

US-Canada Hydrographic Commission

United States of America National Report

National Oceanic and Atmospheric Administration

Naval Meteorology and Oceanography Command

National Geospatial-Intelligence Agency

Rear Admiral Shepard M. Smith, NOAA

43rd - Quebec City, Canada

February 24, 2020



U.S. Hydrographic Leadership

- **NOAA**

- Director of Coast Survey
 - **Rear Admiral Shepard M. Smith**

- **NGA**

- Senior GEOINT Authority, Maritime
 - **John Lowell**
- Director of Maritime Safety Office
 - **Captain Richard Kennedy**

- **Navy**

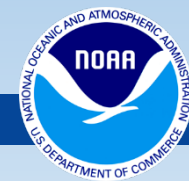
- Commander Naval Meteorology and Oceanography Command, Oceanographer of the Navy, Hydrographer of the Navy, and Navigator of the Navy
 - **Rear Admiral John Okon**
- Deputy Hydrographer of the Navy
 - **Matthew Borbash**

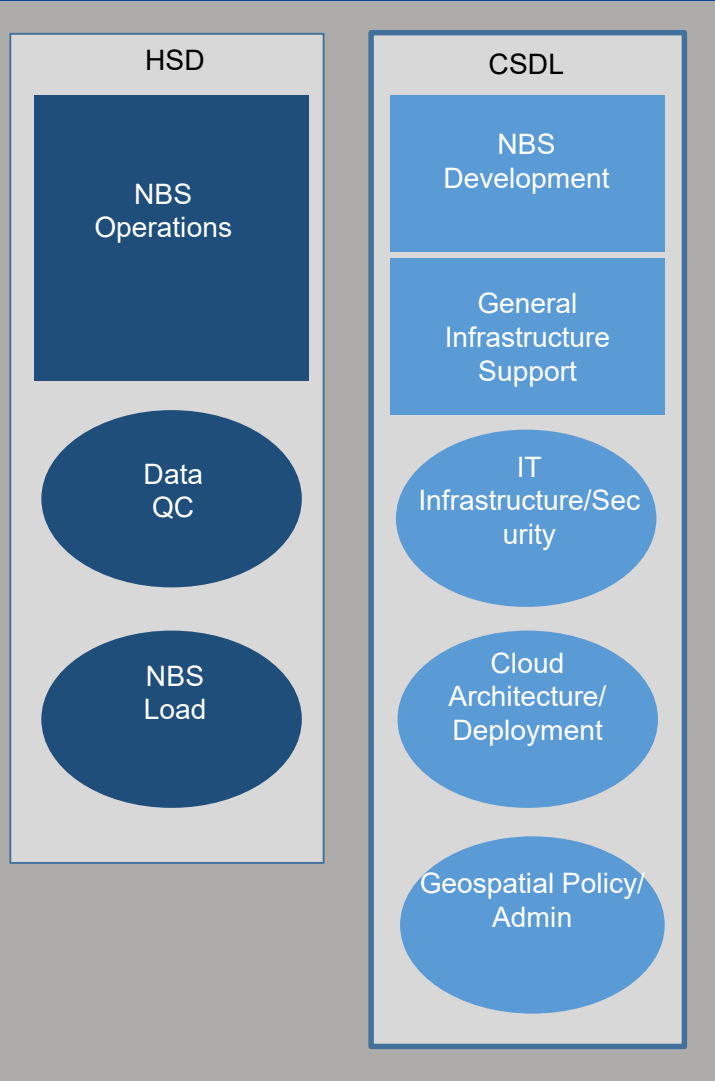


Technological Highlights OCS (2019)

Addressed later in today's agenda

- Optionally Manned Launch development/testing and unmanned system use in general
- NBS (the national bathymetric source of seamless, chart-quality bathymetry) (*Capt Brennan*)
- Automated data processing and quality control (includes Charlene, QCTools) (*LCDR Manda*)
- UAS (Quadcopter) use from ships, structure from motion shoreline characterization (*LCDR Manda*)
- Datum transformation models, ellipsoid to tidal (chart) datum transformation



