

# **SECTION 3**

## **STANDARDS OF CARE**

## C.1. WHAT ARE STANDARDS OF CARE?

Standards of Care are the procedures and practices, beyond regulatory requirements, that experienced and prudent maritime professionals follow to ensure safe, secure, efficient and environmentally responsible maritime operations.

Formalized Standards of Care are “good marine practices” that are developed and published to provide a guide for maritime professionals to consider and incorporate into their decision-making process. Standards of Care are not regulations and thus not enforceable. In some circumstances, they may not be the best course of action to take and based on the mariner’s assessment of the situation at hand, alternative procedures may be more appropriate. Mariners should be mindful that if they are involved in a maritime incident and were not adhering to relevant “Standards of Care” they could be subject to legal action based on a presumption of negligence.

The Standards of Care in this Plan are clearly not all inclusive. They complement laws, regulations and guidance in the Coast Pilot and other documents. If they appear to conflict with law or regulation, the law or regulation should be adhered to.

## C.2. AUTOMATIC IDENTIFICATION SYSTEM (AIS)

The **Automatic Identification System (AIS)** is an internationally adopted vessel tracking and communications system implemented to enhance safe, secure, efficient and environmentally sound maritime operations. The IMO’s International Convention for the Safety of Life at Sea (SOLAS) requires AIS to be fitted aboard international voyaging ships of 300 or more gross tonnage, and all passenger ships regardless of size.

The U.S. Coast Guard also requires AIS be installed and operational on self-propelled vessels of 65 feet or more in length and passenger vessels certificated to carry more than 150 passengers-for-hire, in commercial service, as well as all towing vessels of 26 feet or more in length and more than 600 horsepower, in commercial service. [33 CFR 164.46](#).

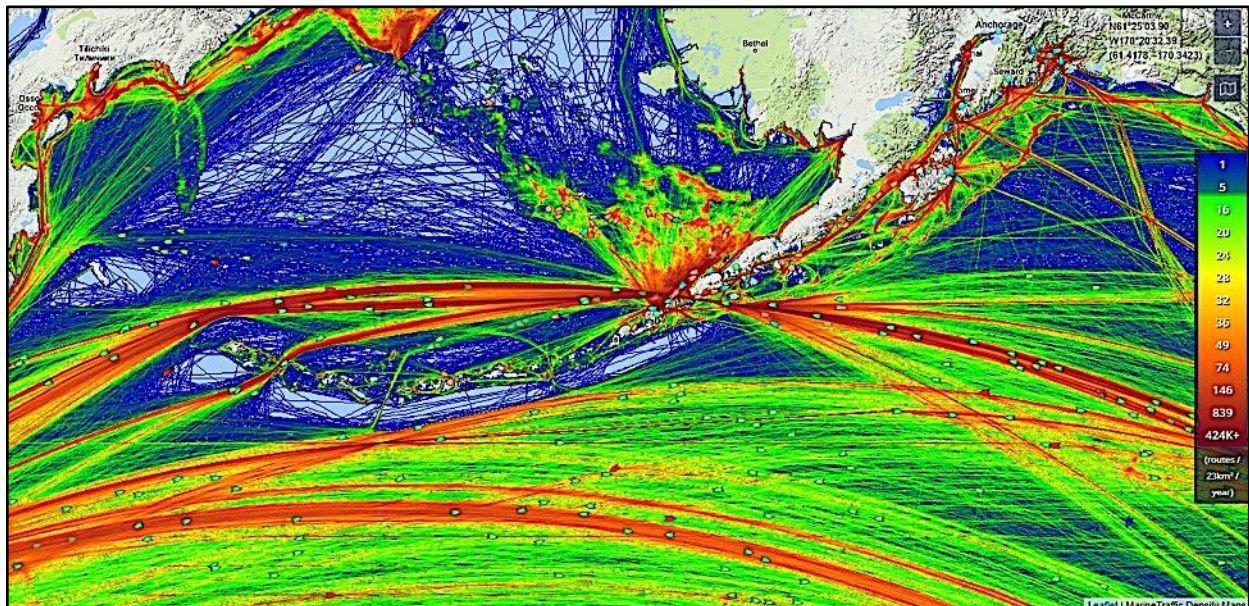
“Properly installed” refers to an installation using the guidelines set forth in IMO SN/Circ.227 (incorporated by reference, [33 CFR 164.03](#)). Not all AIS units are able to broadcast position, course, and speed without the input of an external positioning device (e.g. DGPS); the use of other external devices (e.g. transmitting heading device, gyro, rate of turn indicator) is highly recommended, however, not required except as stated in 33 CFR 164.46(a)(2).

