

Time, Distance,
and
Consequences:
Oil Spill
Response in the
Arctic Reality

ALASKA SENATE SPECIAL
COMMITTEE ON ARCTIC
AFFAIRS

FEBRUARY 19, 2026



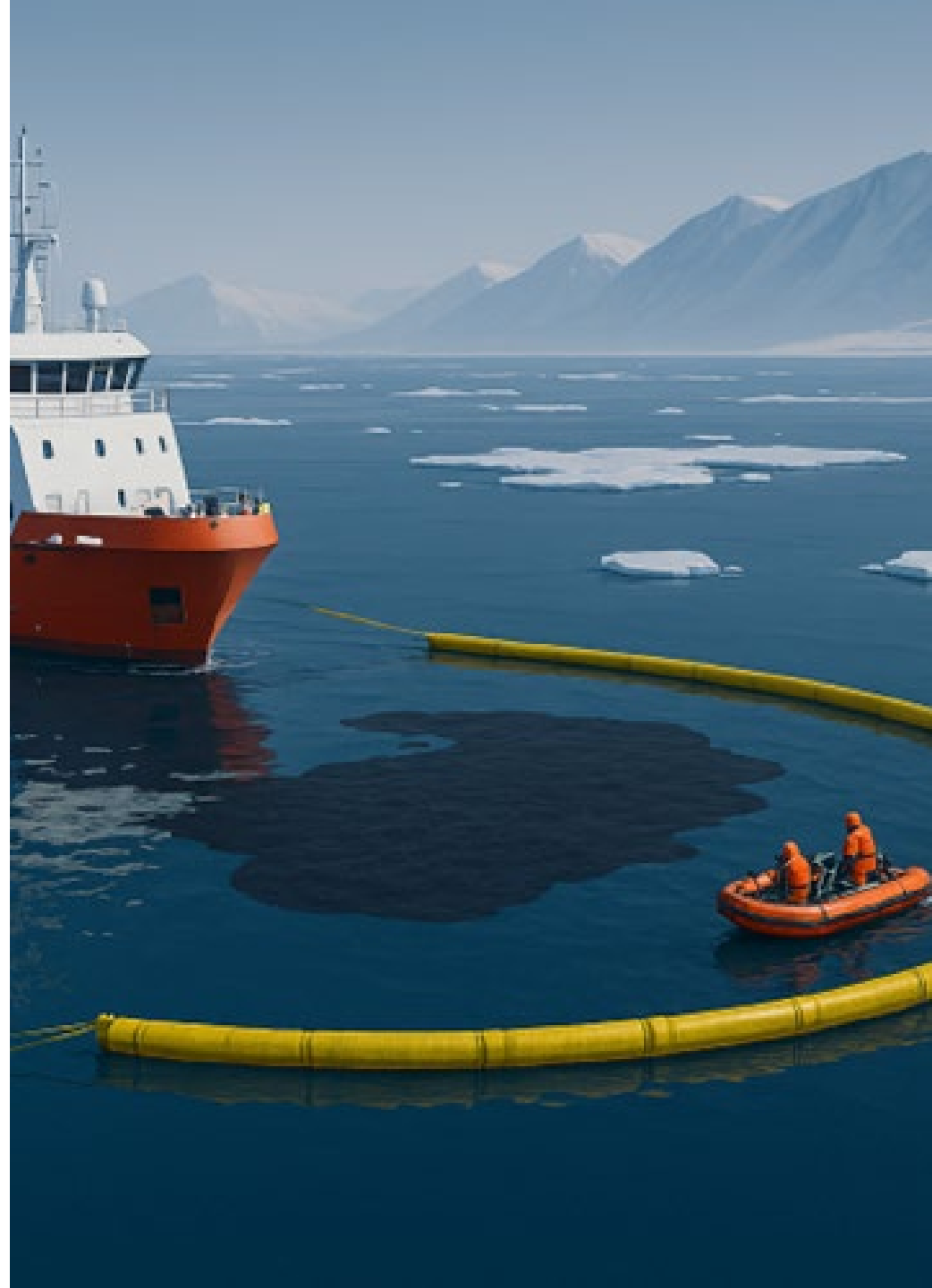
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**Chaduñ
Network**

PREVENT / RESPOND / PIONEER



Agenda

- Alaska Chaduê Network Overview
- Oil Spill Response Challenges in the U.S. Arctic
- Oil Spill Structure in Alaska
- Strategic Outlook
- STARS





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Prevention Focused – Response Ready

