

Marine Casualty Prevention
Port of Dutch Harbor Severe Storm Plan
Winter Rules, and General Anchoring Guidelines
October 25, 2005

PREFACE

On June 1, 1998, in the wake of the November 1997 grounding of the Kuroshima at Summer Bay, the United States Coast Guard Captain of the Port for Western Alaska issued Severe Weather Guidelines for the Aleutian Islands enumerating operating rules for offloading and onloading procedures for vessels at anchor. These guidelines are triggered at the "gale force" level of wind strength.

In February of 1999, the freighter Hekifu, which was in the process of attempting to comply with the Severe Weather Guidelines and move away from a vulnerable anchorage, encountered a severe and unpredicted increase in wind force. Subsequently, the anchor broke free of the bottom and the ship grounded on Rocky Point, Iliuliuk Bay.

March and April of 1999 brought a series of hurricane force storms accompanied by unprecedented snowfall and low barometric pressures. In the week between March 17 and March 25, three such storms hit Unalaska Island.

The Hekifu grounding made it apparent that more guidelines were needed to proactively address Port safety, analyze the approaching weather systems and decide on an appropriate course of action before severe weather arrives. These guidelines are divided into four general practices: the severe weather plan, winter ground tackle standards, seasonal anchorage restrictions, and general anchoring guidelines.

SEVERE WEATHER PLAN

Upon notification of a storm warning by NWS, the U.S. Coast Guard Marine Safety Detachment Unalaska (MSD Unalaska) will contact the Alaska Marine Pilots (AMP), and vessel agents or masters to apprise them of the approaching weather system. The storm system will be tracked by all means possible including satellite photographs available via the National Weather Service Alaska Region internet website <http://pafc.arh.noaa.gov/marfst.php>. When MSD Unalaska, AMP, and vessel agents or masters agree that a severe storm is imminent, the Port of Dutch Harbor office will be notified by fax, and the following steps will be taken:

1. Taking into account the predicted storm strength and wind direction, an analysis will be done by MSD Unalaska and AMP assessing the number of large vessels in the Port, their location, and their vulnerability to the approaching weather.
2. Upon agreement that certain vessels are at risk from the approaching weather, or from sea states generated by the approaching weather, MSD

Unalaska will issue a notice to the agent or master of the at-risk vessels. Any at risk vessel will be directed by MSD Unalaska to prepare for severe weather, weigh anchor and move to sea, or to move to a less vulnerable anchorage. **Notices will be faxed to the vessel agent, followed by a phone call to confirm receipt. Agents will relay the notice to the at-risk vessel's master immediately.** If the vessel agent cannot reach the vessel master, MSD Unalaska will be immediately apprised that notification to that vessel has not taken place. If a vessel agent cannot be reached, the notice will be relayed directly to the vessel master. The Port of Dutch Harbor will be made aware of the notices by fax.

3. Upon notification to an at-risk vessel, AMP and the vessel agent or master will coordinate implementation of the notices issued by MSD Unalaska. When multiple vessel departures are necessary, AMP will decide the order of departures, with the most at-risk vessel first. A moored vessel will not normally be required to move unless the severity of the weather clearly poses an imminent danger if the vessel were to remain at the dock.
4. In the event of unpredicted and sudden weather, MSD Unalaska, AMP, and the vessel agent or master will agree on whether the vessel will be instructed to weigh anchor and put to sea, or be moved to another anchorage. The vessel(s) will make ready to depart before the wind increases to a point that would endanger the vessel, pilot vessel, or the pilot trying to embark or disembark the vessel. The Port of Dutch Harbor will be notified of the agreements by fax.
5. If the Port Director is not in Unalaska, or is otherwise unavailable, the Acting Port Director will make all decisions as pertains to this plan. The supervising officer, MSD Unalaska under the authority of the Captain of the Port, Western Alaska will issue Captain of the Port orders to enforce these provisions as necessary.

WINTER GROUND TACKLE STANDARDS FOR VESSELS ANCHORING IN THE PORT OF DUTCH HARBOR

PREFACE

The bathymetry of the Port limits the number of useable anchorages for single screw, non-bow thrusted, non-controllable pitch propeller (CPP) vessels of 85 meters and above. The problem of large vessels anchored in the Port and dragging anchor in severe weather is due to the depth of anchorage, bottom characteristics, the vessel's loaded condition, and insufficient length of useable anchor chain aboard. Vessels with insufficient anchor chain for their anchorage will, depending on wind direction, drag ashore or drag off the assigned anchorage usually into a greater depth of water, further reducing the scope of the anchor chain, suddenly and dramatically decreasing the anchors holding capability.