The Coast Guard has noticed many AIS users are not updating their unit to accurately reflect voyage related information, e.g., navigation status, static draft, destination, estimated time of arrival, etc. These issues require the due diligence of the users to ensure the AIS unit is always providing proper identification information so that the AIS serves the intended purpose.

AIS messages transmitted by vessels are received and processed by other vessels, AIS shore receiving stations and satellites. AIS also has the capability to transmit digital messages into data including but not limited to safety messages, environmental data and virtual aids to navigation.

The Coast Guard and the Marine Exchange of Alaska are positioning what is referred to as AIS ATONS (Aids to Navigation) in various locations in the Aleutian Islands. Current listing of weather stations can be obtained on the Marine Exchange’s website at [www.mxak.org](http://www.mxak.org). AIS historical information is also used to evaluate maritime operations in the Aleutians, conduct risk assessments and aid compliance with ATBAs.

Figure C-1 provides a visual representation of vessel activity in 2017 and illustrates the extent and location of maritime traffic in the region encompassed by the AIWSC. The legend shows the number of vessels via colors with the red regions the most heavily trafficked. This graphic was developed from Automatic Identification System (AIS) data after the Aleutian Islands’ ATBA were implemented and reveals how most vessels are staying well offshore in compliance with the ATBA, and that vessels are closest to shore when transiting Unimak Pass. Of note, the ATBA is not a mandatory routing measure and most fishing industry vessels and tugs do not adhere to the ATBA due to the nature of their operations that require them to sail closer to shore.



*Figure C-1. Graphic showing the density of maritime traffic activity obtained by AIS (Automatic Identification System) in the Aleutian Islands region in 2017.*

### C.3. SEVERE WEATHER GUIDELINES

Severe weather has several implications for vessels transiting the Aleutian Islands. It is extremely common for low pressure systems to form over the Bering Sea and create sea

conditions that adversely affect a vessel's safety. Severe weather can cause vessels to drag anchor; have a loss of propulsion, steering, or other machinery casualty; and cause crew injuries. The U.S. Coast Guard, through consultation with marine pilots, vessel operators, and port authorities, has developed a set of operating procedures for severe weather in the Aleutian and Pribilof Islands. These procedures help the mariner to establish risk factors in severe weather and mitigate them under certain conditions.

The USCG Captain of the Port – Western Alaska may order a vessel to operate or anchor in a manner directed in the interest of safety under 33 Code of Federal Regulations (CFR) 160.11. Severe weather poses an inherent risk to vessel safety, and thus the Coast Guard plays an active role in monitoring vessel behavior during the frequent storms in the Aleutian Islands.

### **C.3.1. Severe Weather Advisories and Best Practices**

The U.S. Coast Guard Navigation Advisory containing the Operating Procedures for Severe Weather in the Aleutian Islands and Pribilof Islands can be accessed on the USCG Homeport webpage: [https://homeport.uscg.mil/port-directory/western-alaska-\(anchorage\)](https://homeport.uscg.mil/port-directory/western-alaska-(anchorage))

### **C.3.2. Severe Weather Communication Procedures**

The severe weather operating procedures automatically go into effect whenever the National Weather Service marine forecast predicts sustained winds in excess of 45 knots for specific marine zones. This message will be disseminated via email to all ship agents and port and harbor facilities in the Aleutian Islands.