PREVENT / RESPOND / PIONEER



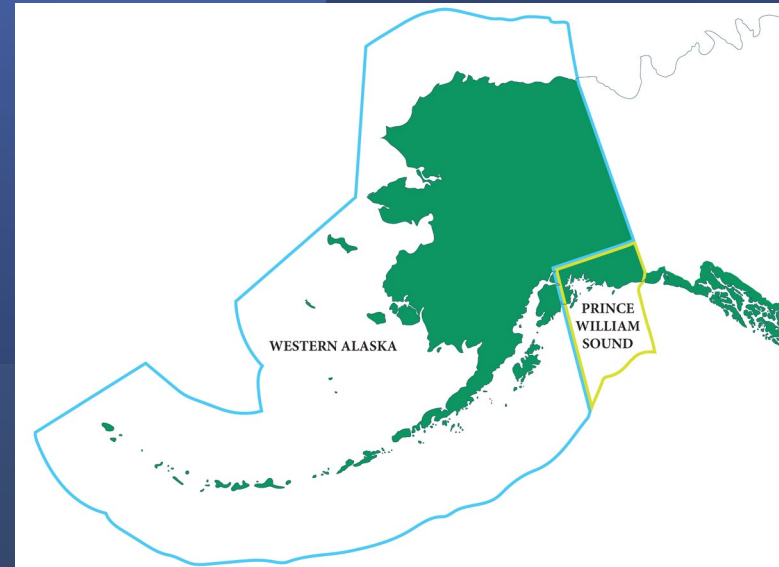
Mission

Provide regulatory compliance with federal and state oil spill prevention and response requirements while advancing innovative solutions to the unique challenges of operating in Alaska and the U.S. Arctic region.



Alaska Chaduê Network

- State of Alaska
 - ❖ Primary Response Action Contractor (PRAC)
 - ❖ Streamline Cleanup Contractor (SCC)—Nontank, Noncrude Tank Vessel & Barge Cleanup Contractor
- USCG classified Oil Spill Removal Organization (OSR) & Alternative Planning Criteria Administrator (APC)
- Founded in 1993
- Industry-led **nonprofit** focused on:
 - ❖ Preventing oil spills
 - ❖ Responding with Alaska-proven resources
 - ❖ Pioneering new technology
- Led by Board of Directors comprised of maritime & fuel facility executives



