

## Annex C – Maritime Heavy Weather & Hurricane Plan

### Purpose

This plan provides guidance to the Hawaiian Islands and maritime community within the CG Captain of the Port (COTP) Honolulu Zone on steps that should be taken and critical risk factors to consider: before, during, and after heavy weather. It should be used by all marine interests to prepare plans for terminals, facilities, vessels and/or marine operations.

This plan is developed to ensure that ports within the COTP Honolulu zone have taken all practical precautions for severe weather, including the worst case scenario—a direct hit by a major hurricane. For hurricanes, most of the preventive provisions and requirements of this Annex are intended to be enacted prior to the onset of *sustained* Gale Force Winds, *when hurricane conditions* (winds and surge) *are predicted to follow*. When Gale Forces Winds are expected, but hurricane conditions are not predicted to follow, the COTP may elect not to implement all of the requirements outlined in this plan. In any case, due to the unpredictable nature of tropical storms and hurricanes, marine interests should plan for the worst case.

### Key Terms & Definitions

1. **Storm Terminology** - The National Oceanic and Atmospheric Administration's (NOAA) National Weather Service (NWS) provides advance warning of tropical storms and hurricanes on a national basis. The Central Pacific Hurricane Center (CPHC) identifies and tracks storms between Longitudes 140° West to 180° and gives warnings of those storms affecting the Hawaiian Islands and North of the equator. Information from these two agencies can be obtained on line at: <http://www.weather.gov/Hawaii> and <http://www.weather.gov/cphc>, respectively. Please note that a storm need not be considered a hurricane for the provisions of this plan to be enacted by COTP Honolulu.
2. The following terminology is used throughout this plan:

Terminology	Sustained Wind Speed
<b>Gale Force Winds</b>	39-54 MPH (34-47 KTS)
<b>Tropical Storm Force Winds</b>	Cyclonic winds 39-73 MPH (34-63 KTS)
<b>Hurricane Force Winds</b>	74 MPH (64 KTS) or greater

3. **Storm Alert Status:** The NWS and CPHC will issue warnings as storms intensify and move closer to our area. The following is a summary of the alert conditions;

NWS Alert	When Issued
<b>Tropical Storm Watch</b>	Tropical Storm Force Winds predicted to impact the watch area within 48 hours.

<b>Tropical Storm Warning</b>	Tropical Storm Force Winds predicted to impact the area within 36 hours.
<b>Hurricane Watch</b>	Hurricane or hurricane conditions are predicted to impact the watch area within 48 hours.
<b>Hurricane Warning</b>	Hurricane Force Winds or a combination of dangerously high water and very rough seas, predicted to impact the warning area within 36 hours or less.

4. **Hurricane Categories** - The strength of a hurricane is measured by its maximum sustained wind speeds. Hurricanes are categorized as follows:

Hurricane Category	Sustained Wind Speed
Category 1	74-95 MPH (64-82 KTS)
Category 2	96-110 MPH (83-95 KTS)
Category 3	111-129 MPH (96-112 KTS)
Category 4	130-156 MPH (113-136 KTS)
Category 5	> 157 MPH (>137 KTS)

Note: Category Three, Four, and Five are MAJOR STORMS.

5. **Port Heavy Weather Conditions** – Port Heavy Weather Conditions are set by the Coast Guard for the maritime community ports and are used to describe, generally, restrictions needed to protect life, vessels, facilities, ports, and the environment for severe weather. **Port Heavy Weather Conditions** will be changed for **each specific commercial port** as the threat of severe weather increases, or as storms approach our area.

Port Heavy WX Condition	When Set
<b>Hurricane Season Preparedness</b>	The <b>Hurricane Season Preparedness</b> is set each year during Hurricane Season <b>01 June to 30 November</b> .
<b>Condition Whiskey</b>	The <b>ALERT</b> condition in which winds above 34 knots (39 MPH) are expected within <b>72 hours</b> .
<b>Condition X-Ray</b>	The <b>READINESS</b> condition in which winds above 34 knots (39 MPH) are expected within <b>48 hours</b> .
<b>Condition Yankee</b>	The <b>WARNING</b> condition in which winds above 34 knots (39 MPH) are expected within <b>24 hours</b> .
<b>Condition Zulu</b>	The <b>DANGER</b> condition in which winds above 34 knots (39 MPH) are expected within <b>12 hours</b> and until the storm has passed and is no longer a threat.