Vessel agents should monitor VHF channel 16 to facilitate rapid communication in the event their vessel is adversely impacted by severe weather.

The U.S. Coast Guard's 24-hour operations center can be reached at (907) 428-4100, and by email at [Sector.Anchorage@uscg.mil](mailto:Sector.Anchorage@uscg.mil).

## **C.4. COMMUNICATION: EMERGENCY & RESPONSE**

### **C.4.1. Tsunami Warnings**

A tsunami is caused by a large and sudden displacement of the ocean. Large earthquakes below or near the ocean floor are the most common cause, but landslides, volcanic activity, certain types of weather, and near earth objects (asteroid, comets) can also cause tsunamis. The speed of a tsunami depends on the depth of the water it is traveling through. The deeper the water the faster the tsunami. Distant earthquakes far away from the eastern Aleutian Islands may produce tsunami that strike approximately 4 hours or more after the earthquake, whereas locally occurring earthquakes near Dutch Harbor or other Aleutian ports may generate waves that hit the shore within minutes.

This document provides general response guidance in the event of tsunamis for smaller vessels (vessels under 300 gross tons) such as recreational sailing and motor vessels, tugs, launches and commercial fishing vessels.

Tsunami wave impacts are greatest in and around ocean beaches, low-lying coastal areas, and bounded water bodies such as harbors and estuaries. Whenever possible, these areas should be avoided during tsunamis. Any tsunami event can threaten harbors, facilities, and vessels.

**Tsunami hazards that can directly affect vessels include:**

- Sudden water-level fluctuations
- Grounding of vessels as water level suddenly drops
- Strong and unpredictable currents that can change direction quickly
- Eddies/whirlpools causing boats to lose control
- Drag on large-keeled/deep draft vessels
- Collision with other vessels, docks, and debris
- Capsizing from incoming surges (bores), complex coastal waves, and surges hitting grounded boats

**In the event of a tsunami warning, vessel owners and operators must assess the circumstances depending largely on where the vessel is located and decide what protective measures will be best given their individual situation and all the factors involved. Recognizing that there no single response will be optimal for all situations, real-time response mitigation measures to prevent or mitigate the damage caused by tsunamis may include:**

- If you are in a harbor and get a tsunami warning, you should secure vessel moorings, leave your boat and move quickly to a safe place on land (high ground or inland, away from the water).
- If you are at sea and receive a tsunami warning you should move to a safe depth<sup>3</sup> and stay away from harbors under warning until officials tell you the threat has passed.
- If you are a boat owner or captain, take extra steps to prepare for a tsunami:
- Make sure you have a way to receive tsunami warnings when you are on the water. The U.S. Coast Guard will issue urgent marine information broadcasts on your marine VHF radio's channel 16. Additional information will be available from NOAA Weather Radio.
- Make a plan and put together a disaster supplies kit to keep on board your boat. Be aware that shore facilities may be damaged, so if you are at sea during a tsunami, you may not be able to return to the harbor you left. Be prepared to remain at sea for a day or more.

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<sup>3</sup> \*Safe depths vary by region, but the minimum safe depth is 30 fathoms (180 feet). The harbor master, port captain, the U.S. Coast Guard, and local and state emergency management offices are the best sources for safe depth and other tsunami safety information and regulations for boaters in your area. (<https://www.tsunami.gov/?page=tsunamiFAQ>)

### **Actionable Tsunami Alert Levels**

Notifications are available from the National Tsunami Warning Center in Palmer, Alaska at <http://wcatwc.arh.noaa.gov>. The Center issues two types of bulletins that require action by Alaska mariners: Tsunami Advisories and Warnings.