Coverage Area

- ~1.5 million sq miles ocean
- Interior Alaska



Member Company Types

Tank Vessel



Tank Barge



Fishing Vessels

Nontank Vessel



Railroad



Exploration Drilling



Tank Facility & Refineries

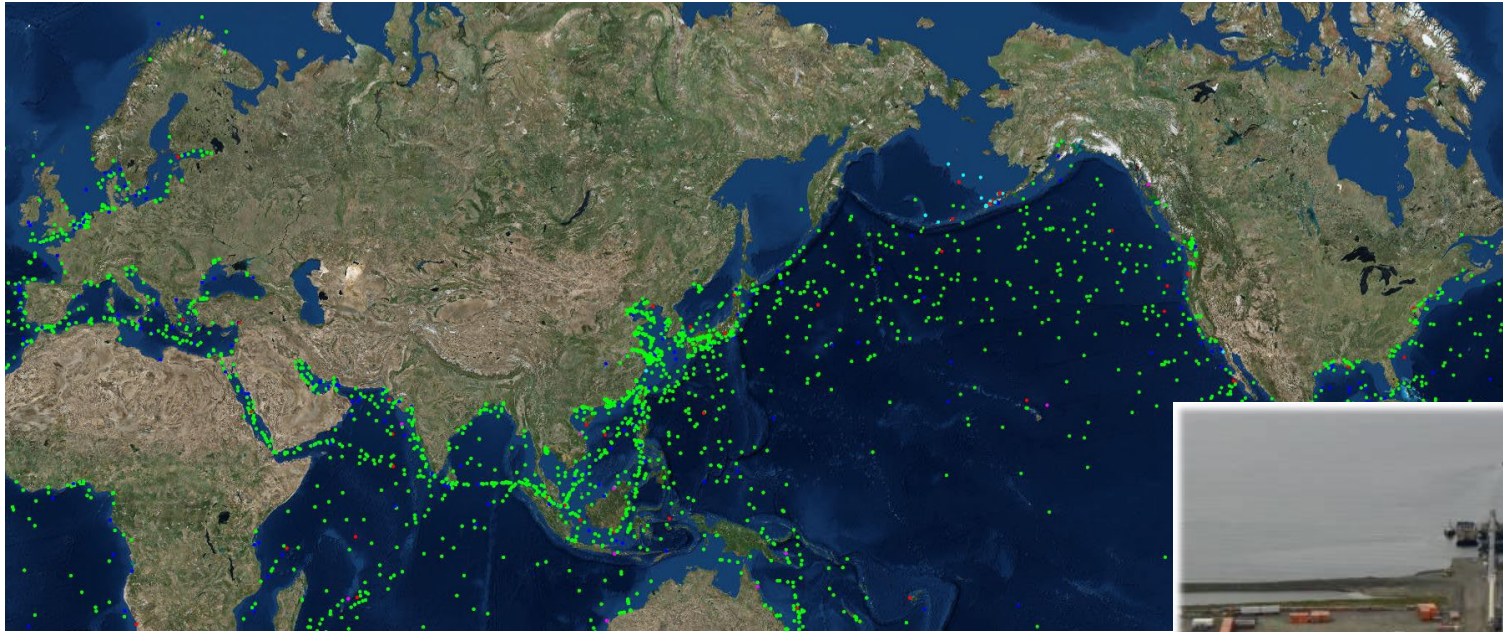


Tank Farm



Disaster Response

Vessels & Facilities

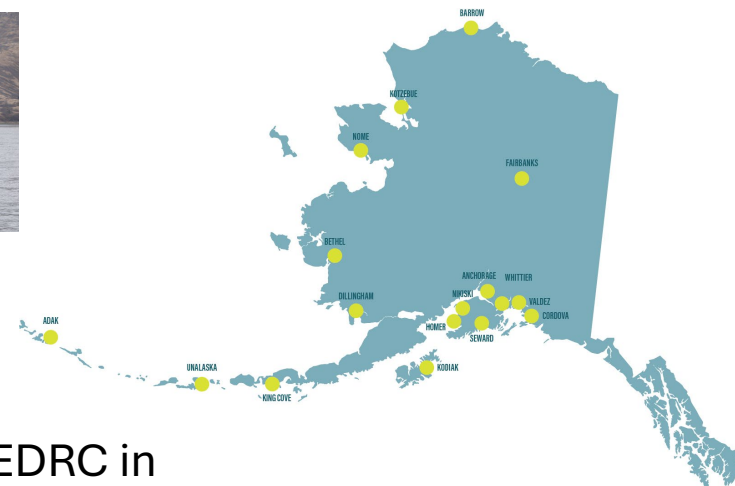
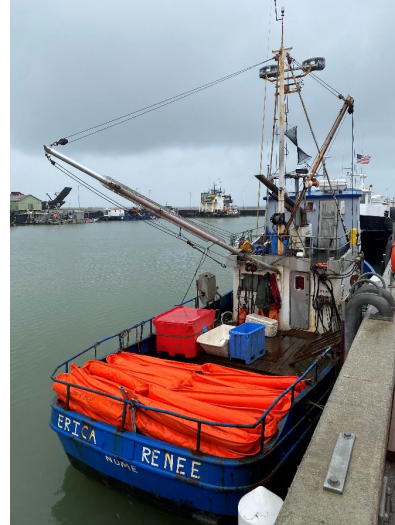


Support over 620 U.S. and International vessel owners & operators that comprise over 5,100 enrolled vessels



34 facility planholders comprising 125+ facilities

Response Capabilities



Containment

- 27+ miles of boom

Mechanical Recovery

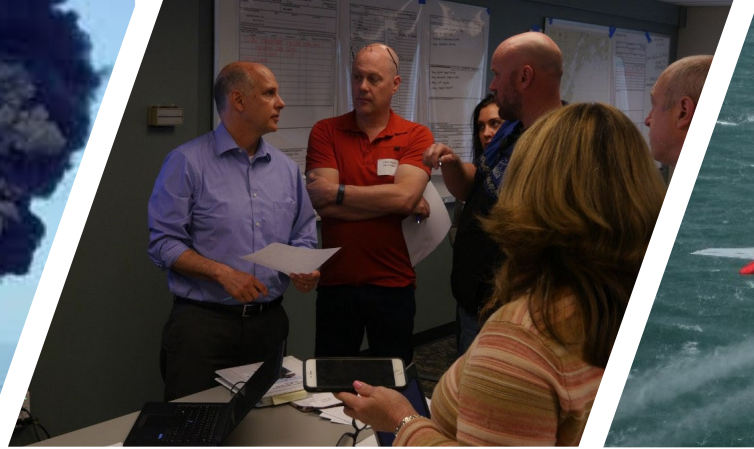
- 78,000+ bbls total EDRC in inventory

Temporary Storage

- 36,000+ bbls dedicated total

Crewed Hubs

- Anchorage
- Dutch Harbor



Other Capabilities

In Situ Burning | Dispersants | Wildlife | Non-floating Oil | Aerial Observers & Drone Certified



