Est. 2001

Briefing to State of Alaska Legislature
Alaska's Arctic Maritime Activities

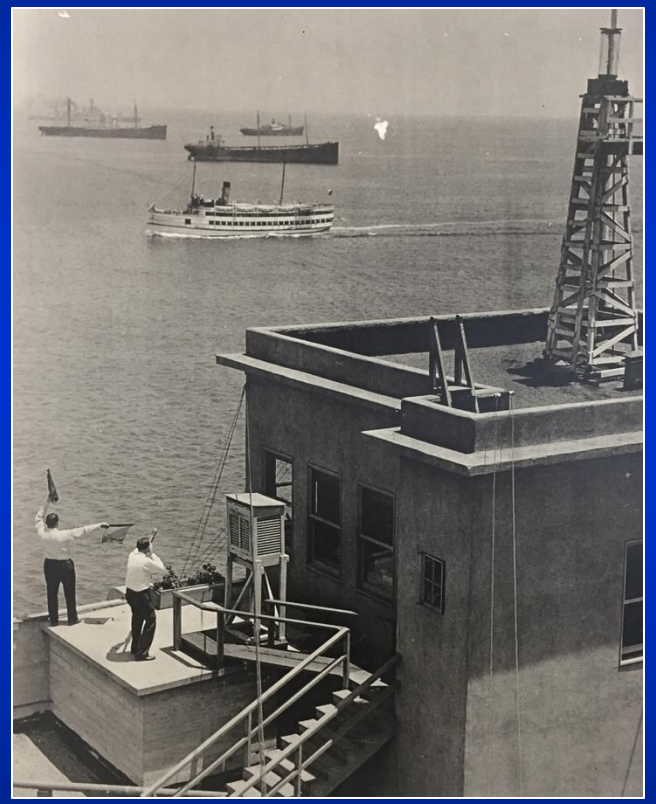
Marine Exchange of Alaska is a non-profit maritime organization established to provide the Alaska maritime community information, communications and services to ensure safe, secure, efficient and environmentally responsible maritime operations.

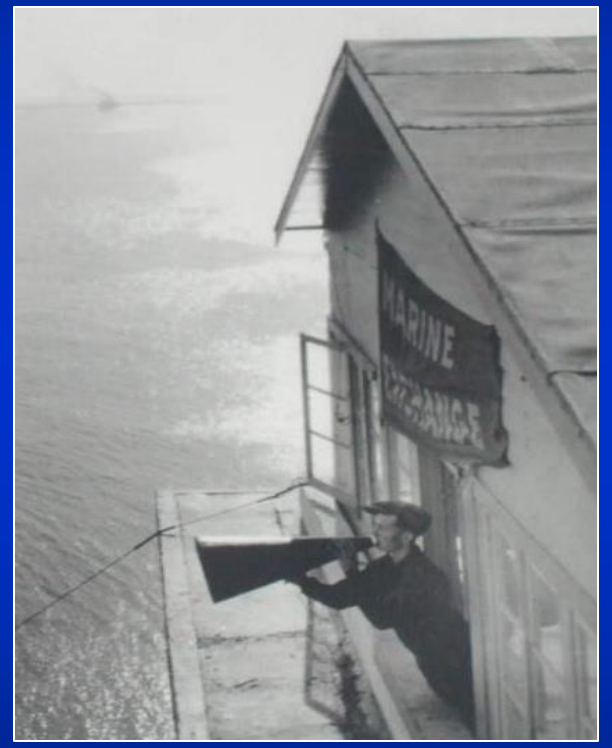
24 Hours Operations Center

Marine Exchange Ship Spotting

Telescopes, Signal Flags, Megaphones

Date back 175 Years





New York, Baltimore, Los Angeles, San Francisco,
Portland and Seattle

State of Alaska, Maritime Community, Coast Guard, NOAA, NFWS

Selendang Ayu

Aleutian Islands 2004

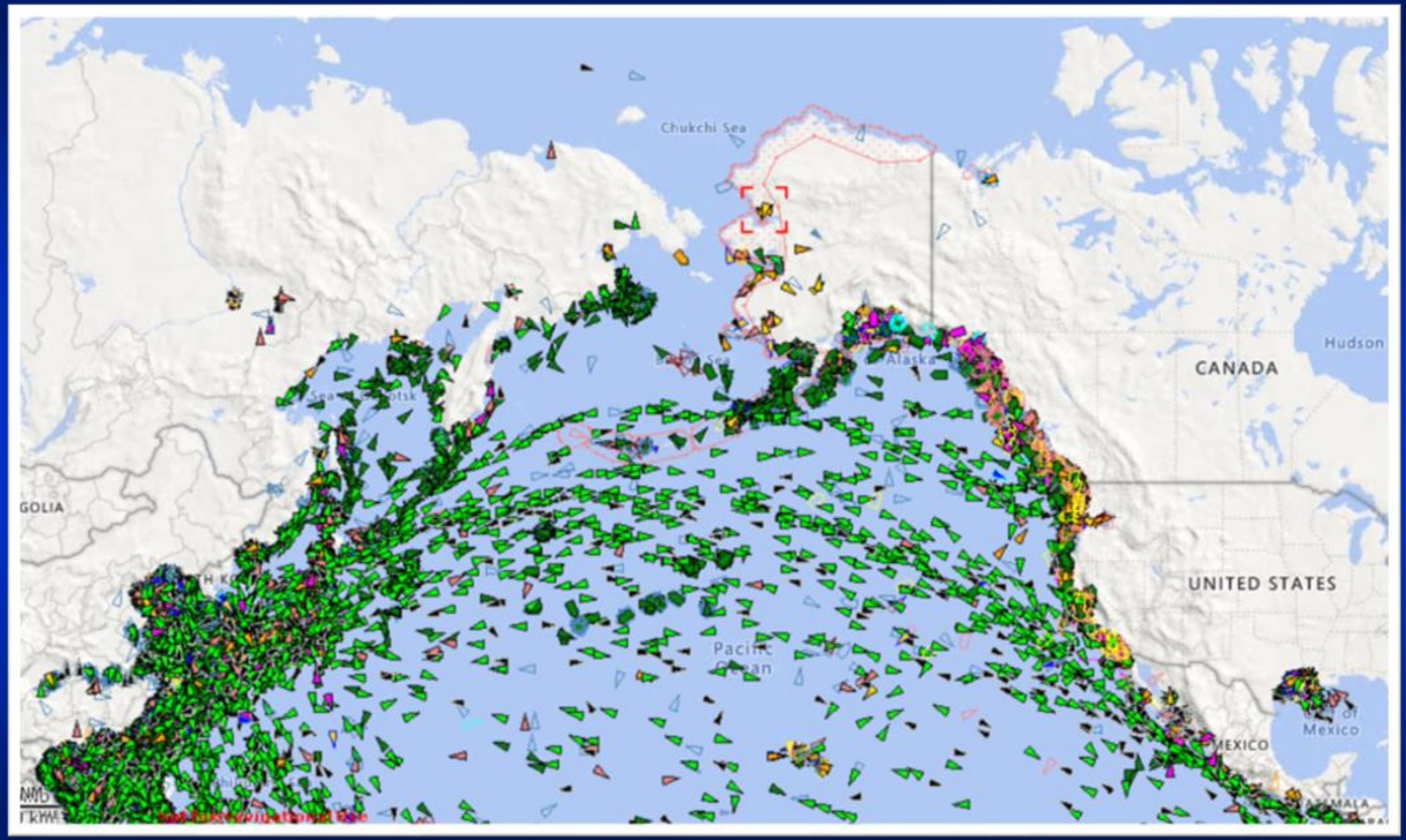
No Maritime Domain Awareness or Management

