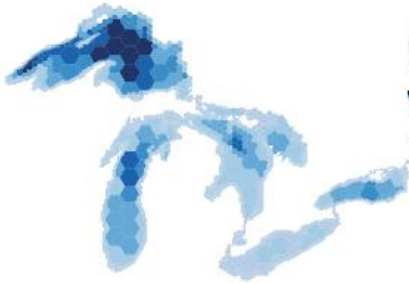
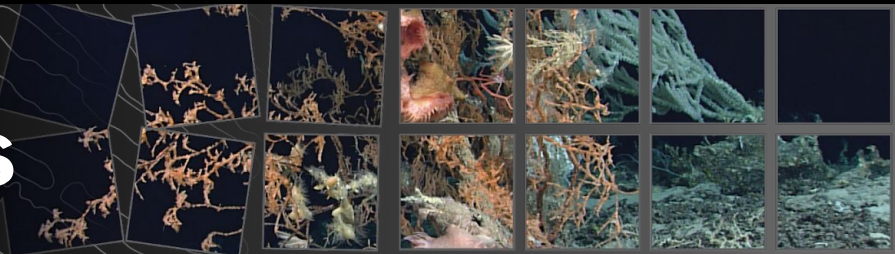
<< Collapse

<https://gis.charttools.noaa.gov/bathy-coverage-report/>

Layers

- ☐ ECS MB
- ☐ Lidar
- ☐ NOS Hydro MB
- ☐ MB (3+)
- ☐ MB (1-2)
- ☐ NOS Hydro SB (3+)
- ☐ NOS Hydro SB (1-2)
- ☐ SB (3+)
- ☐ SB (1-2)
- ☐ CSB (3+)
- ☐ CSB (1-2)

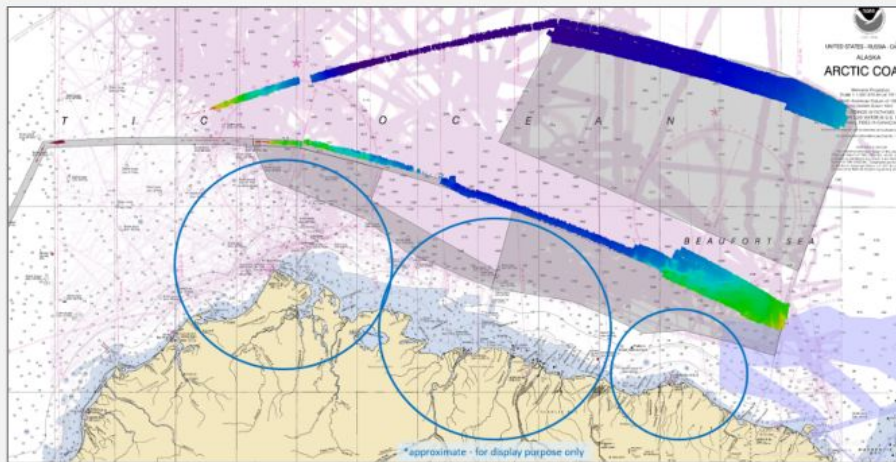
Regional Campaigns



Healy - PARS Study



Update on PARS Project on the USCGC Healy with NSF



HLY2402 PARS = 2794 LNM

HLY2403 ECS = 1104 LNM

~50% unmapped (per bathy gap analysis)