- 1. Tsunami Advisory: Peak tsunami wave heights of 1 to 3 feet are expected, indicating strong and dangerous currents can be produced in harbors near the open coast. SIGNIFICANT tsunami currents or damage are possible near harbor entrances or narrow constrictions.**

#### **Appropriate actions to be taken by local officials when a Tsunami Advisory is issued:**

- Closing beaches, evacuating harbors and marinas. Public access along waterfront areas will be limited by local authorities.
- Local authorities working on or near the water should wear personal flotation devices.
- Port authorities will shut off fuel-to-fuel docks, and all electrical and water services to all docks.
- The repositioning of ships to deep water when there is time to safely do so.
- Advisories may be updated, adjusted geographically, upgraded to a warning, or canceled based on updated information and analysis.
- After the event: Port authorities will not allow public to re-enter structures and vessels in the water until Advisory is cancelled and conditions are safe.
- Advisories may be updated, adjusted geographically, upgraded to a warning, or canceled based on updated information and analysis.

- 2. Tsunami Warning: Tsunami wave heights could exceed 3 feet in harbors near the open coast, indicating very strong, dangerous currents and inundation of dryland is anticipated. SIGNIFICANT tsunami currents or damage are possible. Depending on the tidal conditions, docks may overtop the pilings.**

**Appropriate actions to be taken by local officials when a Tsunami Warning is issued::**

- Evacuation of low-lying coastal areas by local authorities.
- Port authorities will shut off fuel-to-fuel docks, and all electrical and water services to all docks.
- The repositioning of ships to deep water when there is time to safely do so.
- Monitor VHF FM Channel 16 and the marine WX channels for Urgent Marine Information Broadcast from the U.S. Coast Guard, periodic updates of tsunami and general weather conditions; additional information will be available from NOAA Weather Radio.

**VESSELS leaving the harbor and heading to sea, should consider the following:**

- Check tide, bar, and ocean conditions.
- Check the weather forecast for the next couple of days.
- Ensure vessel has enough fuel, food and water to last a few days.
- Have someone drive you to the marina so your vehicle is not left in the tsunami zone.

Note: There may also be vessel congestion in the harbor as vessels attempt to depart at the same time. All vessels should monitor VHF Channel 16 and use extreme caution.

**After the tsunami:**

- Mariners at sea should monitor VHF Channel 16 for possible U.S. Coast Guard Safety Marine Information Broadcasts regarding the conditions and/or potential restrictions placed on navigation channels and the entrances to harbors.
- Check with your docking facility to determine its ability to receive vessels. Adverse tsunami surge impacts may preclude safe use of the harbor. Vessels may be forced to anchor offshore or to travel to a safe harbor. An extended stay at sea is a possibility if the Harbor is impacted by debris or shoaling.

Vessels that stay in port should check with local port authorities for guidance on what is practical or necessary with respect to vessel removal or mooring options, given the latest information on the distant tsunami event; then go outside the Tsunami Evacuation Zone.

## **C.5. EMERGENCY TOWING SYSTEMS**

Because of the history of distressed and stricken vessel incidents in Alaskan waters, Emergency Towing Systems (ETS) have been stationed permanently at strategic locations in the state. The systems are intended to improve safety and environmental protection by facilitating prompt and effective assistance to distressed vessels.

#### **C.5.1. Alaska Department of Environmental Conservation and City of Unalaska– Emergency Towing Systems**

An Emergency Towing System (ETS) is a pre-staged package of equipment that may be deployed in the event a disabled vessel requires assistance in accessing a place of refuge. A manual that instructs responders on the operations of the system as well as procedures for deployment accompanies the system. The system is designed to use vessels of opportunity to assist disabled vessels that are in Alaskan waters. It consists of a lightweight high-performance towline, a messenger line used in deploying the towline, a lighted buoy, and chafing gear. These components may be configured to deploy to a disabled ship from the stern of a tugboat or airdropped to the ship's deck via helicopter.

