

NOAA Office of Coast Survey

working for
*safer navigation, healthier coasts,
and a stronger maritime economy*

Crowdsourcing Maritime Information



- An attractive response to universal problems
 - Vast ocean areas under- or un-surveyed, limited resources
 - Ever-changing seabed, shorelines, and coastal infrastructure
 - Changes in ocean use; changes in sea routes
 - Growing Internet & technology-savvy culture among recreational boaters (78M boaters in the US!)
 - Increasing vessel drafts = increasing navigation risks

Domain Experience

Level-of-Effort to outside-source information

Trusted Systems

Standards

Technology

Awareness

Anonymous
Crowd

Managed
Crowd

Known
Sources

Trusted
Partners

Professional & Expert
Ocean Mappers



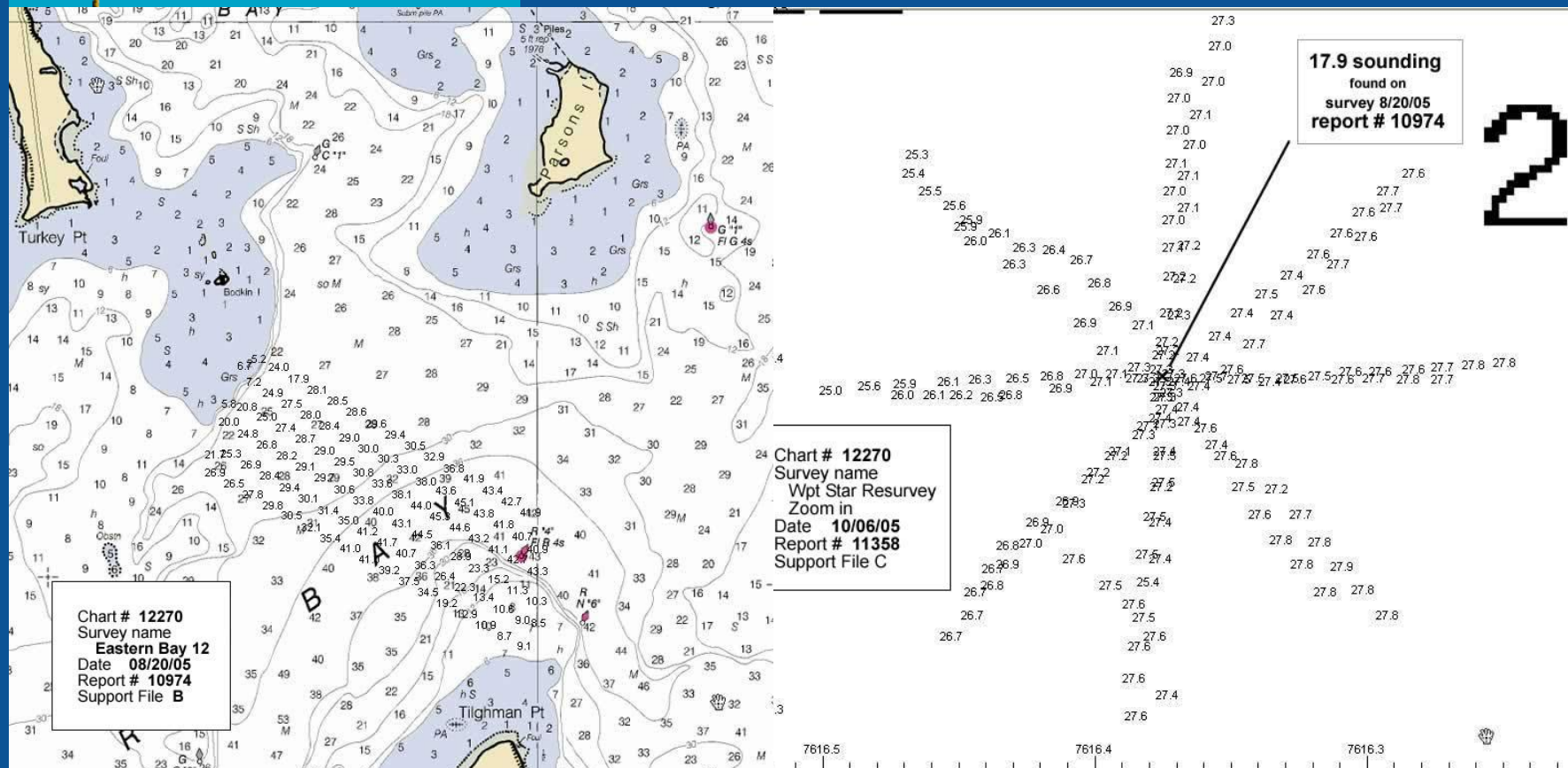
Cooperative Charting Program: US Power Squadrons (USPS)