Remote – Self Supported AIS Sites

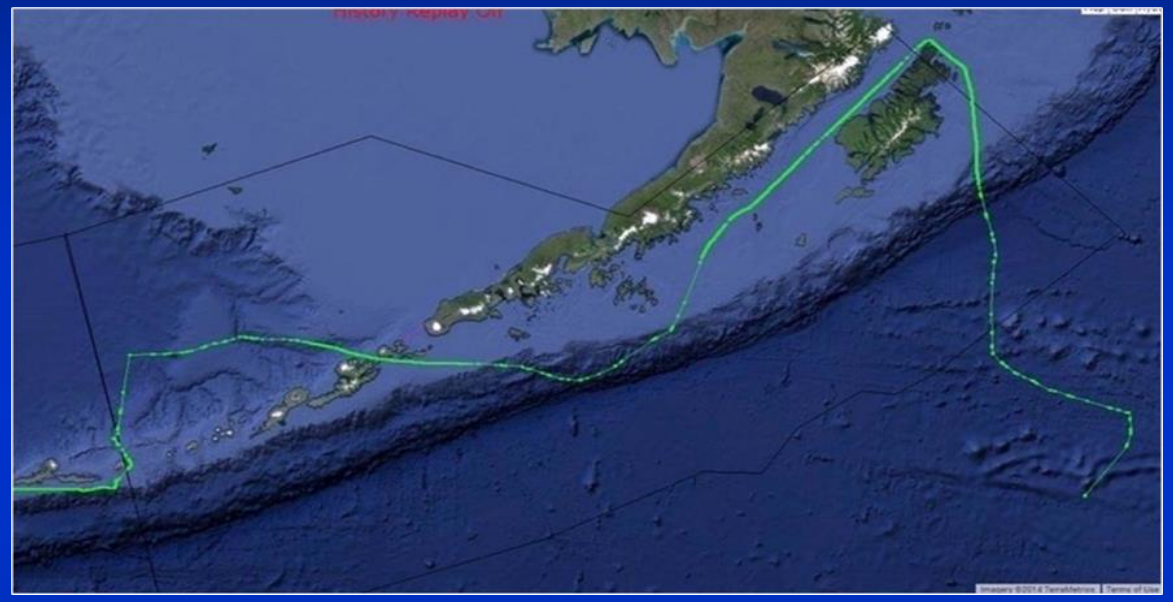
MXAK Alaska Marine Safety Network

Build it and they will come!

150 locations: Vessel Tracking, Weather Reporting and Communications Capabilities