<https://gis.charttools.noaa.gov/bathy-coverage-report/>



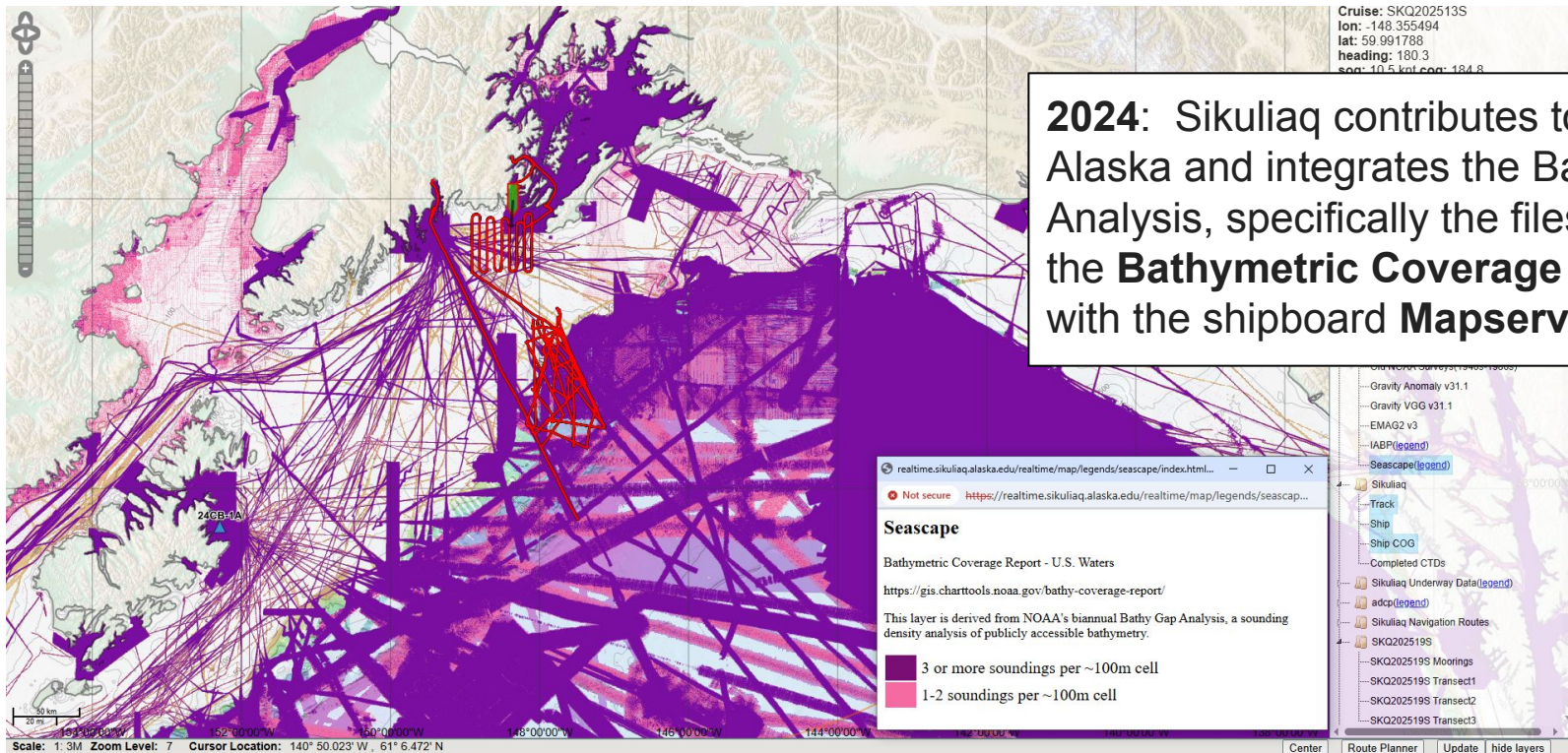
CAPT Meghan McGovern, NOAA
(for Christy Fandel, NOAA HSD Ops)
NOAA/Office of Coast Survey
October 10-25 (HLY 2402) - PARS
October 25 - November 3 (HLY 2403)
Cruise personnel transfer Nome, AK

Blog post:

