



Alaska Information Scuttlebutt

Spring 2025

Providing information, communications, and services to aid safe, secure, efficient, and environmentally responsible maritime operations.

Bridging the Gaps: Marmot Bay Rescue Highlights the Importance of Maritime Safety Infrastructure



Earlier this year, a distress call came in from the **Marmot Bay region**, a remote stretch of Alaskan waters that—until recently—had been a notorious communication dead zone.

The vessel YAHOO 2 had lost power and was drifting dangerously close to shore in deteriorating weather. Three crew members were aboard, and a disaster was unfolding. Fortunately, their call for help did not go unheard.

Thanks to a newly installed Marine Safety Site (MSS) deployed by the Marine Exchange of Alaska (MXAK), our 24/7 Maritime Operations Center (MOC) was able to capture the mayday call via VHF-DSC radio, a digital channel designed for maritime distress communications. While traditional infrastructure in the region failed to pick up the transmission, our MSS filled the gap—relaying critical details to the U.S. Coast Guard, including vessel location, type, and the urgency of the situation.

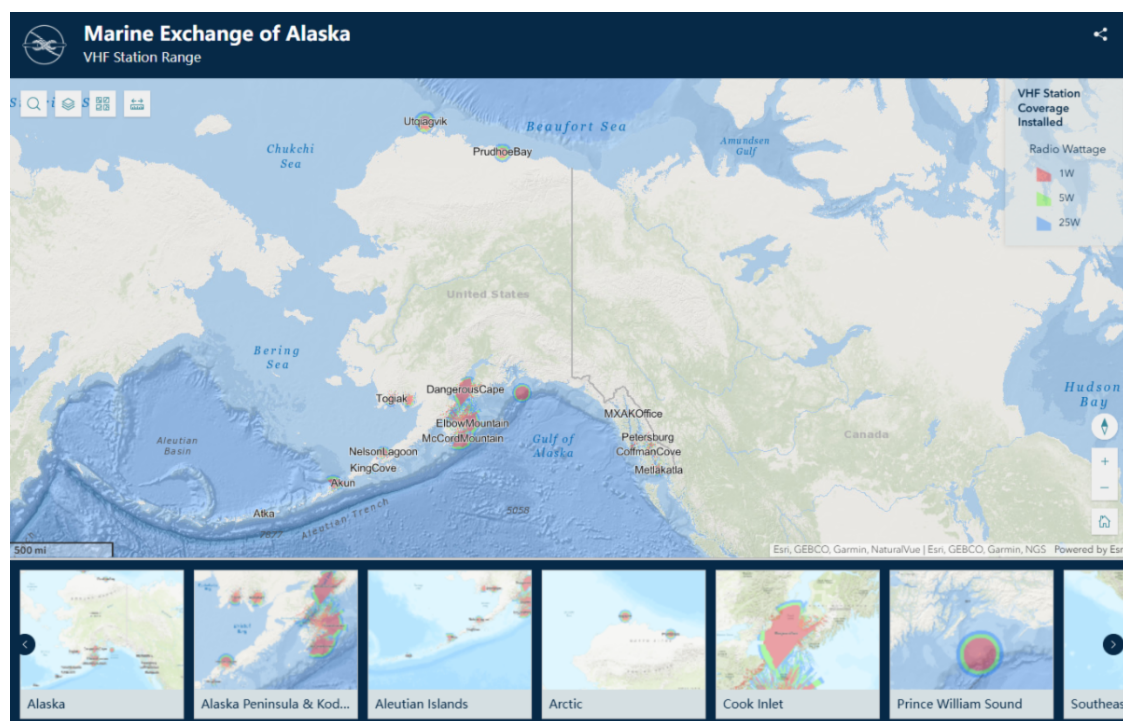
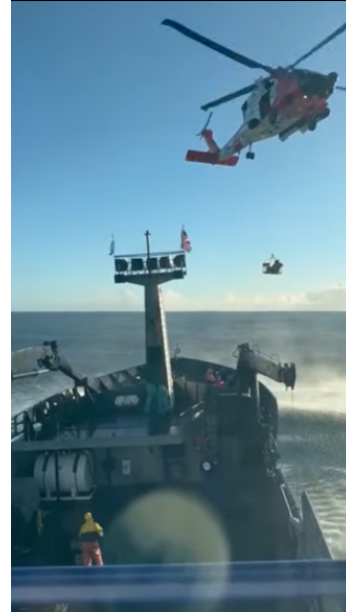
From there, the Coast Guard deployed an MH-60 Jayhawk helicopter from Air Station Kodiak, and the crew was successfully rescued before the vessel was lost. Three lives were saved thanks to swift coordination and the presence of this new infrastructure.