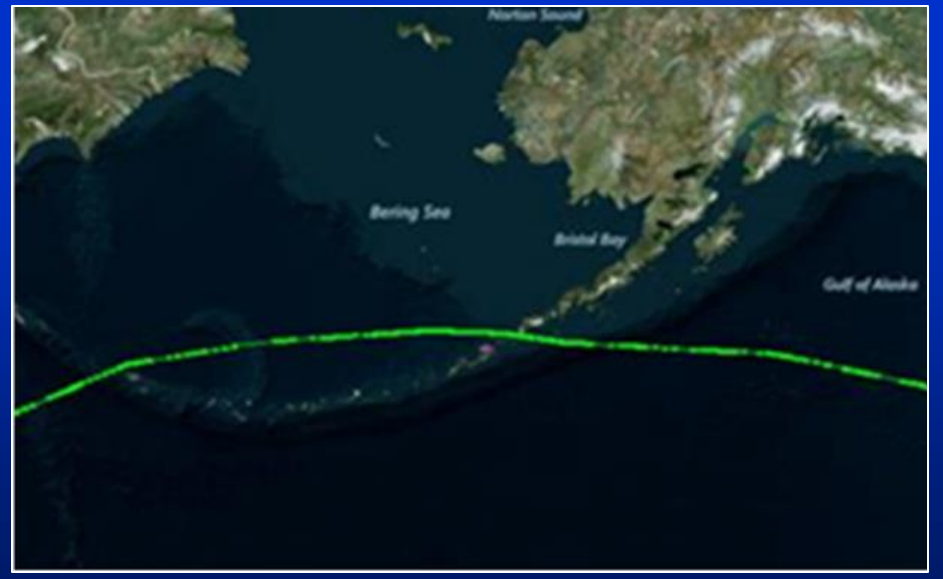

Chukchi Sea
Alaska
CANADA
Hudson
UNITED STATES
Pacific Ocean
Mexico
MEXICO

Sea Traffic Management
Industry Governance



Previous Transit

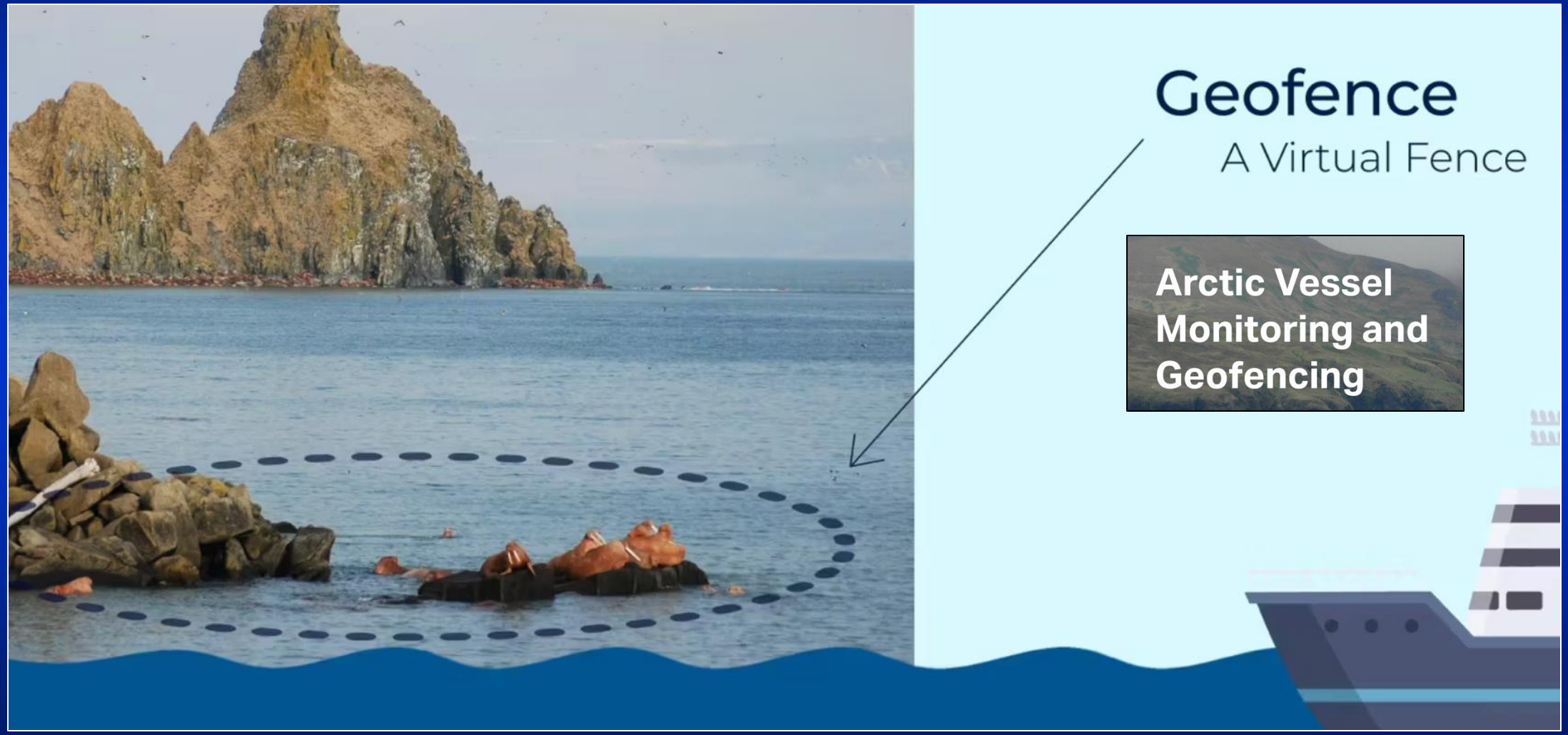
Next Transit

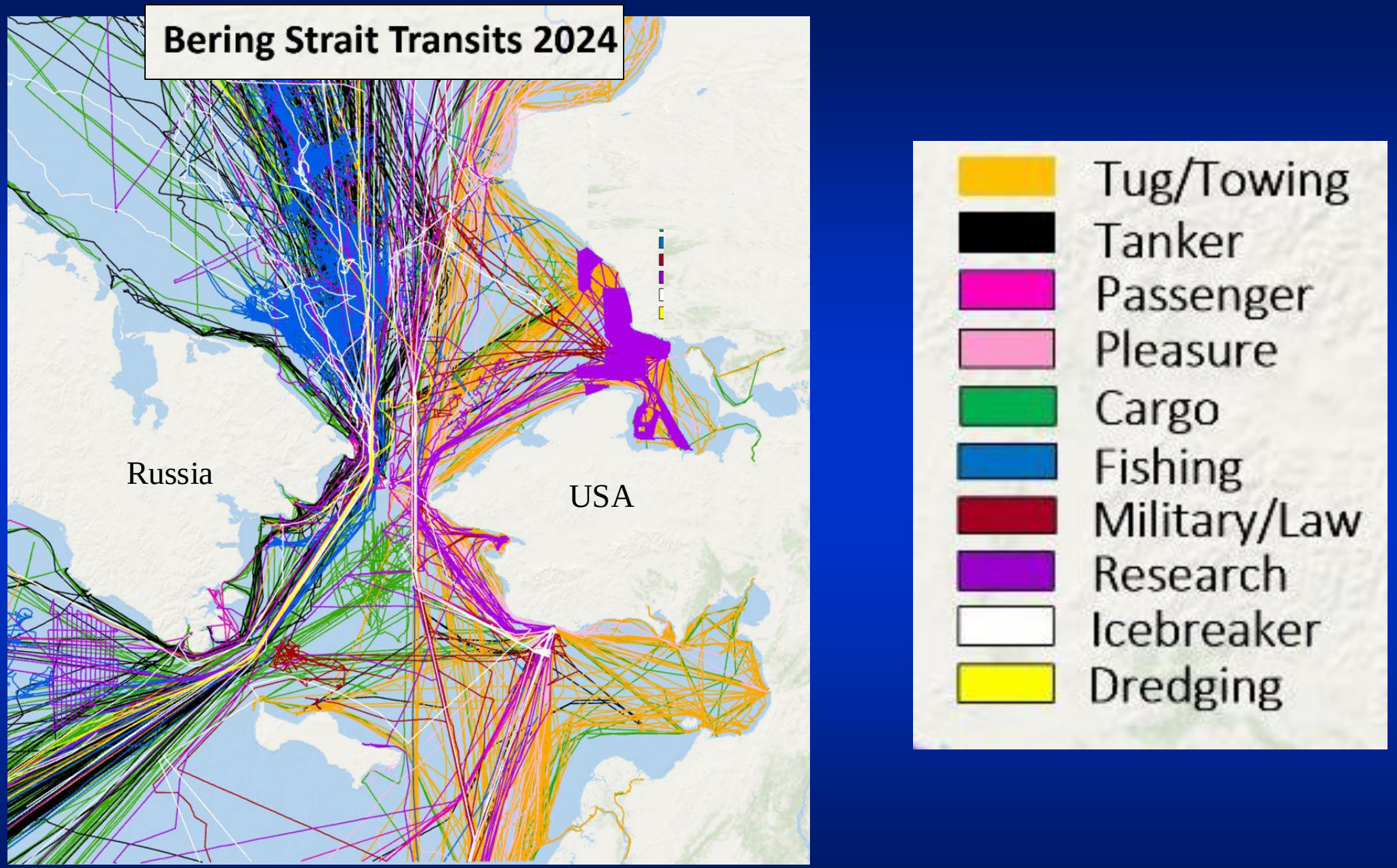


Protection of Marine Environment

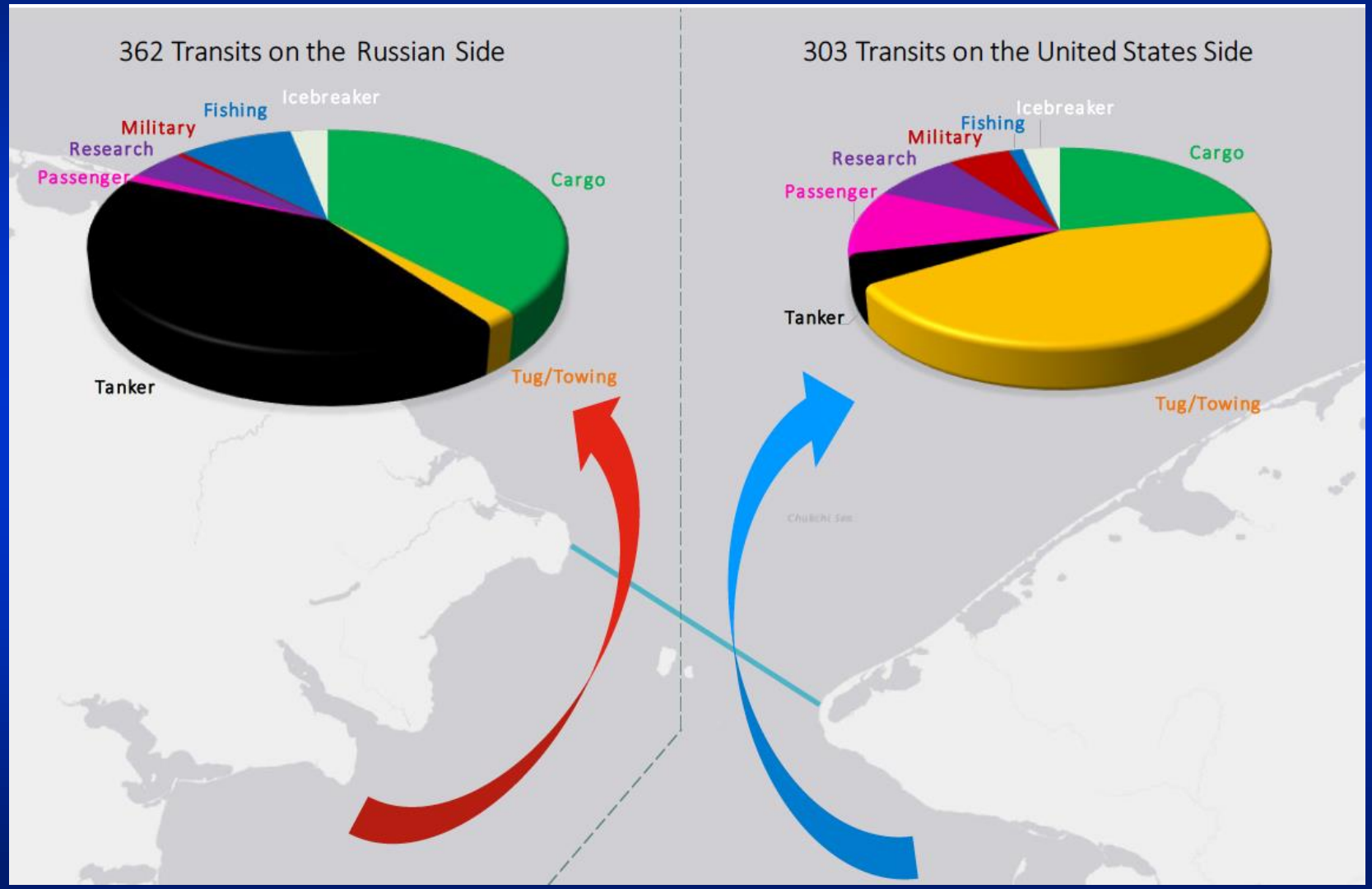
Protection of Marine Environment

Use of Geo-Fences




Bering Strait Transits 2024
Russia
USA
Tug/Towing
Tanker
Passenger
Pleasure
Cargo
Fishing
Military/Law
Research
Icebreaker
Dredging

Bering Strait Transits 2024



Year	Northbound	Southbound	Total
2010	128	114	242
2011	124	115	239
2012	154	162	316
2013	171	173	344
2014	130	125	255
2015	232	220	452
2016	158	182	340
2017	164	196	360
2018	183	175	358
2019	241	236	477
2020	267	290	557
2021	278	277	555
2022	252	257	509
2023	319	362	681
2024	325	340	665

Increase in Maritime Traffic in Bering Strait

Russia's Dark Tanker Fleet

The New York Times

Fake signals and American insurance: How a dark fleet moves Russian oil.

The Cathay Phoenix is not a lone rogue ship, but one of at least three tankers identified by The New York Times taking extraordinary steps to hide their true activity, a

Tankers

History Replay Pause

History Replay

Date: 2022-08-10 12:55

Local:2022-08-04 14:55:00
UTC:2022-08-04 22:55:00

Auto | Manual | Stop

MMSI(s):

Time Span: Minutes