Given the magnitude of winter weather conditions in and around the Port of Dutch Harbor, vessels without certain equipment are at greater risk in severe weather. Bow thrusters capable of bi-directional thrust control greatly increases the ship's ability to hold position. Controllable pitch propellers (CPP) add a great deal of control by using a vessel's engines to help hold position in severe weather. Placing a second anchor will greatly reduce shear force against the vessel as wind forces the ship to yaw back and forth. The minimum vessel size reflects that larger vessels have greater wind sail area and are more subject to control problems in high winds.

The following ground tackle standards for the Port are strongly suggested. These standards are intended to ensure single screw, non-bow thrusted, non-CPP vessels meet or exceed the minimums to anchor in the area between the months of October 1st through April 30th.

1. A single screw, 85 meters and larger vessel(s) without a bow thruster, or controllable pitch propeller (CPP), will maintain 10 useable shackles/shots (275 meters) of chain to the waters edge for both port and starboard anchors
2. A single screw, 85 meters and larger vessel(s) without a bow thruster, or controllable pitch propeller (CPP) that is anchored in the Port that has less than the recommended lengths of anchor chain will make arrangements with a tug of sufficient horsepower and size to control the vessel at all times in all weather conditions for any weather prediction of 45 knots or greater by the NWS while that vessel is at anchor in the Port. A written request for a waiver may be submitted and agreed upon if AMP, the Port and MSD Unalaska agree that the vessel is unlikely to drag anchor in its present location, taking into account the quality and size of the vessel's ground tackle, known vessel characteristics, location of anchorage, water depth and holding characteristics of the bottom.
3. Vessels anchoring are to take great care in fixing the vessel's position by all means available. In selecting an anchor position, a vessel's loaded condition, depth of water, type of bottom, and the amount of shackle/shots in the water shall be considered. This information must be recorded in the ship's log book. An accurate swing and drag circle will be plotted on the vessels navigational chart. Those vessels equipped with a radar system capable of plotting this information should maintain a prudent and diligent plot at all times during severe weather conditions.

SEASONAL RESTRICTIONS OF ANCHORAGES

Because of restricted maneuvering room and close lee shores in certain wind conditions, the South Iliuliuk anchorage described as south of a line from Rocky Point buoy east to the opposite shore on a bearing of 118 degrees true, and the Dutch Harbor anchorages, described as west of a line from Rocky Point buoy north to Dutch Harbor Spit Head light,

will be utilized for anchorages between October 1st and April 30th by permission only. Permission **MUST** be obtained from MSD and the Port before anchoring any vessel in these restricted areas. Length of stay, reason for requesting anchorage in a restricted area, and present weather conditions and forecasts will be considered in granting permission to anchor in the restricted areas.

GENERAL ANCHORING GUIDELINES

1. If a vessel at anchor intends to conduct any maintenance of their main propulsion systems that will affect in any way the vessel's ability to maneuver, the vessel agent or master **MUST** notify MSD Unalaska and the Port of Dutch Harbor and hire a standby tug "of suitable size and horsepower that can control the vessel in all weather conditions". Vessels that have become disabled through mechanical failure **MUST** notify MSD Unalaska and the Port of Dutch Harbor, and provide a detailed synopsis of the failure and an estimated time to affect repairs. A standby tug "of suitable size and horsepower that can control the vessel in all weather conditions" will be required for these vessels as well.
2. When a vessel has another vessel alongside while at anchor, and is planning to disable their Main Propulsion Systems for maintenance purposes, all of the vessels involved **MUST** notify MSD Unalaska and the Port of Dutch Harbor prior to conducting any maintenance. The vessel with full maneuverability will assume full responsibility for the disabled vessel while alongside.

SUMMARY

By documenting and enforcing prudent marine practices suitable for the geography and often-severe climate of the Port, marine casualties such as the Kuroshima and Hekifu can be avoided. These measures are not meant to cause unnecessary delays, or costs to ship owners and their agents. The intent of this plan is to ensure that vessels have the necessary equipment and knowledge suitable to anchor in the area, and to mitigate any potential hazardous weather conditions before the conditions deteriorate to the point that moving the vessel is no longer possible or the pilot is endangered trying to board. Ships will often delay departure, or will not call for a pilot until weather conditions force them to stop their current loading operations. By that time, attempting a departure has placed the vessel in extremis and will place the pilot in danger if he/she is needed to guide the vessel to safety. The Port of Dutch Harbor Severe Storm Plan is intended to safeguard the Port, City of Unalaska, vessel crews, and the environment from marine casualty and the potential pollution resulting from vessel groundings.