This Incident Underscores a Larger Issue—and a Larger Mission

Much of Alaska's coastline remains underserved by traditional communication networks. Gaps in VHF and DSC coverage mean that mariners in distress may not be able to get help in time, or at all. At MXAK, we are working every day to change that. The Marmot Bay incident is a powerful example of what's possible when strategic investments in maritime infrastructure through public-private partnerships are made.

With over 150 Marine Safety Sites statewide, MXAK is actively filling these critical gaps by deploying:

- Advanced VHF-DSC and AIS stations for real-time vessel tracking and distress communication
- Weather sensors and environmental monitoring tools
- 24/7 watchstander support to help ensure distress calls are heard



Saving Lives, Quietly and Consistently

We're proud to support the brave men and women of the U.S. Coast Guard, and we're honored to play a role in ensuring they have the information and situational awareness needed to act quickly and decisively.

But this work comes with a cost—and there's more to do. With thousands of miles of unmonitored coastline still at risk, we rely on federal, state, and local partners to help us continue this mission. Whether through support, advocacy, or collaboration, we invite all Alaskans to stand with us in building a safer, more connected maritime future.

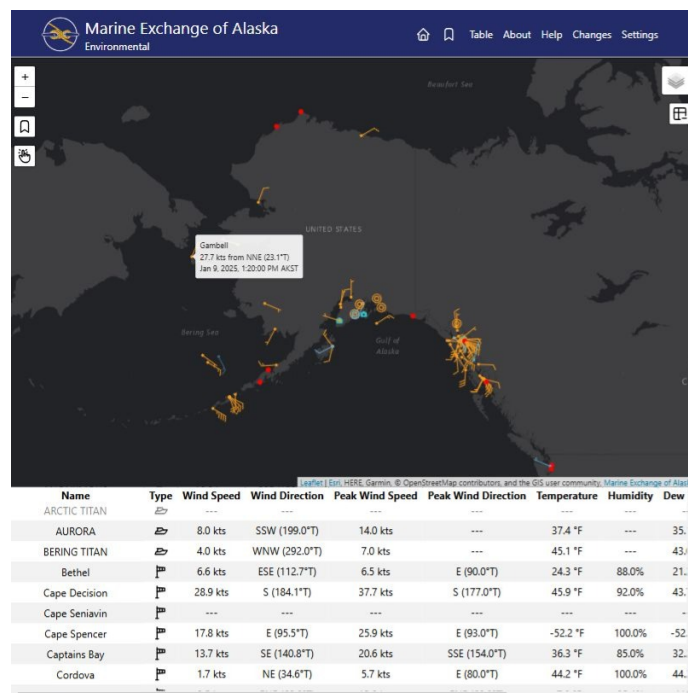
The Marmot Bay rescue reminds us why we do this work. It reminds us that every investment in maritime domain awareness can mean the difference between life and death. And it reminds us of the power of prevention, coordination, and being there when it matters most.

To all who support our mission—thank you!