Ship Path | All Paths | Clear

Download Data | Close

EDUARD TOLL

Anadyrskiy Gulf

CLEAN VISION

CLEAN PLANET

CLEAN OCEAN

CG KIMBALL

Bering Sea

ALASKA

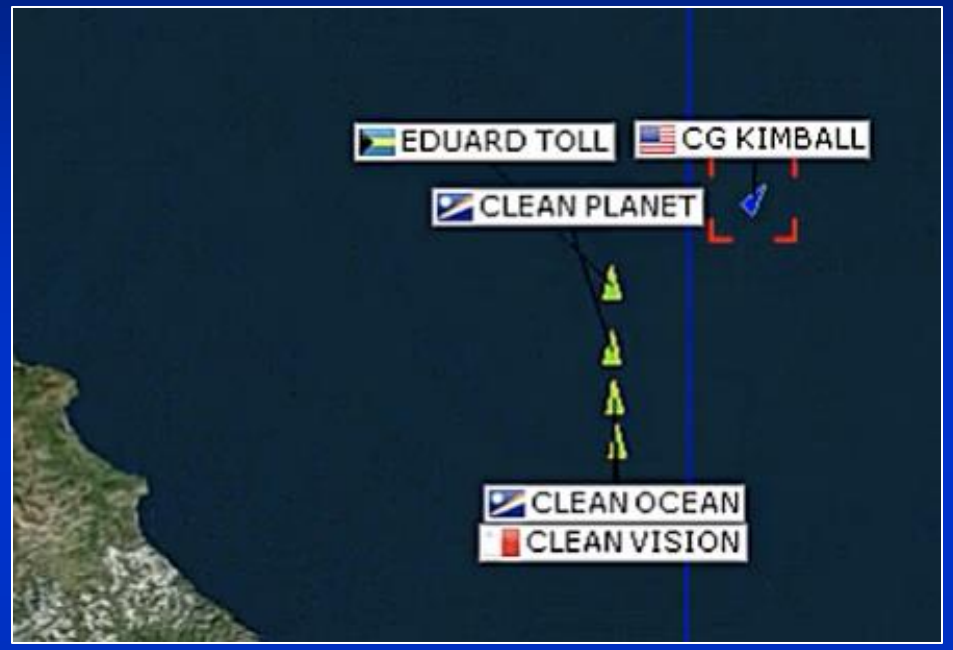
Fairbanks

Anchorage

4 Tankers headed to the Northern Sea Route

Navigational Use

Tankers– Bering Strait



Flags:
Bahamas
Malta
Marshall Islands

USCG-MXAK CRADA

(Cooperative Research and Development Agreement)

"Arctic Next Generation Navigational Safety Information System"

AIS transmission tests conducted with Coast Guard cutter Healy

Arctic Next Generation Navigational Safety Information System

Builds upon AOOS AIS/WX project to communicate information to vessels via AIS;

- Virtual aids to Navigation (i.e. buoys)
- Locations of whalers
- Environmental Data (i.e. weather and ice)
- Locations of whales
- Vessels in distress, etc.
- Notify vessels in “Areas to be Avoided” or exceeding speed restrictions

Addressing Maritime Safety Gaps in Alaska

Distress Communications Services

Maritime Frequency Band (156-174 MHz)

Distress Comms (In Depth)

- Transmit and Receive:

Ch.9: Boater Calling
Ch.16: International Distress, Safety Calling
Ch.68: Non-Commercial
Ch.69: Non-Commercial
Ch.70: Digital Selective Calling (DSC)

UNITED STATES COAST GUARD

REPORT OF THE MARINE BOARD OF INVESTIGATION INTO THE COMMERCIAL FISHING VESSEL SCANDIES ROSE (O.N. 602351)