Resources of Opportunity & Emergency Towing Access Program

Vessel of Opportunity

- 60+ pre-contracted vessels in 9 ports in WAK and PWS

Barge of Opportunity

- ~ 30 tank barges in program
- ~ 800,000 bbls of on-water storage

Emergency Towing Access Program

- 14 companies signed the agreement
- Provides access to 90+ tugs





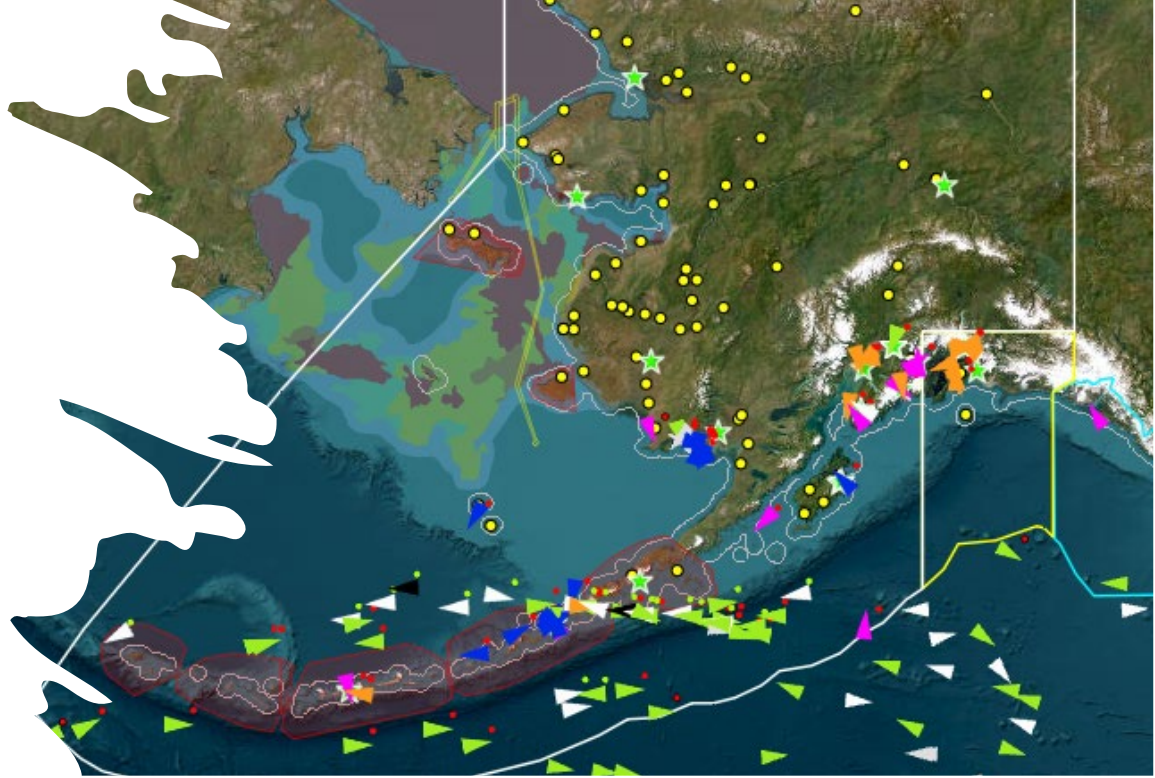
Logistics Partnerships & Agreements



Monitoring Center

Provides continuous oversight and rapid response capabilities to ensure the safety of Alaska's waters, coastlines, and communities.

- **24/7 Staffed in Anchorage**
 - Proactive Engagement
 - Advanced Risk Detection
 - Compliance Validation
 - Emergency Assistance
 - Seamless Response Coordination



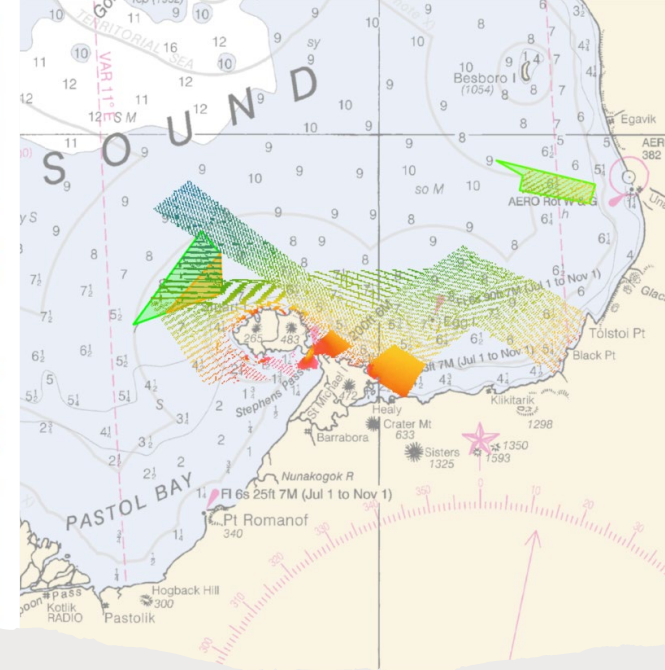


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BEST PRACTICES FOR WESTERN ALASKA TANKER LIGHTERING OPERATIONS

2025 SEASON
ADOPTED MARCH 12, 2025



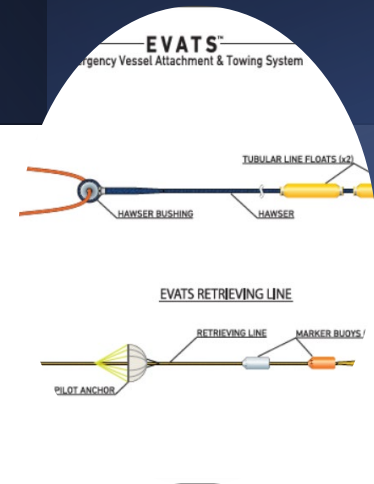
Western Alaska Tanker Lightering Committee

- Purpose: enhance safe and environmentally sound tanker fuel transfer operations for essential fuel deliveries in the remote regions of Western Alaska.
- Scope: 160 remote villages, serving approximately 75,000 Alaskans, dependent on fuel to provide heat and energy to support life in austere Western Alaska environment.
- Committee: tank vessel and tank barge operators, Alaska Marine Pilots, Alaska Chaduê Network, USCG, ADEC, NOAA Coast Survey, NOAA Emergency Response, NOAA National Weather Service, Alaska Maritime Agency, Kawerak, Ocean Conservancy.
- Output: *Best Practices for Western Alaska Lightering Operations Guide*.
- Average Lightering Season: ~130,000,000+ gallons of light fuel oil transferred (STS + STB)

Research & Development



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- **Sea Arrestor** – arrest drift rate by half & stabilize vessel motion by keeping out of trough.
- **Emergency Vessel Attachment & Towing System (EVATS™)** – towing system designed to keep equal loads on towing hawser & ease to deliver and connect system during inclement weather (Kodiak & Anchorage).
- **Fuel Collection Data Analysis** – Partnered with Le Moyne College analyzing data collected since 2020 as ~250 and 300 million gallons of fuel transits through Western Alaska each month.