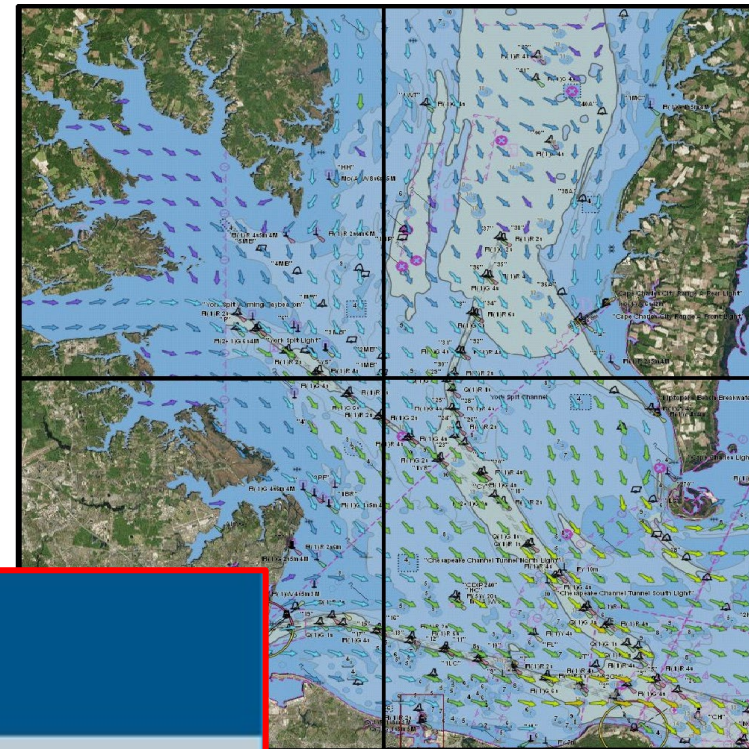
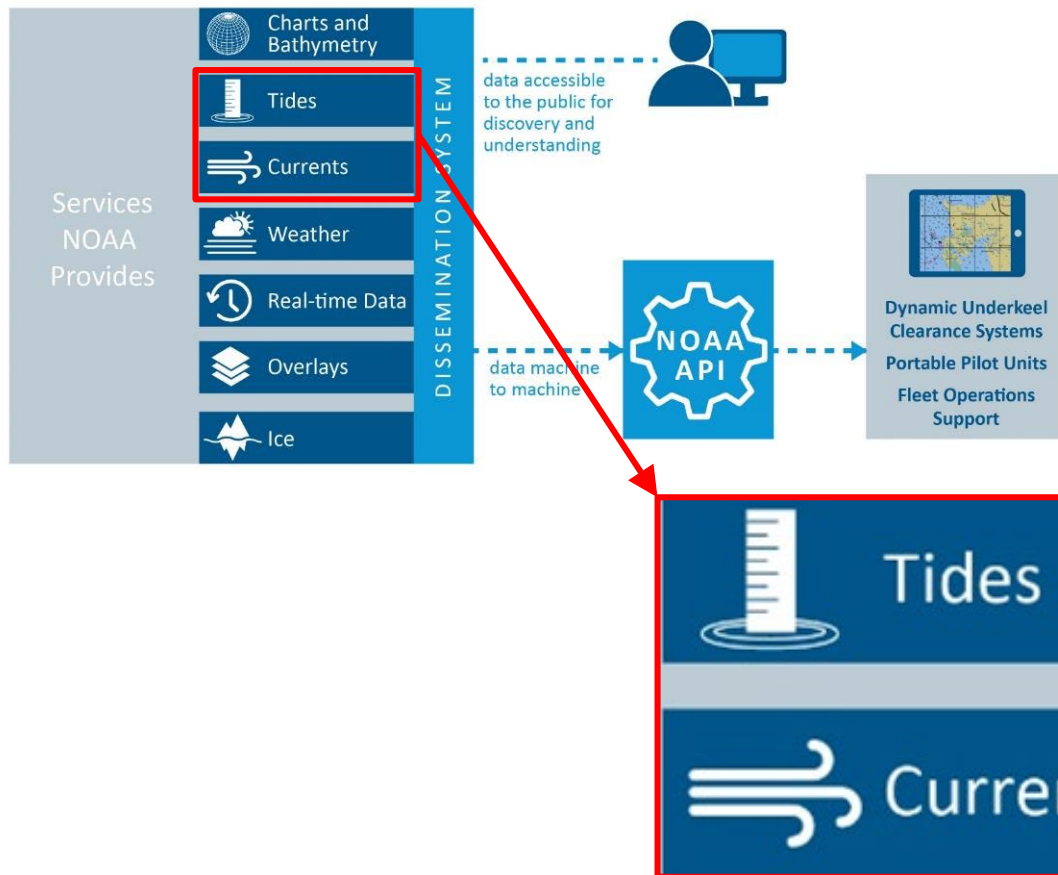