- Since 1962, USPS has submitted data to update NOAA charts.
- The processes and equipment used to make observations or undertake “hydrographic surveys” are pre-approved by NOAA to meet quality standards



United States
Power Squadrons®

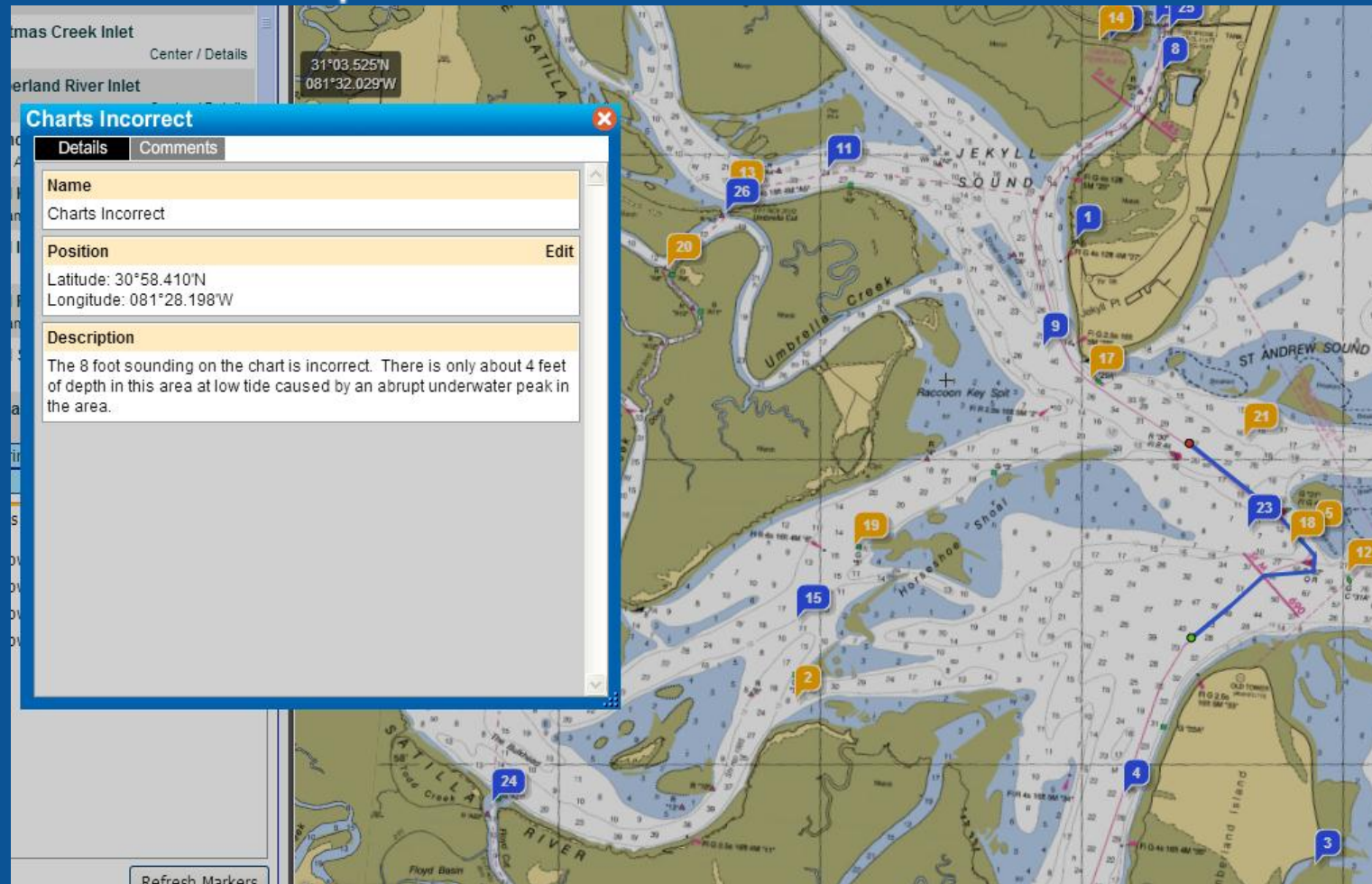