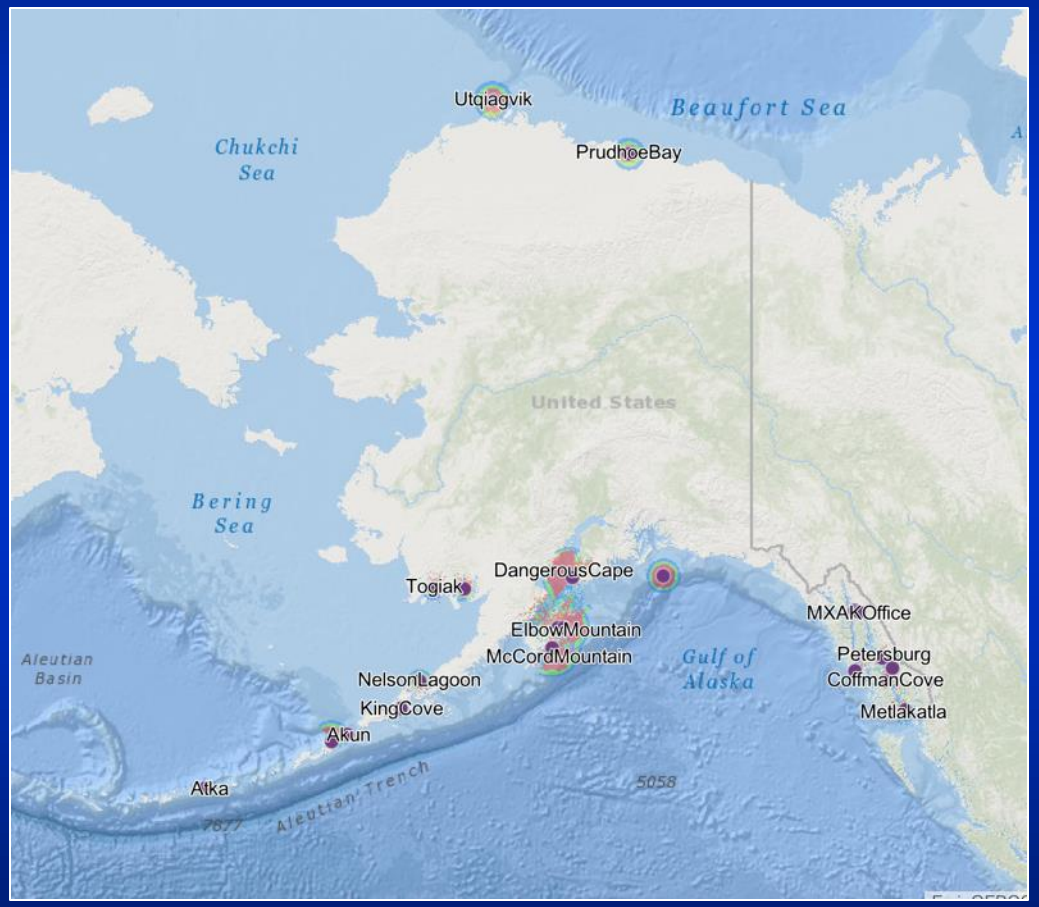
SINKING AND LOSS OF THE VESSEL WITH FIVE CREWMEMBERS MISSING AND PRESUMED DECEASED SOUTH OF SUTWIK ISLAND, ALASKA ON DECEMBER 31, 2019

MISLE ACTIVITY NUMBER: 6881487

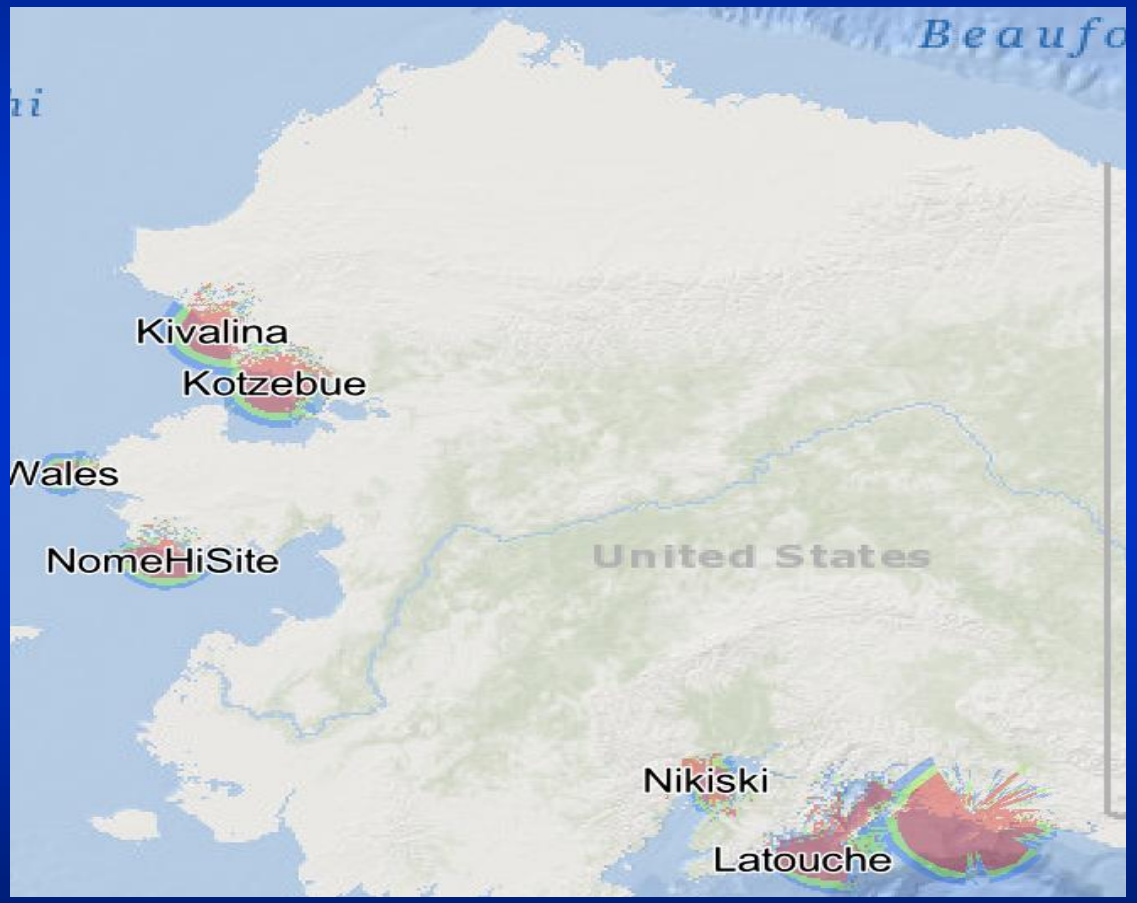
Recommendation 12: Recommend that the Commandant of the Coast Guard, specifically CG-761, examine and close the automatic identification system (AIS) and Rescue 21 (R21) coverage gaps that exist in Alaska to ensure the effectiveness of Coast Guard operations as well as meet national security requirements. As efforts to reduce coverage gaps in D17 partially rely on the work of industry partners, it is strongly recommended that Coast Guard initiatives include collaboration with existing industry partners and utilization of already available communications technology, such as the AIS/DSC capabilities of the Marine Exchange of Alaska.

Action: I concur with this recommendation. The Coast Guard is developing new operational requirements through the DHS Joint Requirements Integration and Management System (JRIMS) process for both follow-on R21 and AIS marine communications systems. These efforts will include an analysis of coverage gaps for both marine VHF (R21) and AIS capabilities in the Alaskan region. Additionally, the Coast Guard is sponsoring a distress alerting gap analysis with the DHS Science &Technology (S&T) Directorate, which will demonstrate and recommend viable approaches to use commercially available space-based solutions to augment the R21 system. The Coast Guard will continue to collaborate with the Marine Exchange of Alaska and other industry partners to utilize existing and planned marine VHF and AIS solutions to close the coverage gaps throughout the Alaskan region.