National Bathymetric Source (NBS) Vision:

- Serve as the authoritative source for charted soundings.
- Provide auto-generated chart-ready bathymetry to MCD.
- Provide nationwide modelled bathymetry to support:
 - Future S-102 products
 - Future tidal epoch changes
 - Highly changeable channel data (Mississippi)
 - Robust use of uncertainty
 - Enhanced source tracking for soundings



Precision Navigation Program

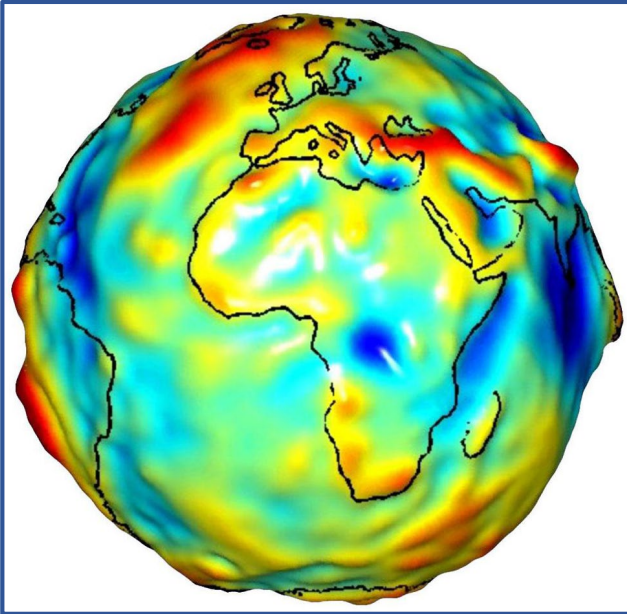


Capacity Building

- Cat-A S-5 (Hydrography) programs
 - University of New Hampshire
 - University of Southern Mississippi
- Cat-B programs
 - NOAA S-8 (Cartography)
 - NGA S-8 (Cartography)
 - Navy S-5 (Hydrography)
 - NOAA's CAT-B S-8 program includes one opening for an international student
 - Contact Shachak.Peerri@noaa.gov