New Resource

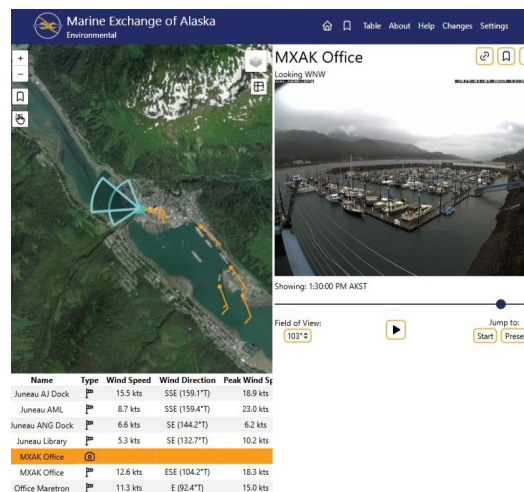
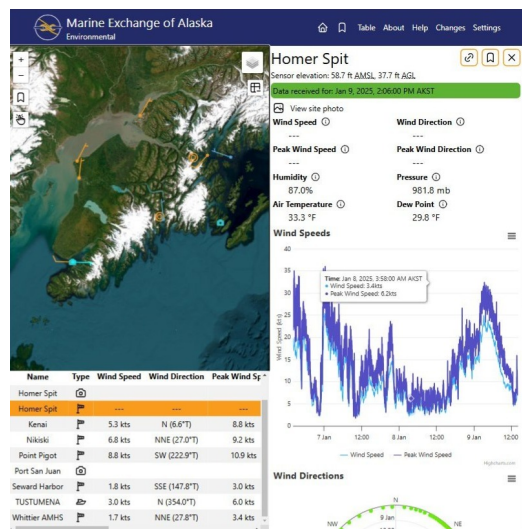
Environmental Data Application

We're thrilled to announce the new and improved [MXAK Environmental Data App](#) - a powerful tool designed to meet the needs of Alaska's vast maritime communities. This app integrates data from MXAK's Marine Safety Sites, NOAA, NWS, and more into one streamlined, easy-to-use platform, providing critical environmental insights in real-time. Coming soon: LIVE AIS targets!



New features include:

- Customizable Layers– Access data from multiple agencies in one place.
- Bookmarks- Save your favorite weather stations and regions.
- Streamlined Design – Works on all devices, even in low-network areas.
- Faster Data Access – Make real-time, informed decisions while navigating Alaska's vast waters.



New Video Tells the MXAK Story

Watch and learn how MXAK is making Alaska's maritime domain safer.



Protecting Alaska's Digital Lifelines: Subsea Cables & Maritime Awareness



In today's digitally connected world, access to reliable internet and telecommunications is more than a convenience—it's essential for everything from business operations and education to healthcare, emergency response, and staying in touch with loved ones.

But what many may not realize is that these connections rely on something very tangible: subsea fiber-optic cables laid on the ocean floor.

These cables—often spanning thousands of miles—form the backbone of Alaska’s digital infrastructure. And recent service disruptions in north, west, and southeast Alaska have brought renewed attention to just how critical these underwater lifelines are.

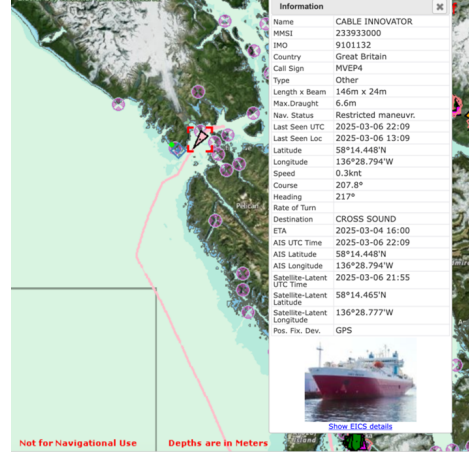
At MXAK, we understand the importance of keeping Alaska connected. In addition to our core mission of enhancing maritime safety and security, we play a unique role in helping to protect subsea cable infrastructure through our vessel tracking system and extensive maritime domain awareness network.

How We Help Protect Subsea Infrastructure:

- Real-time & Historical Vessel Tracking
- MXAK provides real-time alerting to vessels, allowing us to communicate potential risks- such as vessels dragging anchors or operating near known cable paths. This information can be used to prevent damage before it happens and determine the likely cause if an incident occurs.
- Support for internet providers: Our data has been used to analyze vessel activity along cable routes, helping providers determine safe seabed placement and more efficiently diagnose the causes of outages. When a

break occurs, every minute counts, and understanding maritime traffic patterns speeds up both the investigation and the repair.