There are currently two sizes of ETS utilized in Alaska. The larger size is capable of towing vessels greater than 50,000 Deadweight Tonnage (DWT). The smaller system can tow vessels less than 50,000 DWT. Additionally the messenger line is capable of towing vessels under 2000 DWT. The ETS may be deployed from the stern of a rescue tug or lowered to the ship's deck via helicopter.

Since the program's origin, it has expanded statewide. The Alaska Department of Environmental Conservation has purchased and stored 10-inch Emergency Towing Systems at the USCG Air Stations in Kodiak, Ketchikan and Sitka, the ADEC Response Warehouse in Anchorage, and the Emergency Response warehouse in Adak. There are also 7-inch Emergency Towing Systems at the Cargo Building in Nome, at the USCG Facility in Cold Bay and at the city dock in Unalaska.



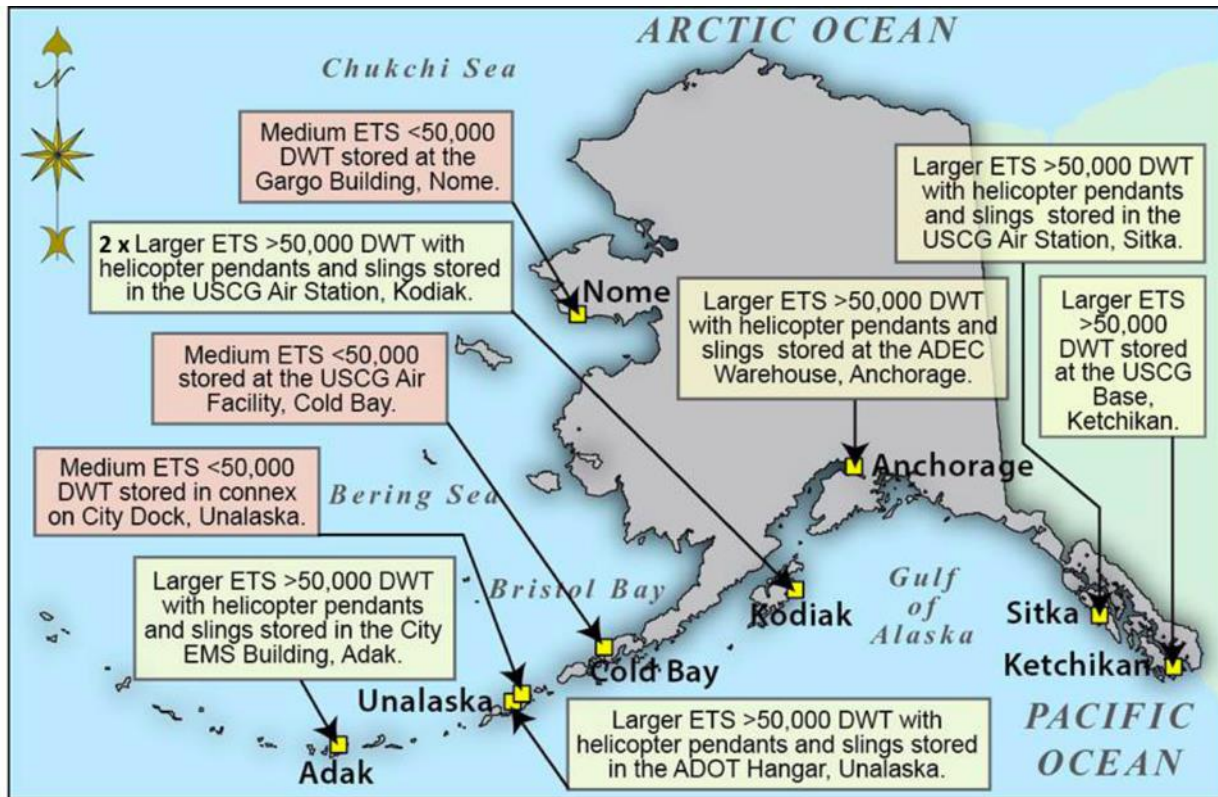


Figure C-2. Emergency Towing Systems (ETS) Locations and Capacities.