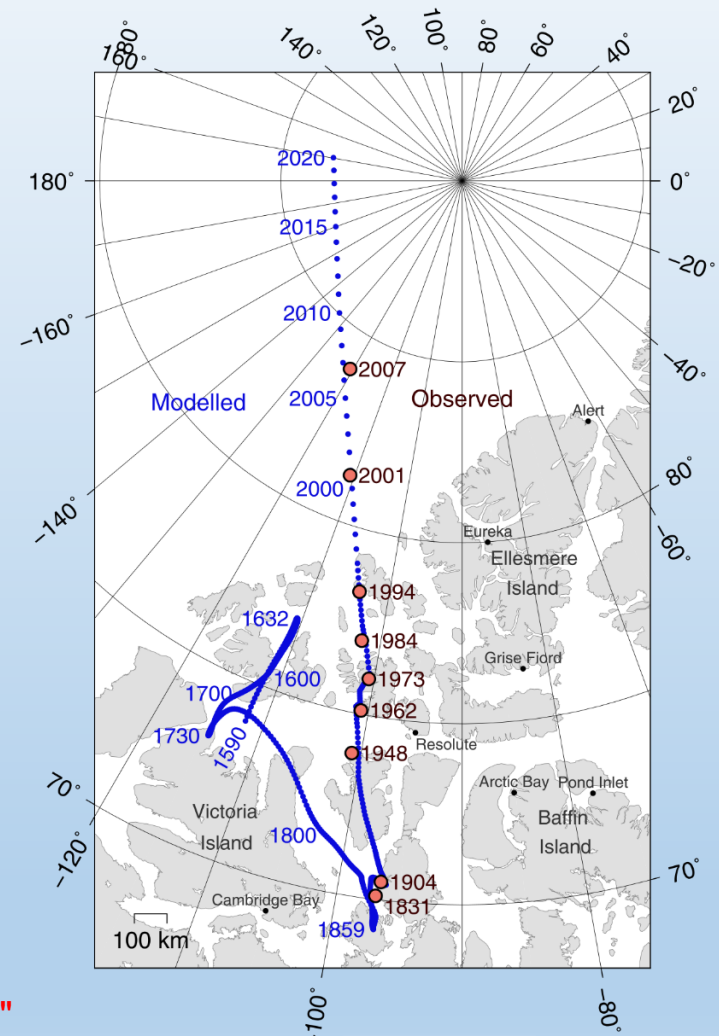
Updated Models



- New Earth Gravity Model (EGM)
 - Released: December 2019 ???
- New World Magnetic Model (WMM)
 - Recently released

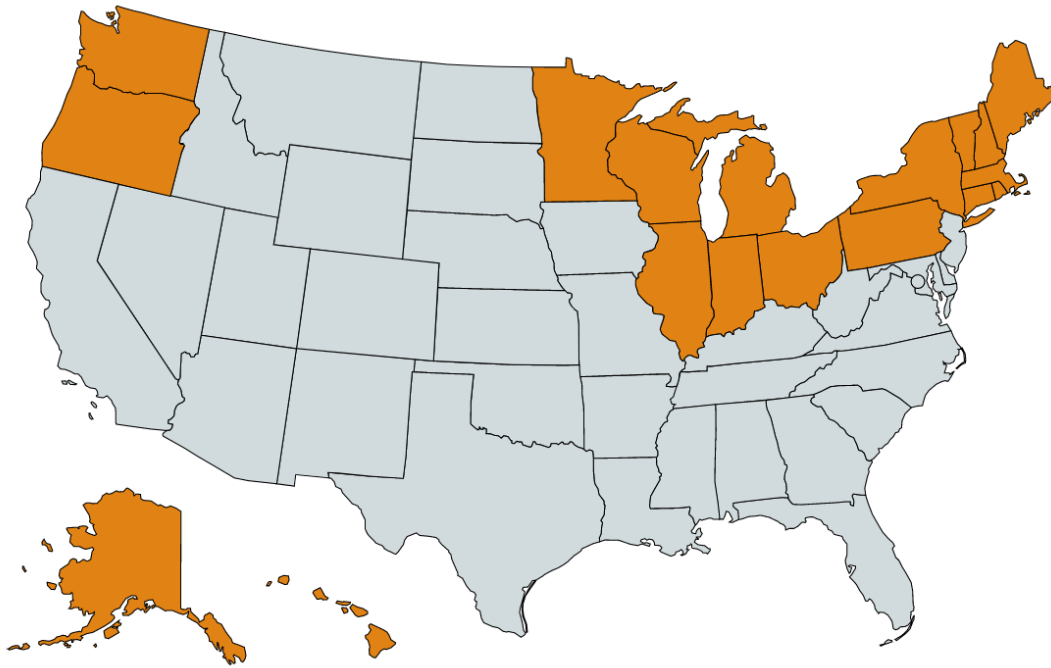
"Encompassing Earth's Magnetic Properties on NOAA Charts"

Wednesday, 2/26/2020 at 1:00 pm (C. Ence)



Regional Navigator Managers

Regional Navigation Manager Coverage



Regions bordering Canada

- Northeast
 - Great Lakes Region
 - Northwest
 - Alaska
- NOAA's navigation managers help identify navigational challenges facing the marine transportation system, and provide the resources and services that promote safe and efficient navigation to a variety of stakeholders