Addressing Distress Communications Gaps in Alaska
VHF Radio and Digital Selective Calling



22 Installed to Date



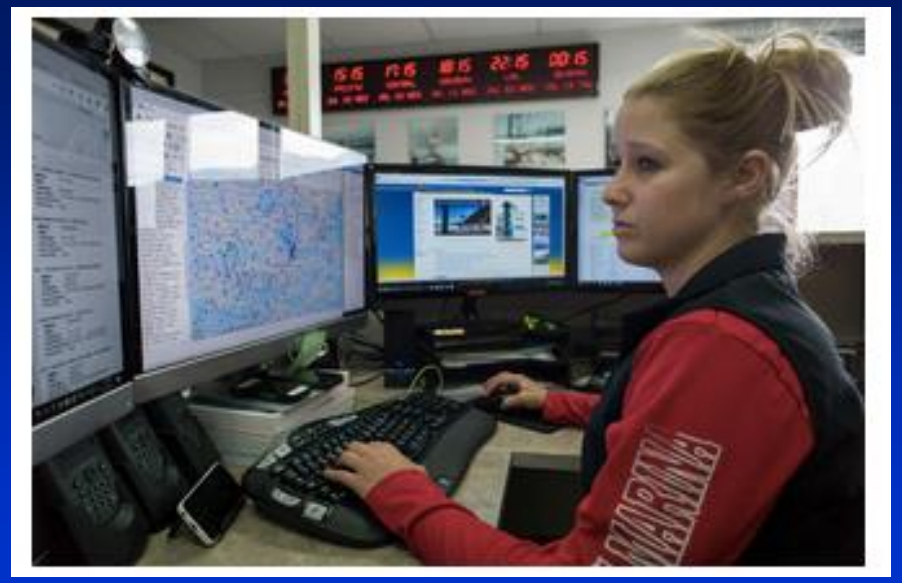
10 Planned in 2025

ArcticWatch

With More Ships in the Arctic, Fears of Disaster Rise

By HENRY FOUNTAIN JULY 25, 2017

Crystal Serenity, a 1,000-passenger luxury liner, at a stop in Ulukhaktok in Canada's Northwest Territories during a Northwest Passage cruise in August. Katie Orlinsky



The New York Times

At the Marine Exchange of Alaska in Juneau, Shelby Martin monitors ship traffic through the state's waters. *Credit Michael Penn for The New York Times*

Even relatively simple monitoring of ships can reduce the potential for disaster. Ed Page, a former Coast Guard captain, runs a private-public partnership, the Marine Exchange of Alaska, that uses a network of radio receivers to watch over ships around Alaska. Exchange operators can contact vessels that are getting too close to shore — a ship should usually be far from land, so that in the event of a mechanical problem, it has time for repairs without running aground — and have them change course.

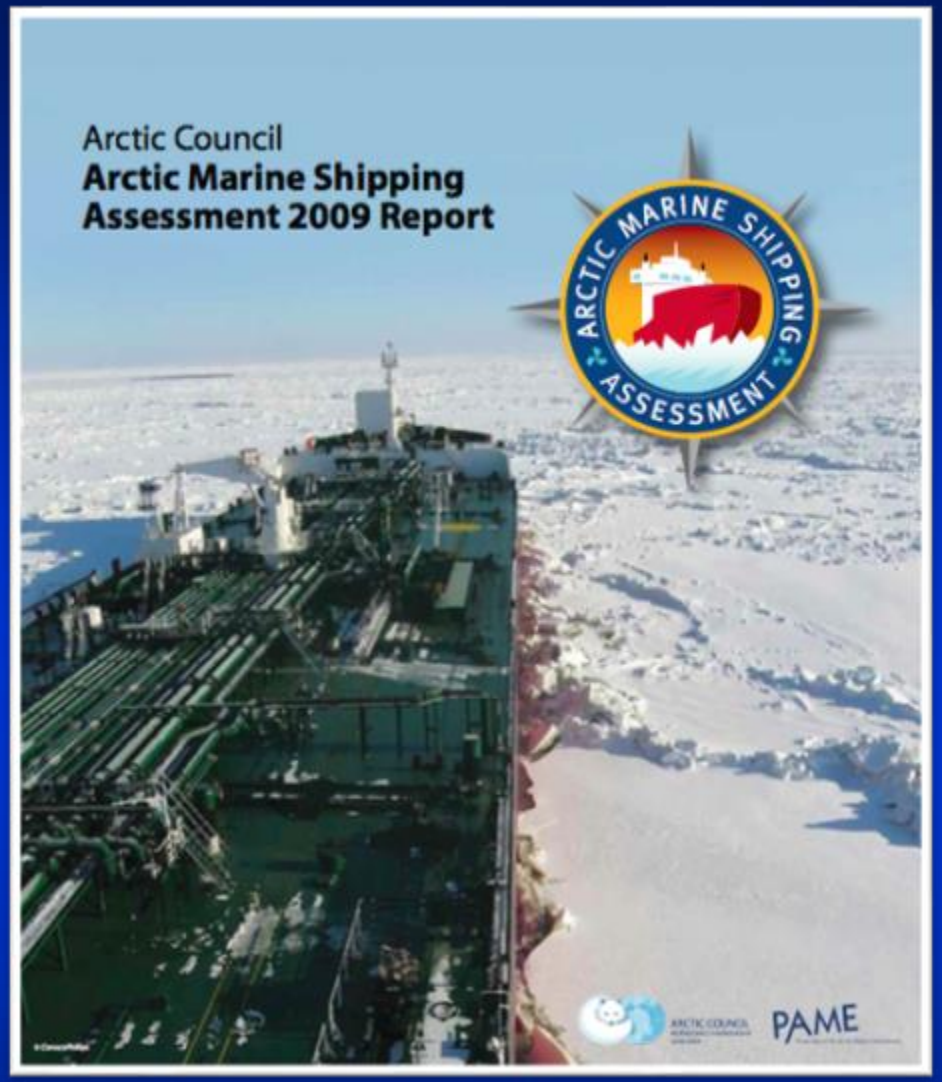
Captain Page acknowledged that if something went disastrously wrong with a ship within the 1.5 million square miles of ocean his network covers, "it would be ugly."

"But we should stop worrying about what we're going to do when things go wrong," he said. "We should prevent things from going wrong."

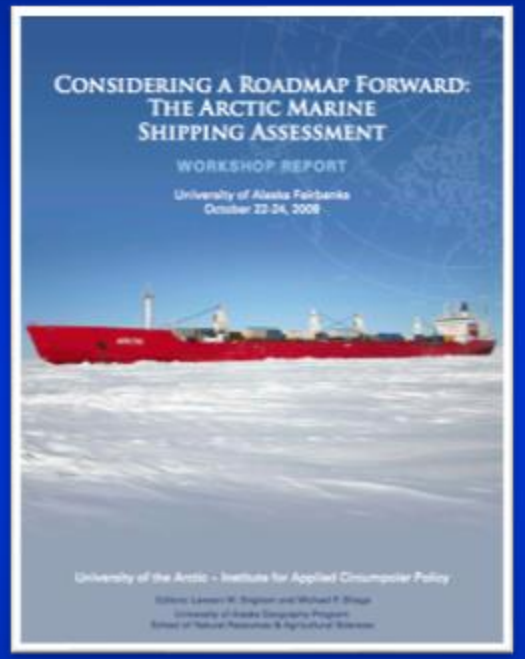
Cruise Ships
Northwest Passage
Greenland to Alaska