Oil Spill Response Challenges in the U.S. Arctic

Arctic Boundary as defined by the Arctic Research and Policy Act (ARPA)

All United States and foreign territory north of the Arctic Circle and all United States territory north and west of the boundary formed by the Porcupine, Yukon, and Kuskokwim Rivers; all contiguous seas, including the Arctic Ocean and the Beaufort, Bering and Chukchi Seas; and the Aleutian chain.¹





Grounded Realities

- Traffic through the Bering Strait continues to increase.
- Alaska's Arctic coastline is vast and infrastructure-light.
- A spill in the Arctic is fundamentally different from the Lower 48.
- Response capability is defined less by equipment inventories and more by weather, geography, and time.

Why This Matters to Alaska

Alaska is the only Arctic state in the United States.

Maritime traffic through the Bering Strait is steadily increasing.

Offshore energy, mining, tourism, and shipping all expand risk exposure.

In the Arctic, time, distance, and environment are not variables — they are constraints.

Community & Environmental Consequences

- Subsistence reliance is direct and immediate
- Slow ecological recovery
- Cultural and food security implications
- State economic exposure (fisheries, tourism, shipping)
- Public trust and state legitimacy implications

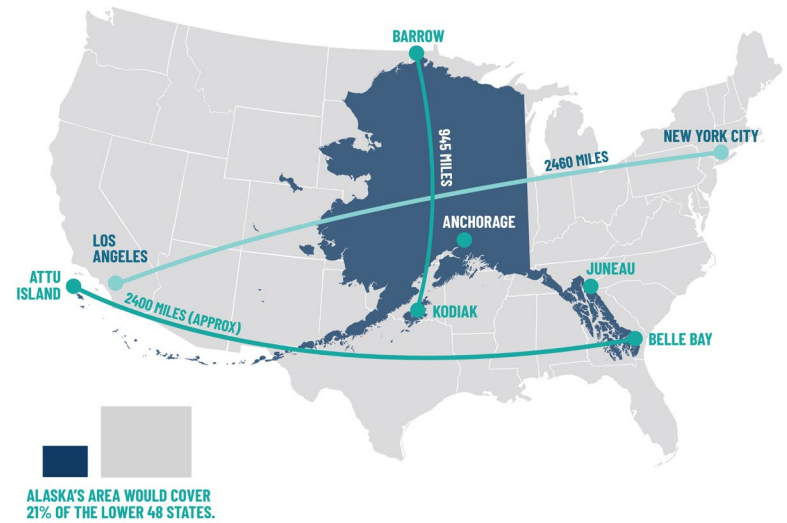
In U.S. Arctic, an oil spill is not just an environmental event — it is a community event.



The Arctic is Operationally Different

Time | Distance | Consequence

- Vast distances
- Limited Infrastructure
- Severe weather and sea ice mobility
- Extended on scene timelines
- Oil behaves differently in ice-covered water
- Ice-covered waters and extreme cold weather impact oil recovery and cleanup efforts



In U.S. Arctic, response capability is defined by time.

Remoteness & Infrastructure Realities

- Few deep-draft ports
- Limited staging and fuel capacity
- Weather-dependent aviation
- Sparse communications bandwidth
- Medical & SAR limitations

In the Arctic, the first 24 to 72 hours often determine environmental consequence



Environmental Sensitivity

- Fragile Ecosystem
- Subsistence dependence
- Narrow ecological windows

The consequence profile is often higher than volume alone would suggest.