- Incident Response & Recovery: In past events, MXAK has directly assisted in identifying the cause and location of subsea cable breaks, expediting repairs and helping restore connectivity. In recent events—like the southeast Alaska break—our team reviewed traffic in the affected region and found no indications of vessel-related incidents. Still, these disruptions serve as a reminder of how important our monitoring systems are for Alaska's resilience.



As a vast, remote, and often challenging region, Alaska depends on physical connections to the outside world—both through shipping lanes and undersea data pipelines. MXAK remains committed to being a trusted partner in protecting both, using innovative tools and a 24/7 watchstanding team to support safe, secure, and connected maritime operations.

Strengthening Governmental Partnerships



Strengthening Federal Partnerships -

We were honored to host a visit from Senator Sullivan at our Maritime Operations Center (MOC), where we discussed the urgent need to expand and modernize the Coast Guard's Rescue 21 maritime distress communication system. Conversations centered on the growing importance of maritime domain awareness, especially in Alaska's Arctic, and how enhanced communication capabilities can strengthen safety, security, and sovereignty in this strategically vital region.

Opening Our Doors to the 34th Alaska Legislature - Members of the 34th Alaska Legislature learned about our mission, tools, and impact on Alaska's maritime future. With the support of our Juneau delegation, this event was a great opportunity to connect with lawmakers



Engaging with State Leaders on Arctic Safety

- MXAK presented before the Senate Special Committee on Arctic Affairs to share the mission and progress of the Arctic Watch initiative. From increasing commercial traffic to subsistence protections, we highlighted the critical need for prevention, real-time information sharing, and collaborative solutions that serve both mariners and coastal communities across Alaska's Arctic.

Building Common Ground on Maritime Safety

We welcomed Representative Nick Begich to MXAK, where we shared our efforts to reinforce the state's maritime safety net. The discussion focused on scalable solutions using existing infrastructure to improve emergency communications, protect property, and save lives—especially in high-risk, underserved areas across Alaska.

and staff to demonstrate how MXAK's services benefit all regions of the state.



2024 Bering Strait and Arctic Transit Report



Bering Strait and
Arctic Transits

PREPARED BY:
Marine Exchange of Alaska
(Data including 2024)



2024 Arctic Vessel Traffic Report Now Available

As maritime activity continues to grow in Alaska's Arctic, the Marine Exchange of Alaska has released its 2024 Arctic Vessel Traffic Report, providing vital insights into shipping patterns through the Bering Strait and surrounding Arctic region.

Using AIS data gathered since 2009, this report highlights trends in vessel traffic—including increases in fishing and cargo vessel activity, seasonal transit windows, and differences between U.S. and Russian shipping routes. Notably, the report reflects continued winter transits extending into early months of the following year, showing how environmental changes are already affecting vessel behavior in the Arctic.

This report helps establish a baseline for future planning and reinforces the importance of maritime domain awareness in Alaska's rapidly evolving Arctic waters.

Want to learn more?

Reach out to the MXAK team at info@mxak.org to access the full report.

Tech Talk

Welcome to ***Tech Talk!***, a new column dedicated to sharing the work of the brilliant folks that make up MXAK's IT department.

For our first article, we'd like to introduce you to the new guy, Matt Newcomer! (Yes, *the new guy's last name is Newcomer*, and yes, *he's heard all the jokes.*)

Matt comes to Juneau by way of Virginia and as a recent master's graduate of Virginia Tech. He joined MXAK last summer and hit the ground running, impressing us with his work ethic, immense knowledge, and fresh perspective. In a few short months, Matt has demonstrated his technical abilities by designing, building, and launching a [brand-new application](#) that collects and displays real-time environmental data from MXAK's broad network of marine safety sites. The progressive web application allows users to view sites



by region, customize their display with bookmarks, and see forecasts and weather warnings.

We sat down with Matt to get to know him better, understand his role as a Software Engineer and ask him important questions like if he's old enough to have ever used dial-up internet. Spoiler alert, he's not.

Q&A

MXAK: Where are you from?