FROM
$37,330

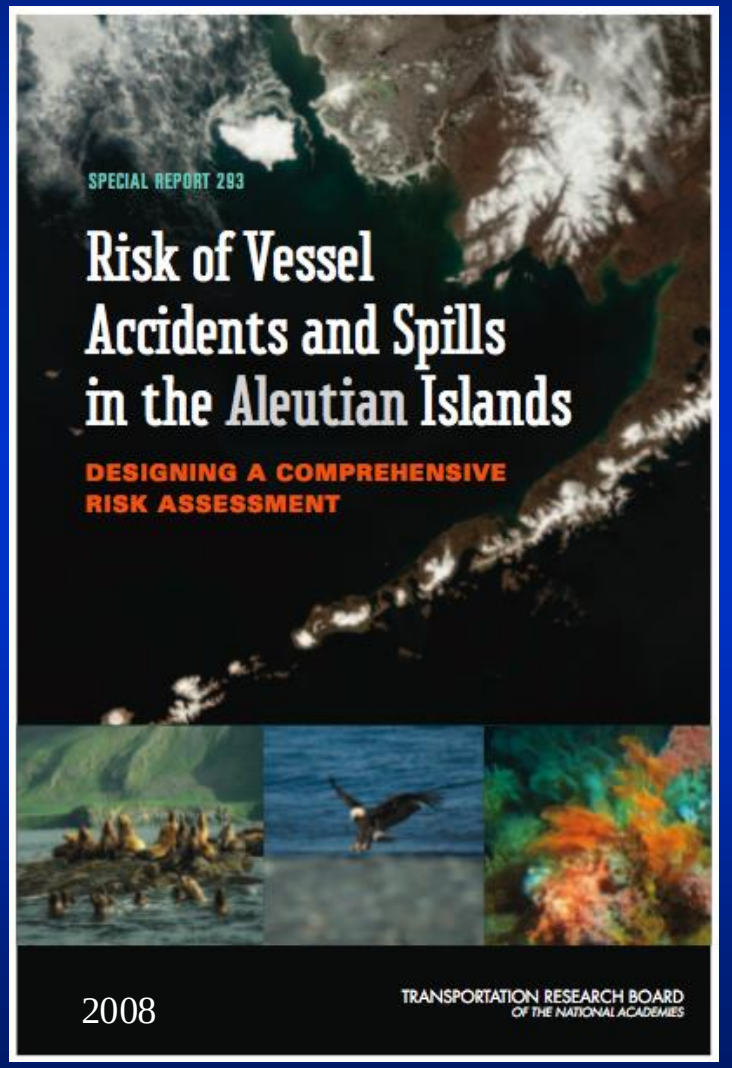
DURATION
22 days



"Completion of an AIS receiver network in the Arctic is high priority; linkages between AIS and marine mammal awareness need to be developed."



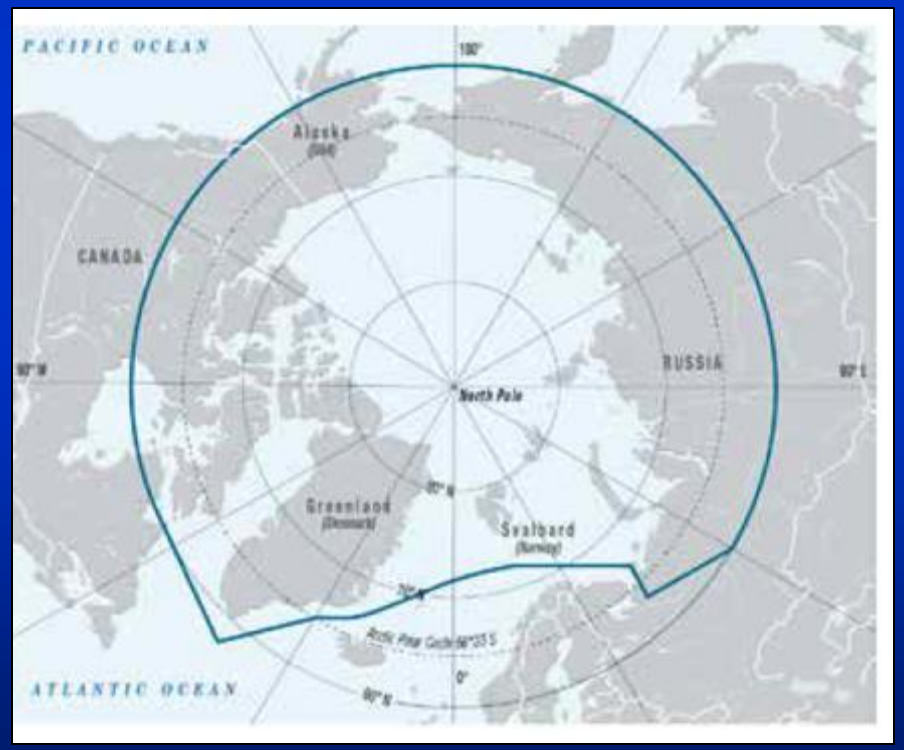
"… take appropriate action to expand the AIS tracking network …"



ArcticWatch

- Commercial ships voyaging and operating in remote polar waters place a premium on ship monitoring and tracking. Sharing Arctic marine traffic data among the flag and port states may require a new binding agreement among the Arctic states. This information could provide new data on the effectiveness of the IMO Polar Code and how the marine industry is adjusting to these new rules and regulations.

related to the future protection of Arctic people, especially those in Arctic coastal communities and their traditional lifestyles. The IMO is



ArcticWatch

The Polar Code is intended to cover the full range of shipping-related matters relevant to navigation in waters surrounding the two poles – ship design, construction and equipment; operational and training concerns; search and rescue; and, equally important, the protection of the unique environment and eco-systems of the polar regions.

Respond to Local Concerns

Bering Strait Voices workshops in 2014 and 2016

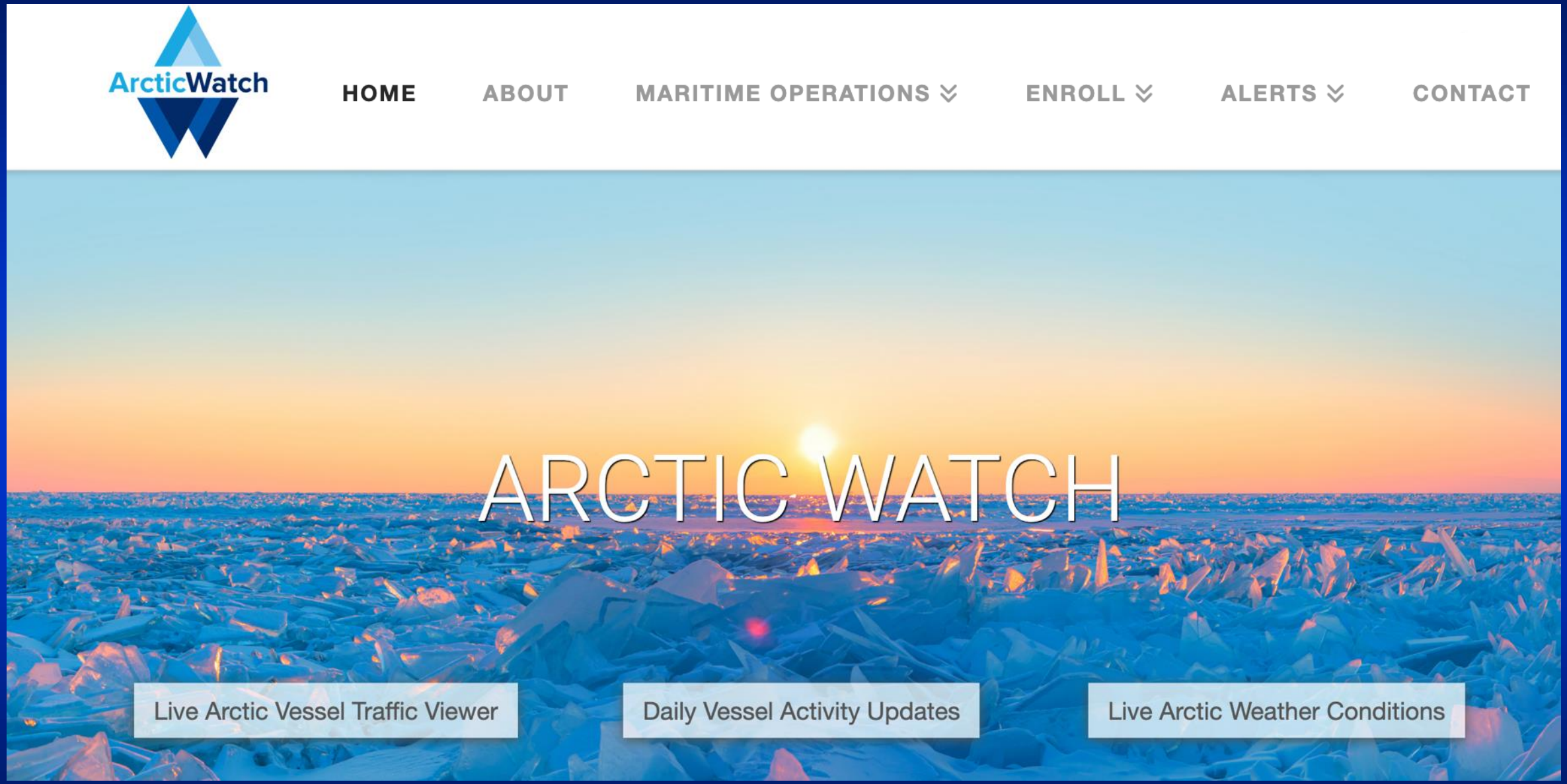
- Want to know what's happening
- Want to shape shipping policies