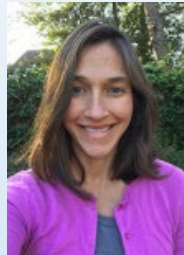
Regional Navigator Managers

Northeast

Colleen Roche

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Great Lakes

LCDR Charles Wisotzkey

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Cell: 202-308-2863



Northwest and Pacific Islands

Crescent Moegling

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Office: 206-526-6840

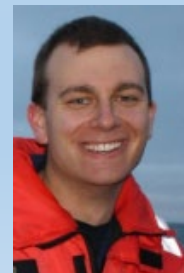


Alaska

Lt. Cmdr. Bart Buessler

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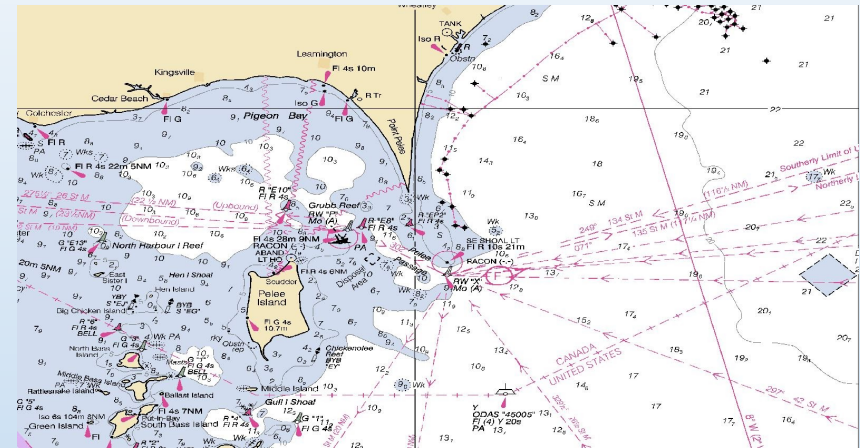
Coast Survey welcomes **LCDR Charles Wisotzkey**, who has re-joined in **January 2020** as the navigation manager for the **Great Lakes** region. Lt. Cmdr. Wisotzkey's hydrographic field experience includes:

- two sea tours aboard the NOAA Ship *Thomas Jefferson*
- Hydrographic Systems and Technology Branch field support liaison for the Pacific
- extensive augmentation with the NOAA Ships *Fairweather* and *Rainer*
- work with various other NOAA and federal hydrographic field units

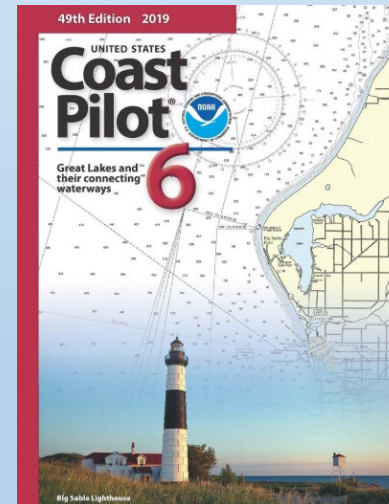


The Great Lakes get a Digital Update

- OCS, LCA, CMC and U.S. and Canadian mariners collaborate to update the Recommend Courses in Lake Erie from paper charts to ENC's
- Compiling and updating information for Lake Erie's 75 routes (covering 20 NOAA and 5 Canadian ENC's)



Erie Raster Capture



ENC of Pelee Passage
Southeast Shoal

The next Version of
Coast Pilot will be
released in April





Two Vessels Join NOAA Fleet

- *Oceanographer* (Honolulu) and *Discoverer* to join NOAA fleet
- Design underway, construction beginning by end of 2020
- Missions range from general oceanographic research to climate and ecosystem studies



NOAA-UNH JHC Annual Review

- July 2019
- Participants: OCS, Center for Operational Oceanographic Products and Services, the Naval Oceanographic Office, NGA, the U.S. Army Corps of Engineers, the **Canadian Hydrographic Service**, and Geosciences Australia
- UNH researchers and students described their work and results, OCS presented its Precision Navigation technology plans, and participants discussed future research priorities