The ETS Manual and Training video can be downloaded or viewed at the following website:  
<https://dec.alaska.gov/spar/ppr/prevention-preparedness/ets/>

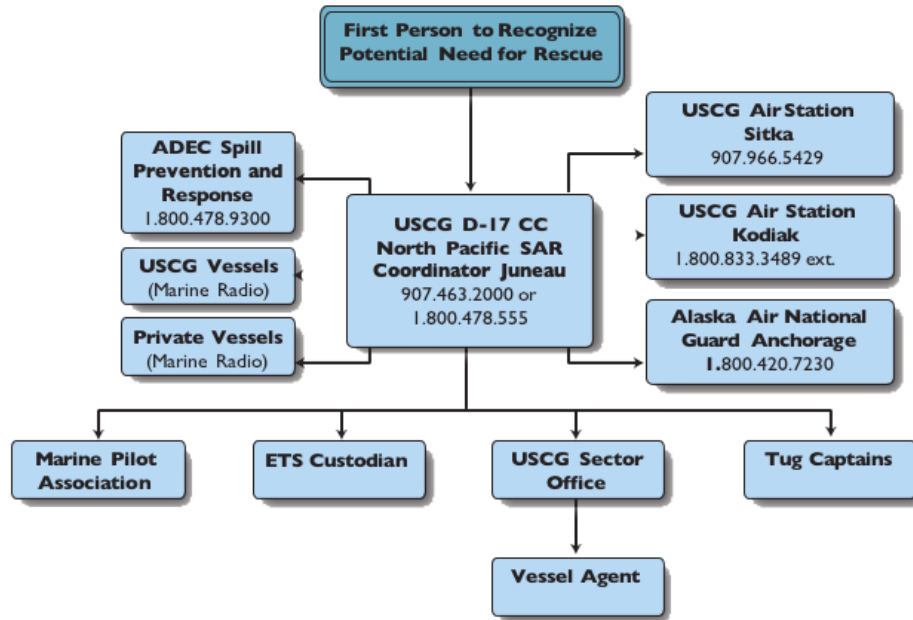
### C.5.2. Alaska Maritime Prevention & Response Network Ship Arrestor

The Network’s large-scale para-sea anchor is available for deployment on large ocean-going vessels that lose power or become otherwise disabled and adrift while underway. The intent of the sea arrestor system is to increase the window of opportunity for a successful vessel repair or casualty response, and to improve the probability of a successful recovery when responding vessels arrive on scene. The ship arrestor system is designed to dramatically slow the drift rate by half of a disabled ship, stabilize the ship by anchoring the bow into the wind and seas, and provide a means to attach a tow line to the ship should towing be necessary. The arrestor is designed for deployment by aircraft or tug. Currently, one para-sea anchor system is available in Anchorage, Alaska for deployment to help close the response time gap by reducing the drift rate of disabled and adrift vessels.

A component of the sea arrestor system is the Emergency Ship Arrest System and Emergency Vessel Attachment & Towing System EVATS™, which is also considered a standalone system that can be used independently to improve the safety, reliability, and versatility of securing a towline between a disabled vessel and a towing vessel. It is designed for rapid deployment and recoverability in heavy weathers and low-light conditions, establishing a safer distance between

the disabled vessel and the responding towing vessel. The Network has staged an EVATS™ in Dutch Harbor, Alaska in the event this towing system is needed to render assistance to a vessel disabled and adrift, preventing the vessel from running aground as another capability to reduce risk and close the time response gap.

### C.5.3. Activation of the Emergency Towing System and Ship Arrestor EVAT System



- ï Verify initial notifications have all been made
- ï Coordinate with involved parties to size-up situation and inventory rescue assets
- ï Develop plan of action
- ï Make secondary notifications

Figure C-3. Initial activation and call-out of the ETS.