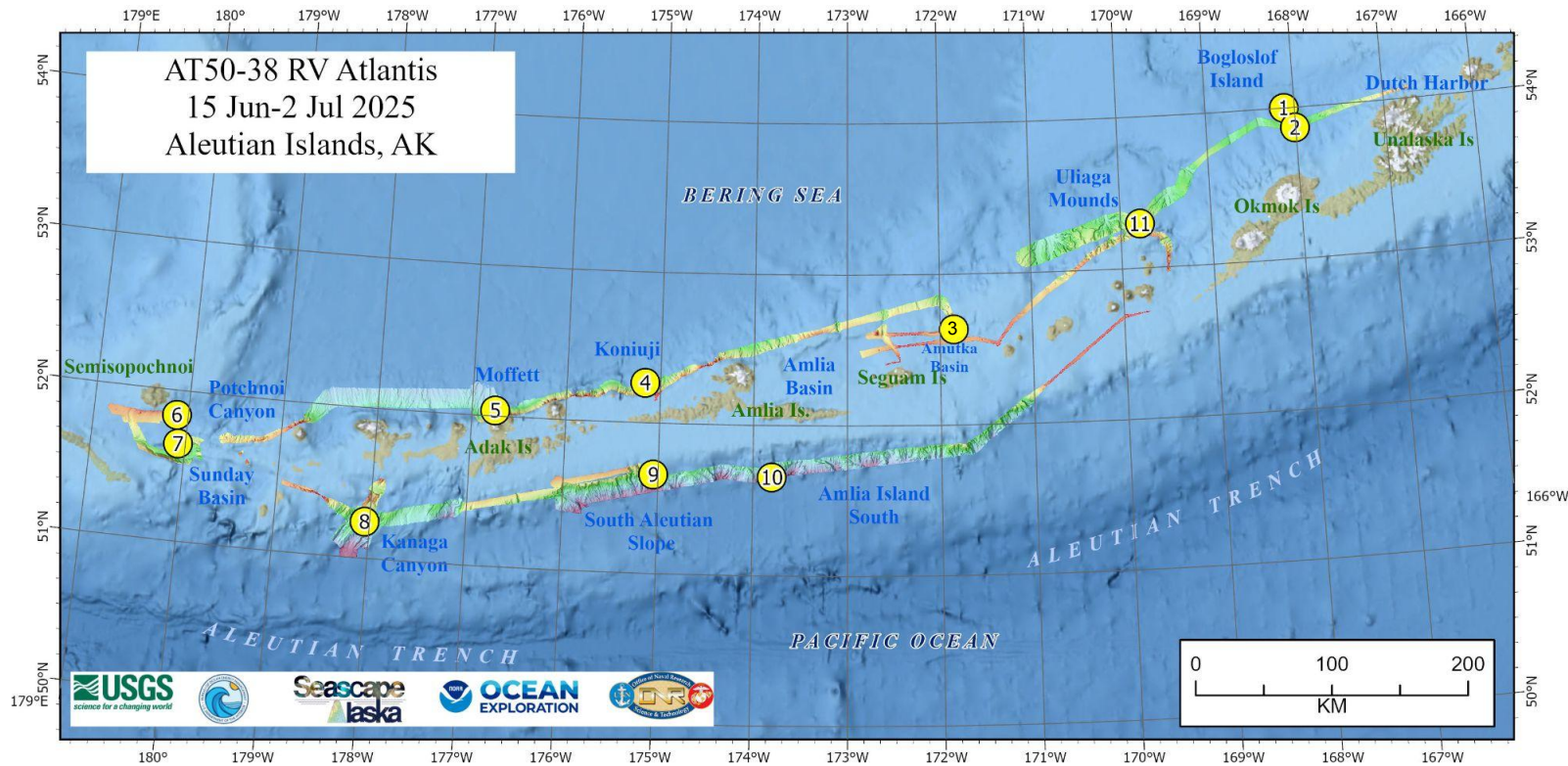
<https://nauticalcharts.noaa.gov/updates/interagency-science-team-collects-ocean-and-weather-data-in-the-arctic-aboard-u-s-coast-guard-cutter-healy/>

R/V Sikuliaq and Transit Mapping

2024: Sikuliaq contributes to Seascapes Alaska and integrates the Bathymetric Gap Analysis, specifically the files available in the **Bathymetric Coverage Report Tool** with the shipboard **Mapserver**.