Opportunities: Crowdsourcing Maritime Information

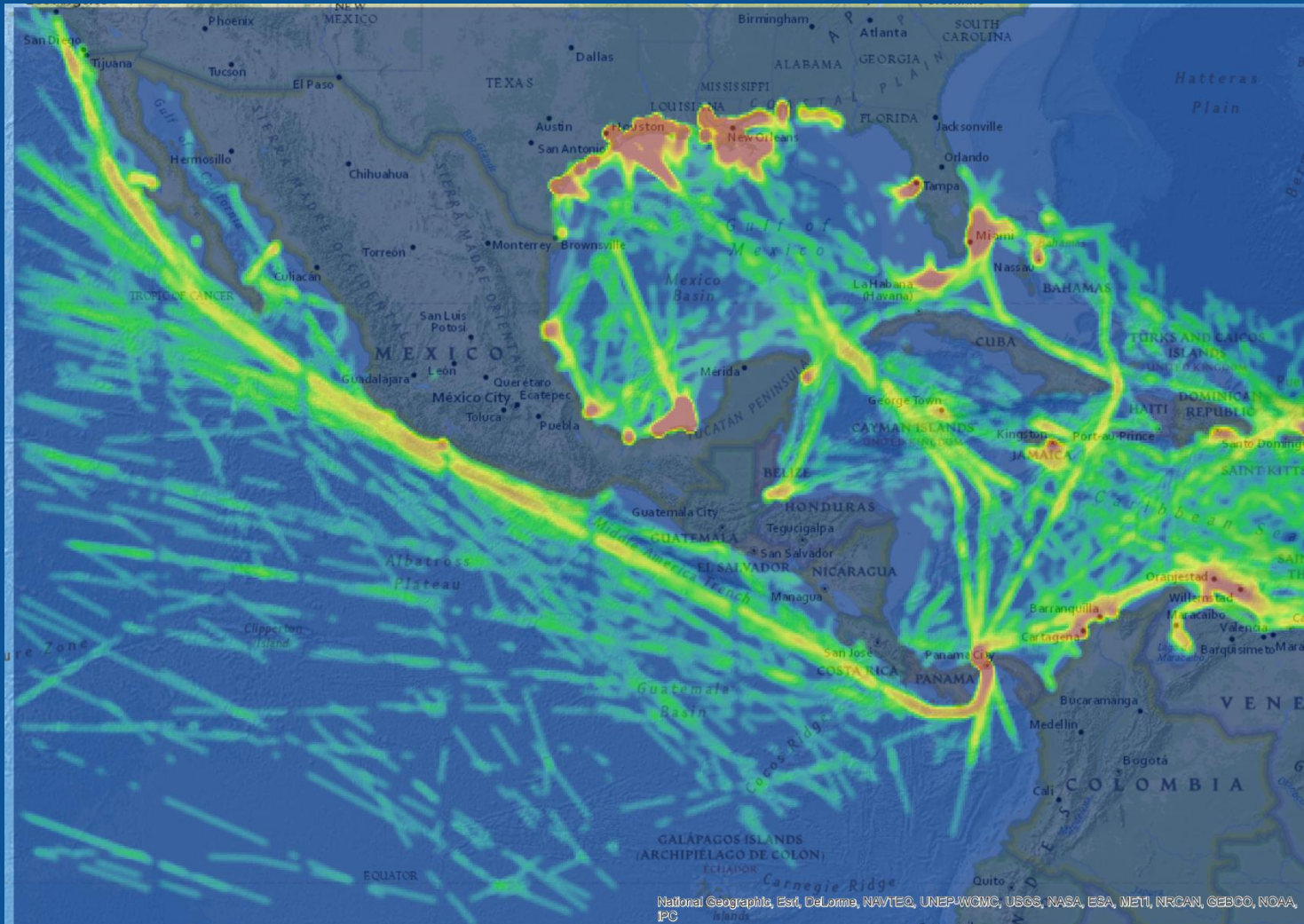


- An Interactive Cruising Guidebook
- Users can add, remove, and comment on hazards, chart discrepancies, and add general local knowledge
- www.activecaptain.com