Governance & Coordination

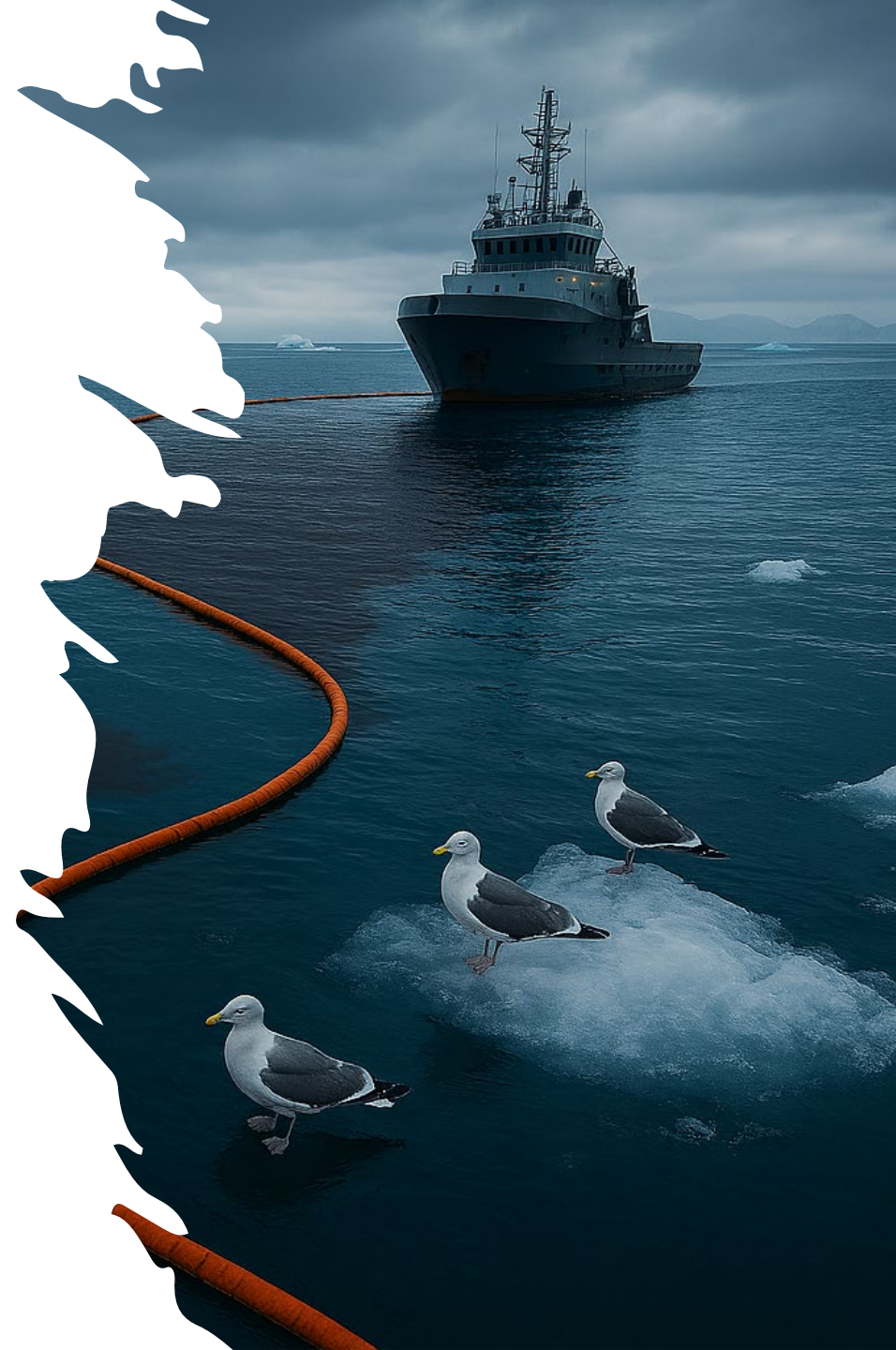
- Multi-layered regulatory authority
- Arctic-specific planning standards
- Limited communications interoperability
- Tribal coordination

Governance overlay is often as complex as the physical response itself.

The Arctic does not forgive delay

Arctic oil spill & emergency response is defined by three compounding factors:

- Environment that resists intervention
- Distance that delays intervention
- Ecosystems and communities that amplify consequence



Oil Spill Response Structure in Alaska



Response Techniques—What Actually Works in the Arctic

- Mechanical Recovery – works but limited by ice & sea state.
- In-Situ Burning – Effective in ice but narrow operational window.
- Dispersants – Technically viable but politically & publically sensitive.
- Monitoring & Detection – Weather and bandwidth dependent.

Response success depends heavily on weather, season, ice condition, pre-authorization frameworks, and type of oil.