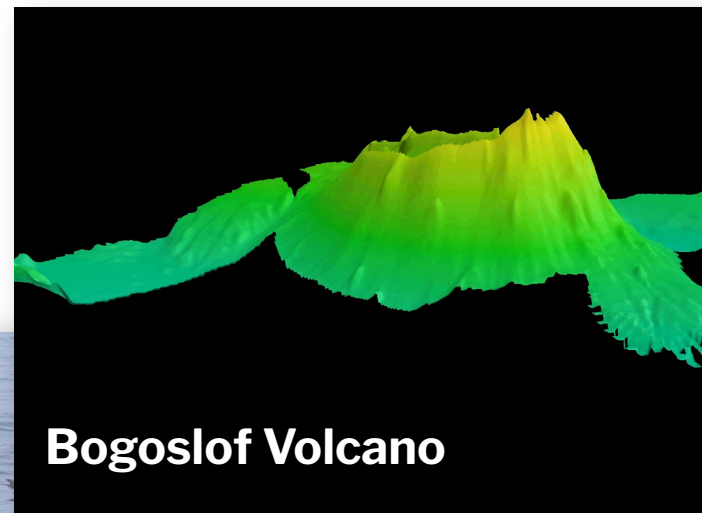


The Aleutian Arc: Integrated Exploration of Biodiversity at Priority Benthic Habitats



The Aleutian Arc: Integrated Exploration of Biodiversity at Priority Benthic Habitats: The Stats!

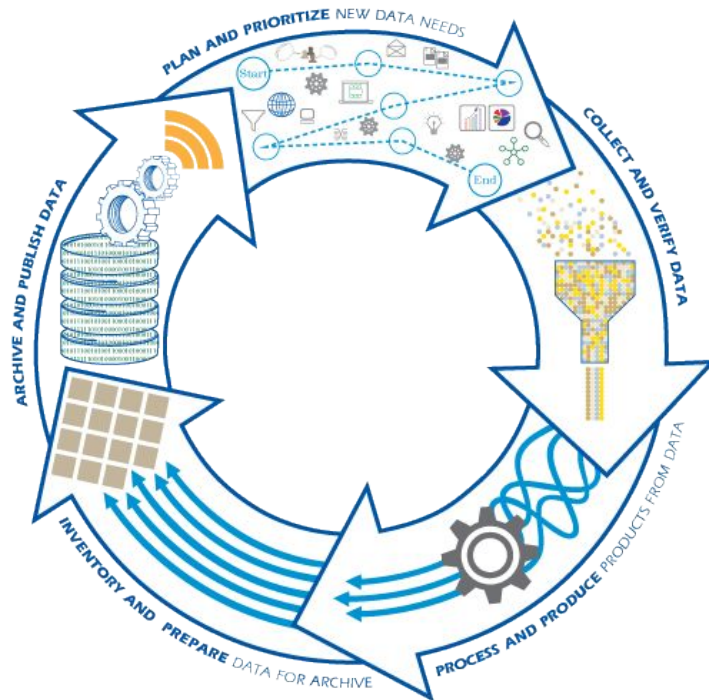
- ~3,631 km traveled
- ~18,103 km² of Multibeam Collected
 - ~7,192 km² **new** bathymetry
- 11 *U.S. Navy's HOV Alvin* Dives
- 884 Samples Collected
 - 444 Biological Samples
 - 29 Geological Samples
 - 408 Water Samples
 - Nutrients: 109
 - eDNA: 239
 - Radium: 129



courtesy of The Aleutian Arc: Integrated Exploration of Biodiversity at Priority Benthic Habitats. USGS; NOAA Ocean Exploration, ONR, NOPP, BOEM, NOAA IOCM, USGS; Woods Hole Oceanographic Institution. Photography by Art Howard

Strategies for ARF and NOMECA Collaboration

Map Once, Use Many Times



- NOMECA is aligned with Administration priorities!
- Leverage recent examples of collaborative work to better utilize ships to meet multiple needs
 - Communicate intentional efforts to support NOMECA and regional campaigns.
 - Increase awareness of NOMECA gaps and priorities
 - Increase awareness of ARF plans to identify/leverage white space on UNOLS ship schedules
- Unified approach to address declining availability of Federal ships by defining requirements, strategic budgeting, and engagement activities

The Aleutian Arc: Integrated Exploration of Biodiversity at Priority Benthic Habitats