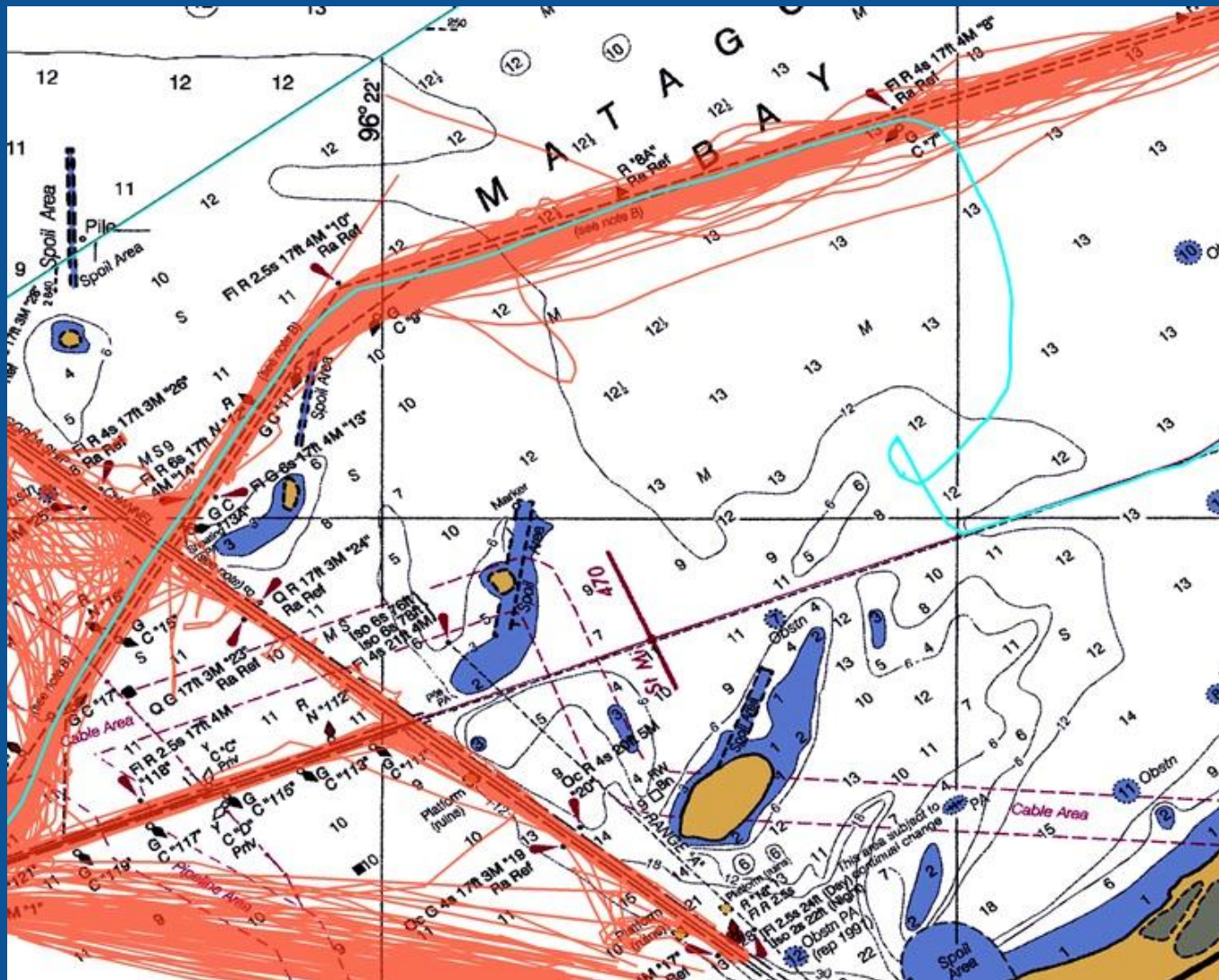




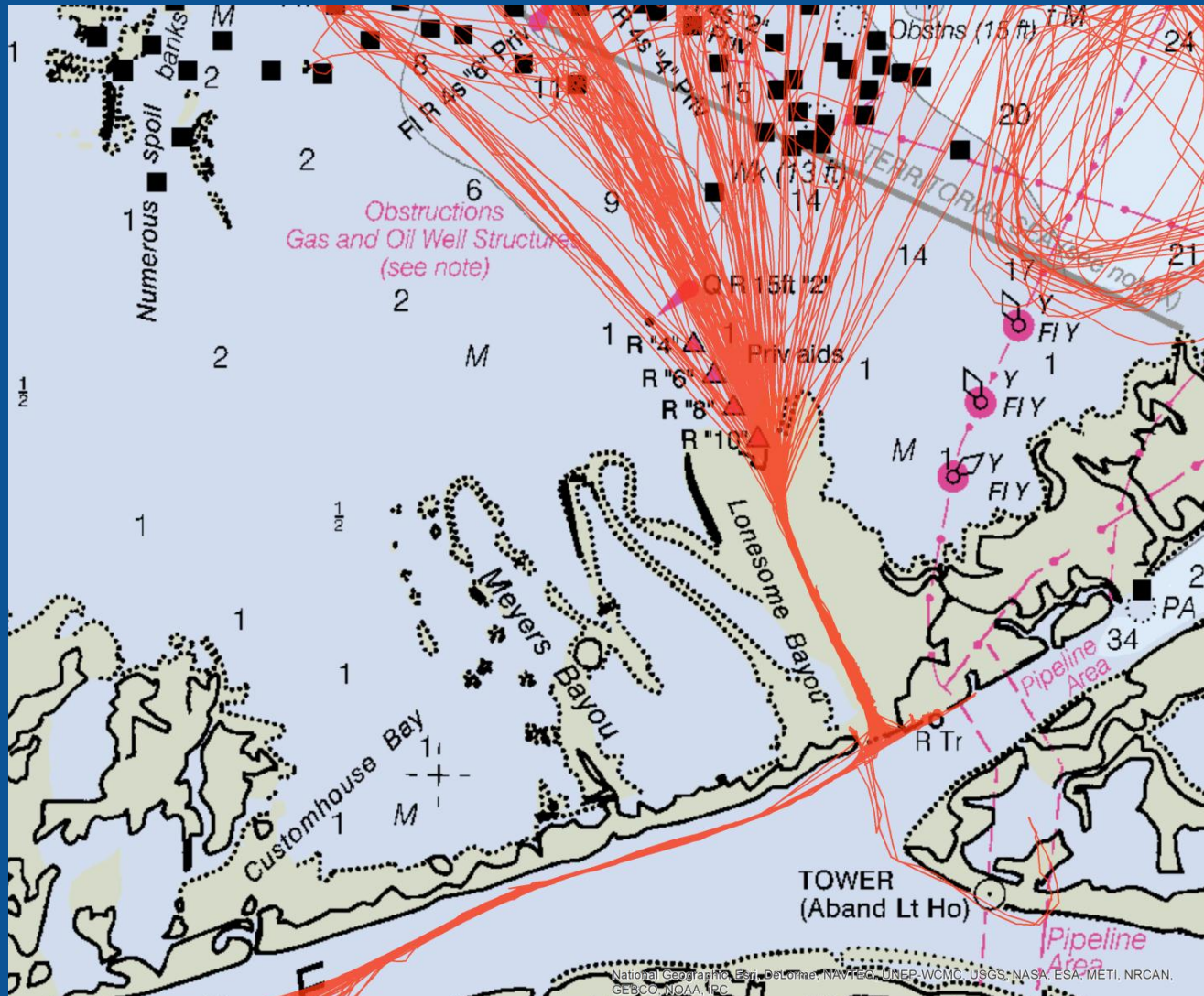
Historical AIS Data



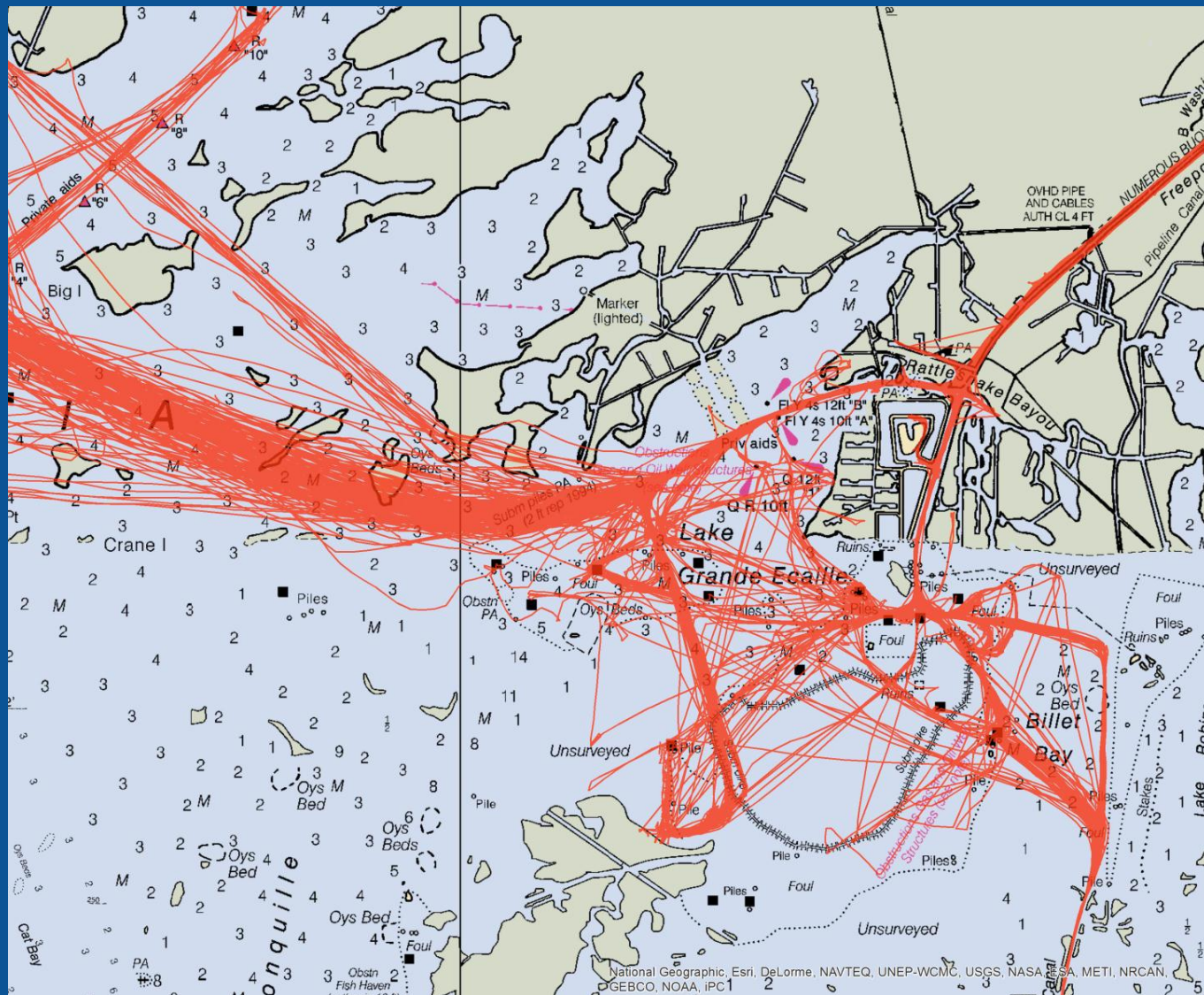
Historical AIS Data



Historical AIS Data



Historical AIS Data