Workforce & Training Challenges

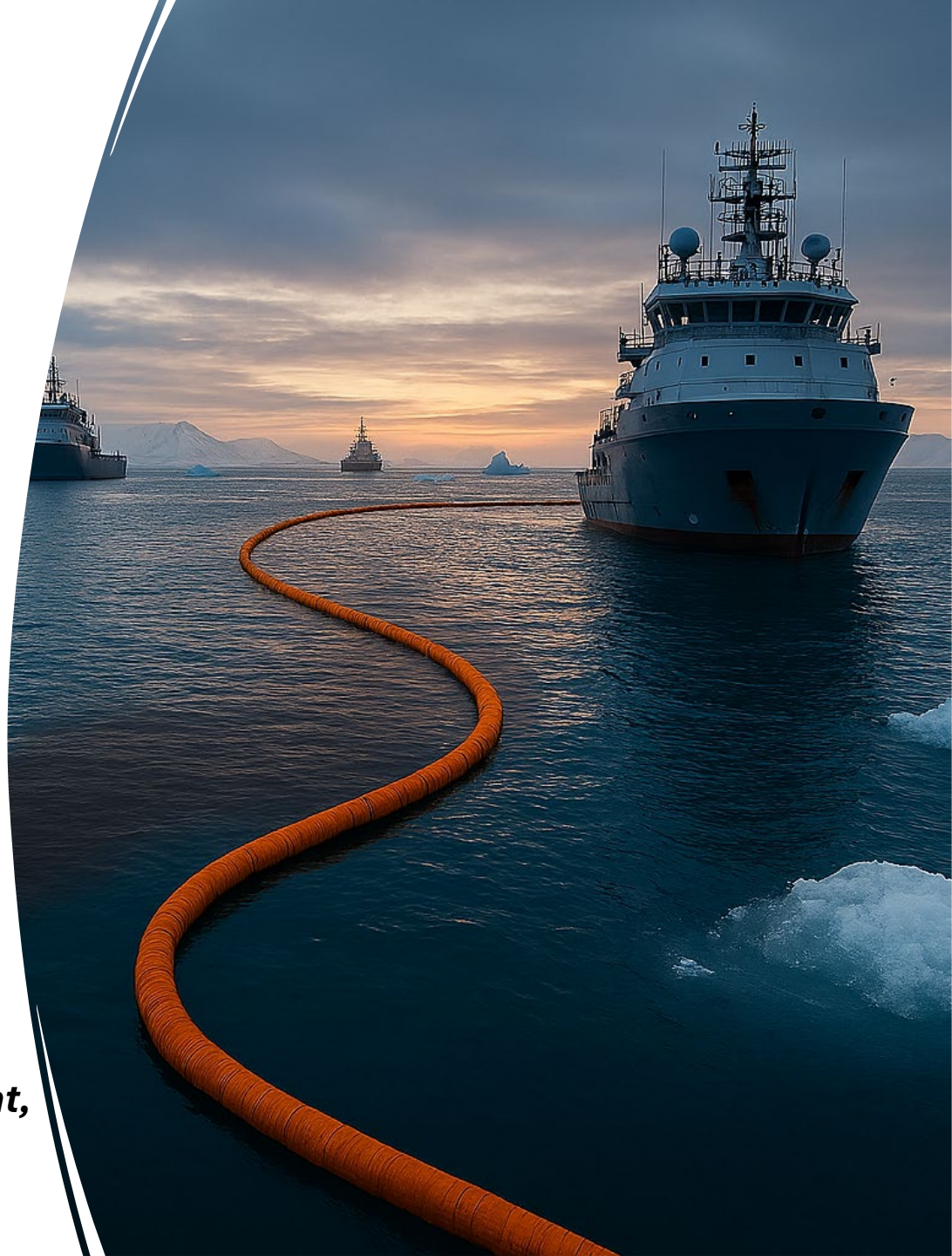
- Small local responder pools.
- High cost of sustained training and exercises
- Seasonal workforce availability
- Fatigue management in austere condition
- Limited seasonal window to conduct field exercises.

Oil Spill Response Capacity in Alaska

Layered, Resident, Collaboration

- Dedicated Oil Spill Response Organizations
- Industry & Marine Operators (Organic Capabilities)
- State & Federal Resources

Alaska's response capacity is resident, redundant, and interoperable.



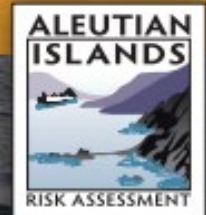
Aleutian Islands

RISK ASSESSMENT

Recommending an Optimal Response System for the Aleutian Islands:

Summary Report

February 2015



Prevention Is
Equal to
Response

The Aleutian Islands Risk Assessment reached a critical conclusion:

Prevention measures can reduce risk more effectively — and more affordably — than relying solely on response capability.

If response time is measured in days, then prevention must operate in minutes.



The Prevention Imperative

- Prevention reduces environmental harm.
- Prevention reduces fiscal exposure.
- Prevention protects subsistence communities.
- Prevention protects maritime commerce.

In the Arctic, the most successful oil spill response is the one that never occurs.

The 24/7 Situational Awareness Necessity



Spills rarely begins as a spill—they begin as anomalies, such as propulsion failures, a weather routing deviation, or unsafe operating practices.

Without continuous situational awareness, we are reacting to consequences rather than preventing incidents.

Decisions are **only as good** as the **information** that informs them.

You can not manage what you can not see.



Interoperable Common Operating Picture

Better information in the first 24 hours reduces consequence in the first 72.

Why Situational Awareness

Unplanned Events Monitored in Alaska 2021 - 2025

Bering Sea
248 Unplanned Events

Gulf of Alaska

UNITED STATES

Yuko

Strategic Outlook



International Framework for Arctic Maritime & Oil Spill Response

US – RU

US – USSR Agreement on Combating Pollution (1989)

US – USSR Maritime Boundary Agreement (1990)

Agreement on Cooperation on Marine Oil Pollution
Preparedness and Response in the Arctic (2013)

US – CA

CANUS Joint Marine Pollution Contingency Plan (1977)

Arctic Council Oil Pollution Agreement (2013)

International

- United Nations Convention on the Law of the Sea (UNCLOS) (1982)
- IMO International Code for Ships Operating in Polar Water (Polar Code) (2017)



Alaska's Operational Advantage – Self Reliance

While geography extends response timelines, Alaska has developed a culture of operational self-reliance.

In Alaska, we do not assume immediate external reinforcement. We plan to operate independently.