Rochelle Wigley (GEOBCO) presents during the annual review

Contact: Andy Armstong
(Andy.Armstrong@noaa.gov)



Current Event Highlights

NOAA Releases 2020 Hydrographic Survey Season Plans (Jan 2020)

Public Feedback on NOAA 5 Year Process to End all Traditional Paper Charts (Nov 2019)

U.S. Committee on the Marine Transportation System releases 10-Year Projection of Maritime Activity in the U.S. Arctic (Oct 2019)

Royal Canadian Navy Trainees visit NOAA (Sept 2019)

- 10 trainees from the Venture Naval Officers Training Center, Esquimalt, British Columbia tour NOAA offices at the Western Regional Center in Seattle, briefed on NOAA's mission

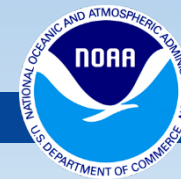
Saildrone Launched with Seafloor Mapping Capabilities in the Gulf of Mexico shows Promise for Remote Arctic Mapping (Aug 2019)



Royal Canadian Navy trainees with Crescent Moegling and Kirby Cook, with training vessel, Wolf



Rear Adm. Smith, Richard Jenkins, and Brian Cannon with the Saildrone



Current Event Highlights

NOAA Supports Safe Transit in Puget Sound (Aug 2019)

- NRT-Seattle, NOAA's Center for Operational Oceanographic Products and Services and Coast Survey's Pacific Hydrographic Branch collected multi-beam data, including information on the depth of the seafloor and updated several features, increasing efficiency for ferry travel in the Puget Sound



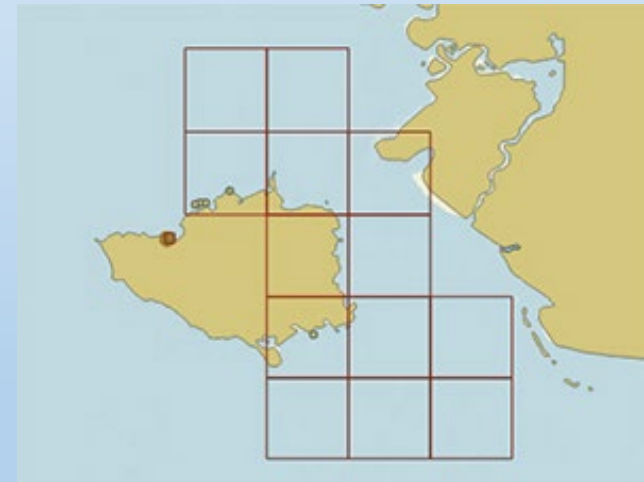
NRT-Seattle with the F/V Salish ferry, Puget Sounds

Tabletop Exercise Prepares Responders for Potential Disasters in the Pacific Northwest (June 2019)

Successful Collaborative Research Expedition in the Newly Expanded Lake Huron Sanctuary Area (May 2019)

NOAA Improves Etolin Strait Data with new ENC Layout (Feb 2019)

- Coast Survey released 13 new large-scale ENCs (20 fold increase) of Etolin Strait, Alaska, a pilot project for a larger rescheming of all NOAA ENCs