NOAA Integrated Ocean and Coastal Mapping Crowd-Sourcing Examples

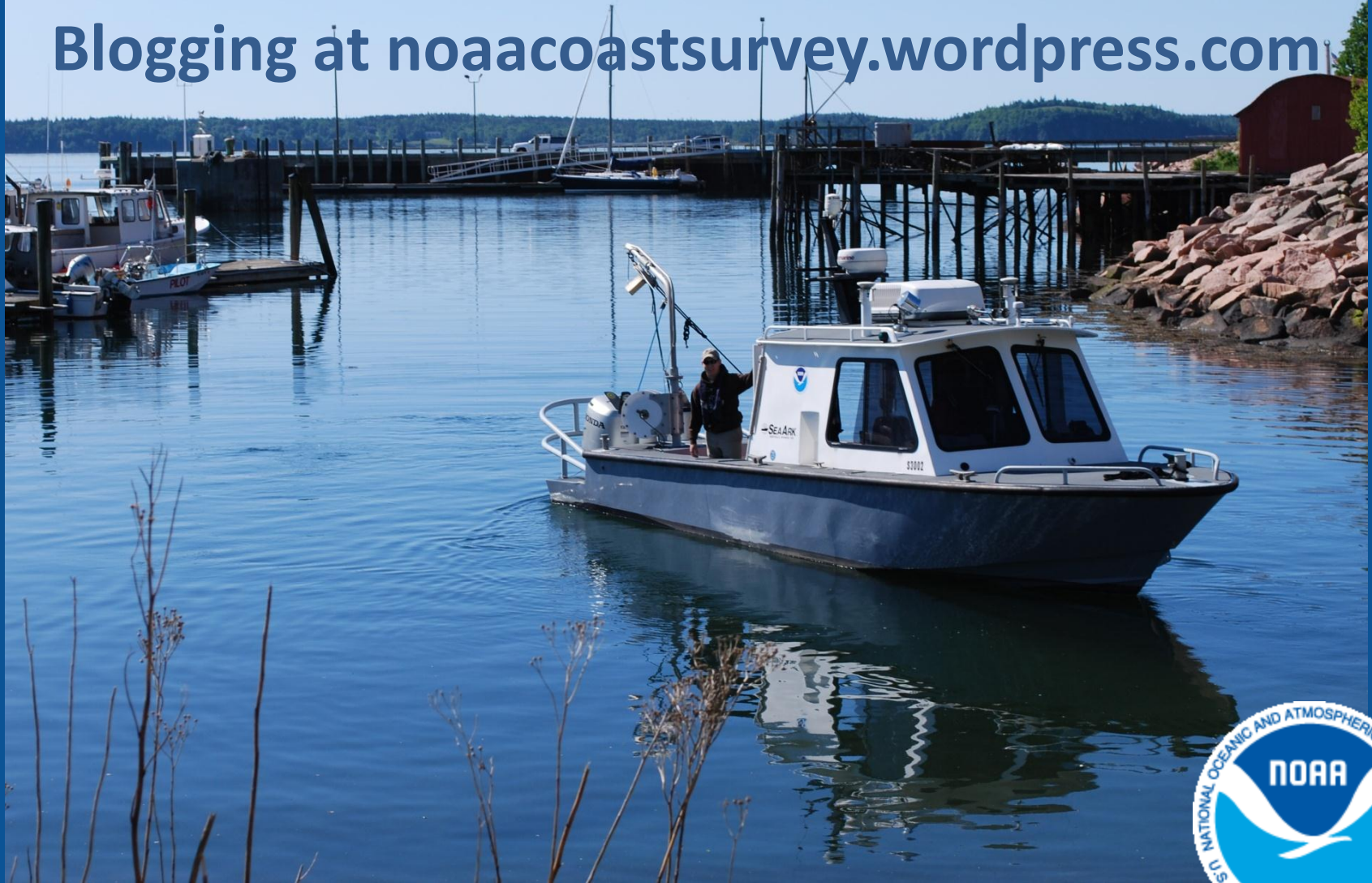
- Arctic Survey Trackline Selection Tool
 - In development: identify where vessels plan to transiting, and could acquire data
- Training partners with acoustic capability to deliver good data
 - Partnership with USCG in Arctic
- GEBCO crowd-sourced bathy database
 - In proposal: National Geophysical Data Center
 - A database for crowd data that could be used for reconnaissance, change alerts, and chart adequacy
- Baseline IOCM Seafloor Mapping Standards



www.nauticalcharts.noaa.gov

Twitter @nauticalcharts

Blogging at noacoastsurvey.wordpress.com



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