MN: *I'm originally from Leesburg, Virginia – about 40 miles from Washington D.C and about 2,800 miles from Juneau.*

MXAK: What's your educational background?

MN: *I earned my Bachelor of Science (B.S.) in Computer Science from Virginia Tech in May of 2023. I also earned my Master of Engineering (M.Eng.) in Computer Science from Virginia Tech in May of 2024. Go Hokies!*

MXAK: Did you take an accelerated program in college? With all due respect, you seem young to have already achieved a master's degree.

MN: *I did. I completed my undergrad in three years and my master's degree in 1.5 years instead of two, which I did concurrently to my undergrad.*

MXAK: That's admirable. So, it's safe to assume you're not old enough to have suffered through dial up internet like the rest of us?

MN: *No, but I've heard a recording of the iconic sound.*

MXAK: What sparked your interest in software engineering?

MN: *I was introduced to programming as a hobby in my freshman year of high school by some friends. I built several small, one-off projects to explore the space, and I was hooked. I was introduced to software engineering more formally in my sophomore year of college. By that point in time, my ambition for personal projects had reached a point where I needed new techniques for managing how I created software. In that way, curiosity started me down the path and my formal education gave me some of the tools I needed to improve.*

MXAK: What was your first impression of Marine Exchange of Alaska?

MN: *When I first came to the Marine Exchange, I was surprised by the impact that so few people can make. With a crew of a little over 30, MXAK's ability to monitor vessel traffic, perform security audits, create and support technical products, and much more is genuinely impressive.*

MXAK: What made you want to relocate to Alaska to work for MXAK? Are you enjoying life in Juneau?

MN: *Software engineering jobs are typically located in large cities, and I just don't find living there appealing. I never expected that I'd end up in Alaska, however. I decided to relocate here after visiting MXAK in January of 2024 and getting a feel for Juneau.*

I generally like living in Alaska. I'm still getting used to the wintertime darkness and rain that seems to go on for days and days. The views and people I have met and work with far outweigh the challenges posed by the rough weather and remoteness, however.

MXAK: What are you currently working on?

MN: *I'm currently working on version two of the new environmental data application in support of Arctic Watch. The look, feel, and functionality of version two will be extremely similar to the current version but will also include performance gains, new data sources, and other improvements that were learned in creating and deploying version one. I don't have many specifics to share right now but stay tuned for more information on this front!*

MXAK: What are you most excited to work on?

MN: *Once I finish the application I'm currently working on, I'm excited to begin working on improvements to internal tooling and systems. Given the scale of our AIS transmit/receive network and the buildout of our VHF capability, keeping track of information on each site and configuring each piece of equipment becomes challenging.*

MXAK: Computer technology seems to evolve rapidly. How do you stay on top of what's new? Are there any emerging technologies you're excited about?

MN: *Computer technology does evolve rapidly - so much so that it could be a full-time job just keeping up with changes in this space. I try to stay on top of new projects and developments using developer forums, mailing lists, and aggregation sites like Hacker News, "awesome-*" lists on GitHub, and Stack Overflow. Each source has a specific purpose and intended use, but new developments and projects that are important tend to appear across multiple sources. I am therefore able to get a broad sense of what's out there while relying on the wisdom of the crowd to help highlight important developments.*

Many of the projects that I work on here are web-based or target a web user interface, so much of my reading focuses on web technologies. I'm excited about some newer technologies like WebAssembly (Wasm), GraphQL, and TypeScript reaching wider adoption across the web ecosystem. I'm also excited that satellite-based communication technologies are becoming affordable and widely available.

MXAK: What do you like to do in your free time?

MN: *Outside of work, I like to bake, read, and work on personal projects. When the weather gets nice, I want to resume gardening and biking.*

We're thrilled to have Matt on the crew. He's a fantastic asset to have on our team and we look forward to seeing how his contributions help support the mission of creating safe, secure, efficient and environmentally responsible maritime operations in Alaska.