In 2023, Tribal Advisory Council of Northern Bering Sea Climate Resilience Area issued a letter to U.S. Coast Guard asking for a greater understanding of Bering Sea vessel traffic and influence over it.

Clyde Oxerok speaking at the 2016 Summit as Michael Kiyuklook and Cameron Okbaok listen.

Arctic Representatives Meeting in Juneau

February 2024


ArcticWatch
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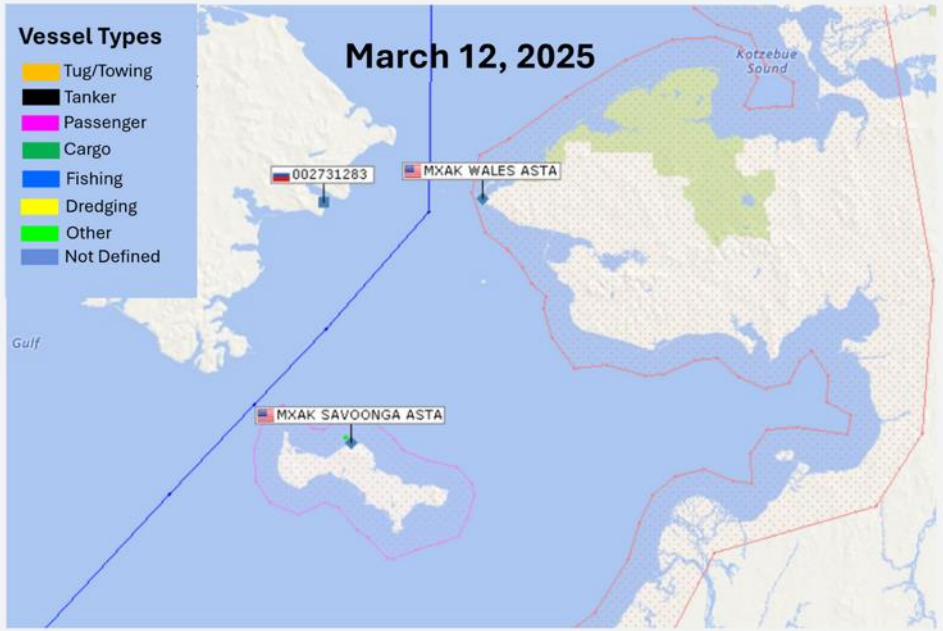
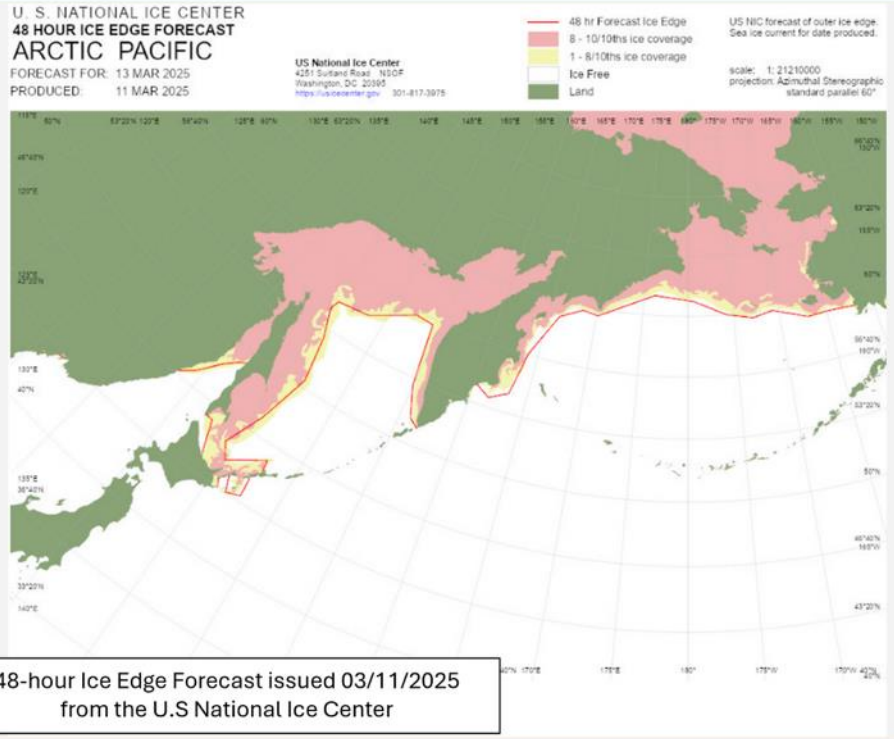
ENROLL
ALERTS
CONTACT
ARCTIC WATCH
Live Arctic Vessel Traffic Viewer
Daily Vessel Activity Updates
Live Arctic Weather Conditions

Arctic Watch Web Site Information

DAILY VESSEL ACTIVITY

Click image to see daily snapshots of vessel activity in the Arctic. Only vessels transmitting AIS signals are shown.





48-hour Ice Edge Forecast issued 03/11/2025
from the U.S National Ice Center

Vessel Activity Archive

Arctic Watch Operations Center

INFORMATION HOLDERS

- State Agencies (ADFG, DEC)
- Federal Agencies (NOAA, NMFS, NWS, USFWS)
- U.S. Coast Guard Emergency First Responders
- Alaska Natives Arctic Communities
- Academia/Researchers
- Vessels Operating in the Area
- Subsistence Harvesters

ArcticWatch

CAPABILITIES

INFORMATION

- Marine Protected Areas (Walrus haul-outs)
- Ice & Weather Conditions (Web & AIS Broadcast)
- Vessels in Distress (Active monitoring, coordination & response)
- Virtual Aids to Navigation (Traffic Lanes, ATBA)
- Endangered Species (Reduced Speeds)
- Active Harvesting Activities (VHF/AIS/Community link)

Arctic Watch 2025

- Build out additional vessel tracking, weather and communications stations
- Enroll vessels (no fee) in the Arctic Watch initiative to participate in the transmitting and receiving information that aids safe and environmentally sound maritime ops.
- Complete development and deployment of smart phone Arctic Watch weather and vessel tracking display for Arctic residents and vessel operators
- Operate a 24 hour Arctic Watch and partnering with local residents to provide, receive and disseminate safety and environmental information to their communities.

Arctic Watch