Outreach in Dutch Harbor, *facilitated by Christina Bonsell (BOEM)*

- **Presentation on project plans to the Qawalangin Tribe of Unalaska- Tribal Council**
 - Virtual Meeting
- **“Dive into Tidepools” at the Museum of the Aleutians**
 - Hands-on event focusing on local biodiversity via touch tanks and facilitated discussions
- **Ship tours of the R/V Atlantis**
- **“Exploring the Deep Sea: Hidden Habitats, Volcanoes, and More”**
 - Talk at the Unalaska Public Library (presenters from BOEM, USGS, NOAA, and the Smithsonian)
- **“Ocean Discovery Day” at Unalaska City School**



courtesy of The Aleutian Arc: Integrated Exploration of Biodiversity at Priority Benthic Habitats. USGS; NOAA Ocean Exploration, ONR, NOPP, BOEM, NOAA IOCM, USGS; Woods Hole Oceanographic Institution. Photography by Art Howard

UNOLS Research Planning Module

<https://mfp.us/>

MFP | unolsUntitled Project

File

Statistics

Total Time:
6d 7h

Travel Time:
4d 2h

Time at Stations:
2d 4h

Total Distance:
984nm

Suggest Order

Export

Routing
ON

Select Port of Departure

Order/Type	Station Meta	Ship Speed	Time Needed
↓	0.00 NM	get route	10 knots
1	Research Area 6,038m Middle Speed Survey	10 knots	1d 0h 55m
↓	594.70 NM	get route	10 knots
2	Research Area - 2 52m Middle Speed Survey	10 knots	2d 11h 28m
↓	389.77 NM	get route	10 knots
3	Research Area - 3 20m Middle Speed Survey	10 knots	1d 14h 59m
↓	0.00 NM	get route	10 knots

Select Port of Arrival

Position: 64.7097, -137.0843
Elevation: 24m

300 km

mapbox

Beving Sea

1

2

3

Anchorage

Add new

Add layer

General

National Datasets

Australia

Finland

Japan

USA

☒ Bathymetry Gap Analysis

Oceanographic

Map Options

Base Layer

GEBCO Grid

Show on Map:

☒ EEZ

☐ MPA

+ Add More (1)

U.S. Mapping Coordination

<https://iocm.noaa.gov/maps/USMappingCoordination/>

The screenshot displays the U.S. Mapping Coordination web application. The interface includes a header with the NOAA logo and the text "U.S. Mapping Coordination" and "A Collaboration Site for Mapping Data Acquisition". Navigation buttons for "Submit Your Plans" and "User Guide" are in the top right. On the left, a "Visible Projects" sidebar lists organizations with expandable dropdowns: All Projects, Bur. of Land Management (BLM), Bur. Ocean and Energy (BOEM), National Park Service (NPS), NOAA, JALBTCX, US Forest Service, and U.S. Geological Survey (USGS). The central map shows the United States with blue markers indicating project locations. Map controls like zoom in (+), zoom out (-), and home are on the right. A bottom status bar shows "Selected features: 0". On the right, a "Plans and Priorities" filter panel contains dropdowns for Project Status, Data Type, Organization or Program, and Calendar Year, all showing "0 Selected". It also includes checkboxes for 3DEP and 3DHP priorities, both showing "1 Selected". A legend at the bottom right defines the map symbols: light blue for "Proposed", dark blue for "Planned (Funded) and Ongoing", and grey for "Existing Data: Inventories, Collections, etc. (not comprehensive)".

U.S. Mapping Coordination
A Collaboration Site for Mapping Data Acquisition

[Submit Your Plans](#) [User Guide](#)

Visible Projects

- All Projects
- Bur. of Land Management (BLM)
- Bur. Ocean and Energy (BOEM)
- National Park Service (NPS)
- NOAA
- JALBTCX
- US Forest Service
- U.S. Geological Survey (USGS)

Plans and Priorities

Select Project Status: 0 Selected

Select Data Type: 0 Selected

Select Organization or Program: 0 Selected

Select by Calendar Year: 0 Selected

Are you looking for 3DEP priorities? 1 Selected

Are you looking for 3DHP priorities? 1 Selected

Plans and Priorities

Project Status

- Proposed
- Planned (Funded) and Ongoing
- Existing Data: Inventories, Collections, etc. (not comprehensive)

Selected features: 0

Esri, GEBCO, Garmin, NaturalVue Powered by Esri