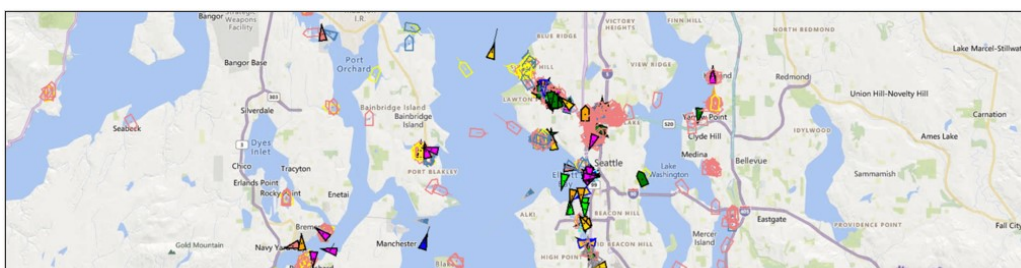
Rick's PacTracs Tip: Tracking Vessel Movement Made Easy

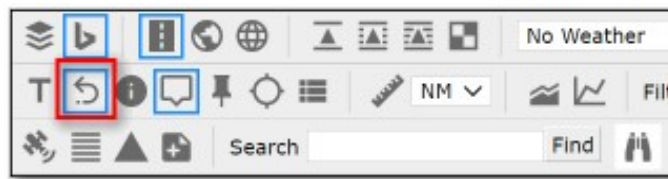
Did you know you can quickly identify which vessels are moving in a group? Just click the "Show Tracks" icon in the PACTRACS toolbar (2nd row, 2nd button from the left). This tool reveals movement tracks behind active vessels, making it easy to spot traffic patterns at a glance.



At the Marine Exchange of Alaska, our expertise doesn't stop at real-time monitoring. With over 10 years of historical AIS data, we regularly assist stakeholders across industries—from fisheries and subsea cable operators to government and nonprofit partners—providing valuable insight into vessel behavior, routing, and maritime operations.

Have a question? Need a track-back? We're happy to help. Our team is standing by to support Alaska's maritime community with the information you need to navigate smarter and safer. **Rick is MXAK's Membership Coordinator. If you have any questions, please don't hesitate to give him a call at 907-463-2607 or e-mail him at ricksypeck@mxak.org.**





Compliance Corner: Updates for 2025



As we sail through 2025, the Regulatory Compliance team has some important updates to share regarding Facility Security Plans and training opportunities.

Facility Security Plan Renewals:

This year brings several Facility Security Plan renewals, and we're already tracking some expiration dates. If your plan is due to expire, please take some time to review it and let us know of any changes. We'll be reaching out soon, but feel free to get in touch with us if you're aware of an upcoming renewal.

Expanded Training Opportunities:

With three members now on our team—Ken, Jon, and Brett—we've expanded our availability to provide MTSA security training and DOT hazmat training. If you're interested, reach out to coordinate with your audit schedule. The earlier we hear from you, the better we can

accommodate your needs! Additionally, we're available for planning area-wide training sessions, just like we did in Dutch Harbor earlier this month.

We're here to help you navigate compliance with confidence. If you have any questions or need assistance, don't hesitate to reach out to our Regulatory Compliance Team.

Stay safe and compliant,
Ken, Jon, and Brett

MXAK in the Media

We're proud to share recent features highlighting MXAK's pivotal role in enhancing maritime domain awareness and safety:

[Distress Calls Highlight MXAK's Critical Role](#) - reporting from KMXT underscores MXAK's vital contributions to maritime safety, especially in regions where gaps in the U.S. Coast Guard's Rescue 21 system persists.

[Tracking Maritime Incidents in Real Time](#) - MXAK's AIS and VHF systems were instrumental in tracking the F/V *Northern Endurance* grounding near Unalaska. Situational awareness tools once again proved essential in supporting responders and sharing timely maritime information.

Buying Time - The Juneau Empire spotlighted MXAK's efforts detailing how our team utilizes advanced technology and partnerships to ensure safe maritime transit.

MXAK StoryMaps - Explore our comprehensive operations through the interactive ESRI StoryMaps series, starting with "MXAK 101," which highlights our capabilities such as Automatic Identification System (AIS), distress communications, and more.

mxak.org

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