New gridded layout for Etolin Strait ENCs



NOAA Technical Paper Presentations

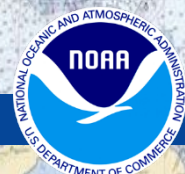
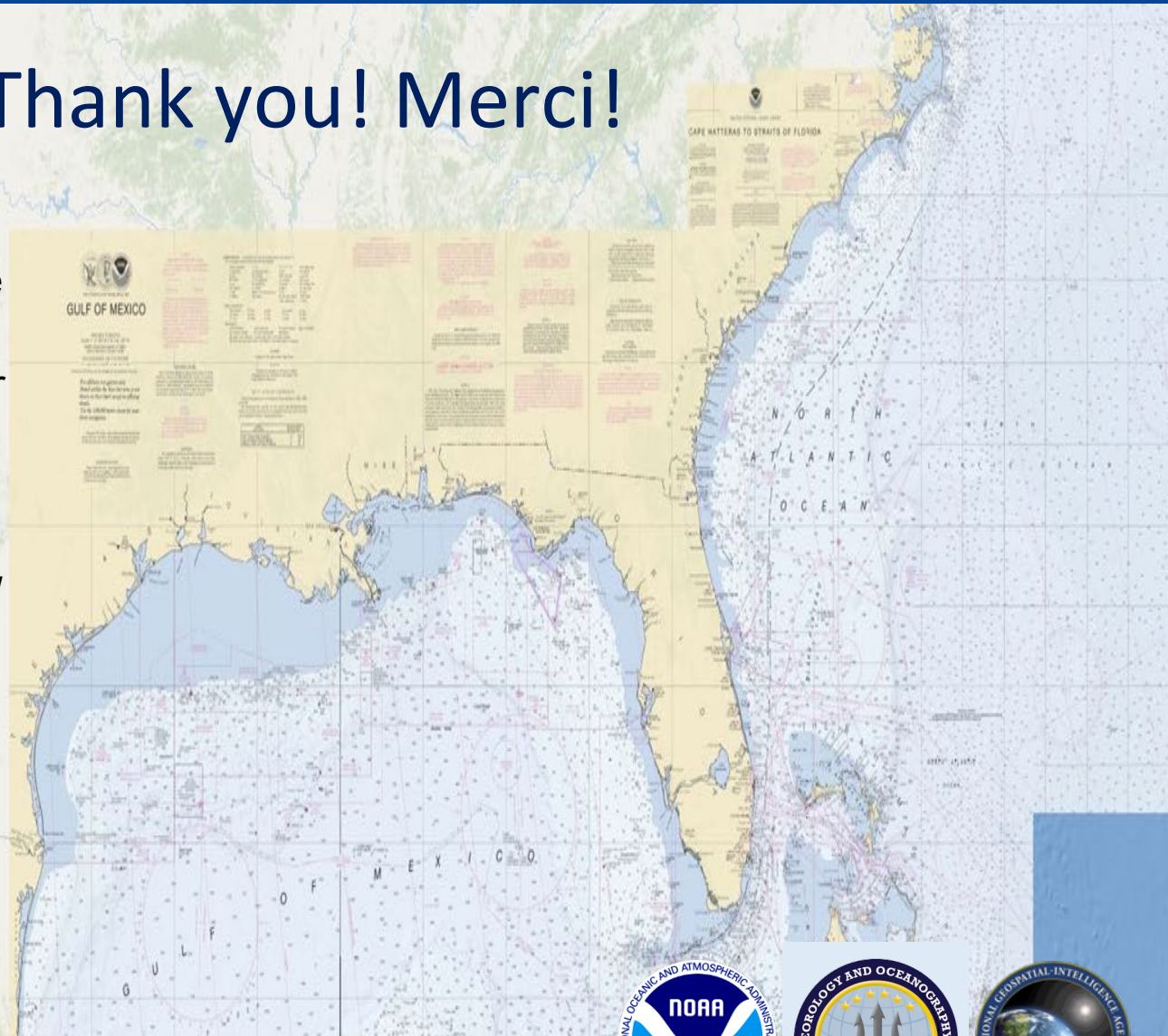
Presentations this Week	Presenter
The National Bathymetric Source	Glen Rice
New Metadata Layers for the BAG Format	Glen Rice
Holistic Processing Automation: Charlene, SHAM and Scribble	Eric Younkin
A Reimagined Approach to Informing a Nation's Hydrographic Survey Priorities - A Preliminary Demonstration of Hydrographic Health	Michael Gonsalves
Solutions to Hydrographic Challenges in the Alaskan Arctic	Alissa Johnson
Encompassing Earth's Magnetic Properties on NOAA Charts	Christie Ence
Operational Survey Trials of the DriX Autonomous Surface Vessel on NOAA Ship Thomas Jefferson	Charles Wizotzkey



Thank you! Merci!

To find out more about the
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and Facebook

@NOAAcharts and find
the Coast Survey blog at
**[nauticalcharts.noaa.gov/
updates/](http://nauticalcharts.noaa.gov/updates/)**



Esri, GEBCO, DeLorme, NaturalVue