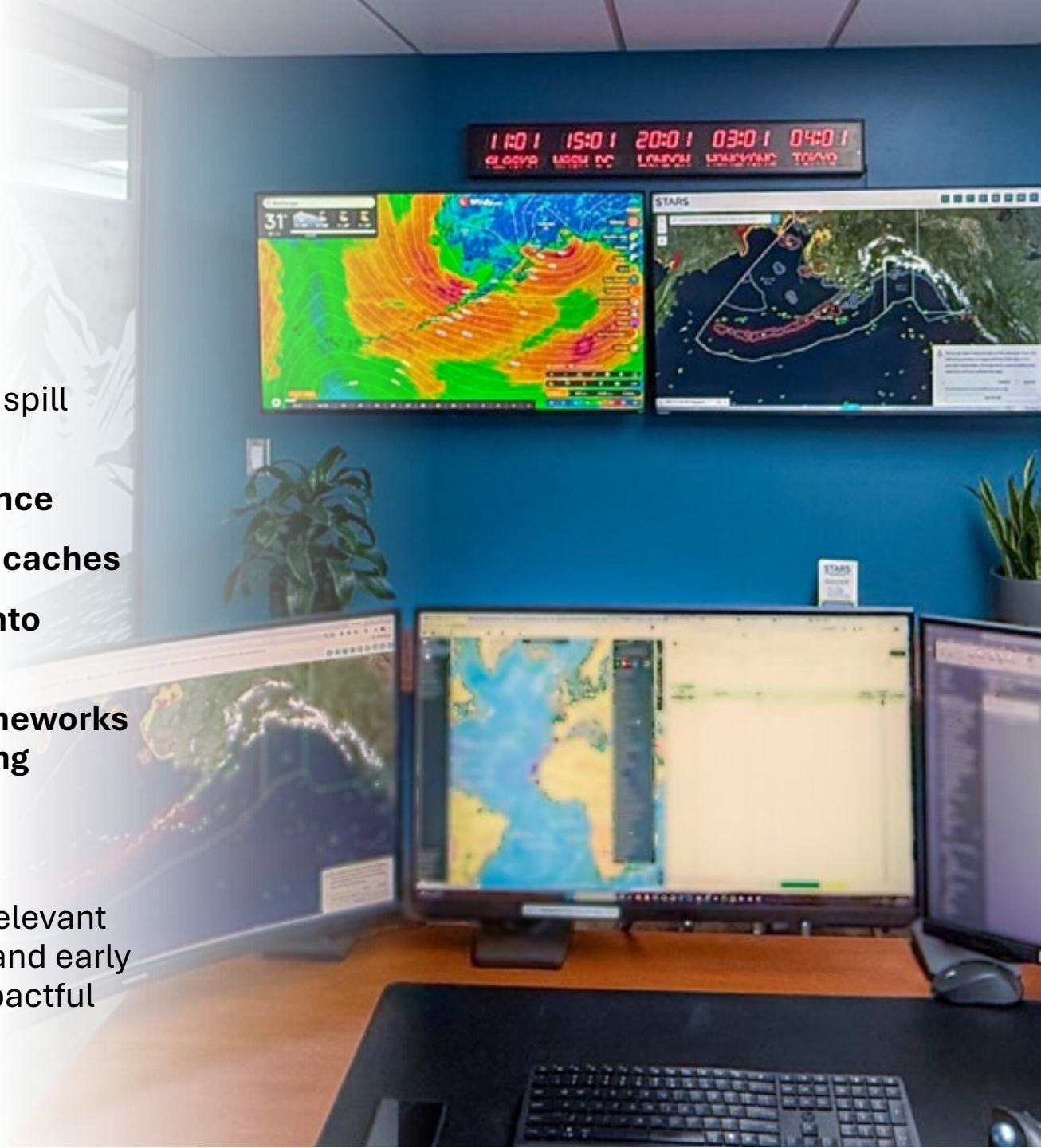
Alaska has built a resident capability model that reflects our geography.



Emerging Solutions

- **Detection and predictive modeling** (ice movement, spill trajectory)
- **Satellite-based surveillance**
- **Pre-positioned response caches**
- **Community integration into planning and operations**
- **Risk-based planning frameworks tailored to Arctic operating envelopes**

These tools are particularly relevant in Alaska, where prevention and early detection are often more impactful than large-scale mechanical recovery after a spill occurs.



Strategic Challenges: State & Federal Alignment

State Strategic Challenges

- Sustaining Capability Under Revenue Pressure
- Engagement in Federal Rulemaking
- Balancing Preparedness & Cost

Federal Strategic Challenges

- Western Alaska Planning Criteria Development
- Institutional Continuity
- Response Over Prevention Emphasis

Effective Arctic preparedness requires alignment between State, Federal, and industry approaches — with equal emphasis on prevention and response, and build on Alaska’s proven experience.



Emerging Capabilities & Strategic Investments

- Invest in persistent situational awareness & common operating picture technology.
- Advance AI-enabled early detection & predictive modeling.
- Integrate more sensors and data feeds.
- Reduce mobilization time where possible.
- Expanded Arctic training exercises.
- Enhance logistics streams.
- Build Community-based response integration.
- Strengthen interoperable decision systems.
- Maintain equal emphasis on prevention and response.



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Questions

Buddy Custard
buddy.custard@alaskaosro.org
907-348-2348 (work)
907-348-2365 (24/7)