## **Responsibilities**

### **General**

The primary responsibility for natural disaster preparation and response rests with affected individuals, private industry, state and local government. This plan provides the general recommended actions to be taken by each member of the maritime community with the ultimate goal of having everyone completely prepared for an approaching storm. This plan cannot foresee all situations or conditions and therefore does not reduce or replace the responsibility of any person or organization to exercise prudent judgement in the preparation for and response to heavy weather conditions.

The Captain of the Port Honolulu will close ports and waterways whenever conditions pose an unacceptably high risk to vessel and facility safety. Post heavy weather recovery emphasis is put on immediate surveys of channel blockage and prioritization of steps necessary to resume essential, then normal vessel traffic.

Preparations for the arrival of a storm are critical to the safety and security of the port. Timely preventative actions and corrections of hazardous conditions may significantly eliminate or reduce the loss of life and property during heavy weather. It is the responsibility of every agency, organization, and individual in the maritime community to take every precaution to minimize potential damage.

### **Captain of the Port (COTP) Responsibilities**

The Coast Guard is one of several Federal agencies that respond to actual or threatened natural disasters or emergencies. The COTP Honolulu is responsible for the safety and security of the ports within a zone that includes the islands and atolls of the Hawaiian island chain and American Samoa. The COTP will oversee actions that are intended to safeguard the port against damage that may be caused by heavy weather.

Upon initial notification of a storm that has the potential for affecting the COTP zone, the COTP will begin tracking the storm. The COTP will issue Broadcast Notice to Mariners (BNTMs) on VHF-FM Channels 16 and 22A, when a storm's trajectory, speed, or strength poses a threat to the Hawaiian Islands. The basis for whether or not a BNTM will be issued is based on information obtained from the National Weather Service and other forecasting resources available to the COTP. The intent of issuing BNTMs is to ensure that reasonable and timely preparations can be made by the maritime community to minimize damage from heavy weather. In American Samoa, Industry will receive these same notifications via phone calls from the local Coast Guard representative to the COTP.

It is important to note that changes in storm speed, direction and conditions can change in an accelerated rate and may influence the settings of **Port Heavy Weather Conditions**. Separate conditions may be set at different times for different ports, so pay close attention to notifications set by the COTP to see the condition set for your area.

Sector Honolulu will attempt to pass updates on forecasted closure times three times a day with a morning, midday, and evening update.

## Port Heavy Weather Conditions Preparations

### **Hurricane Season Preparedness 01 Jun to 30 Nov:**

Making preparedness part of annual planning can alleviate the rush to do these things when a storm is actually approaching. These efforts include:

- Updating internal contact lists & phone numbers.
- Reviewing your company's contingency plans to minimize disruptions and ensure your business or organization is back up-and-running as early as possible.
- Attending port briefs by the Coast Guard can help in understanding the actions that the Coast Guard will be taking before, during and after the storm.
- Determining what preparedness actions your staff & workforce will need to take.
- Ensuring that your business has the proper tools and equipment that is needed for safe guarding your vessel and/or facility.

### **Port Condition Whiskey – 34 knot winds are expected within 72 hours:**

Preparations for the arrival of a storm are critical to the safety and security of the port. Specific actions and expectations should include the following:

- The Coast Guard will issue a Broadcast Notice to Mariners (BNTM) and fax out Marine Safety Information Bulletin (MSIB).
- The Captain of the Port (COTP) may restrict the operations of, or deny entry into the port to, vessels transporting oil or certain hazardous materials.
- The COTP will be minimizing the overall number of vessels in port. Oceangoing vessels 300 gross tons or more will be required to leave port. Vessels of 200 to 300 gross tons will be required to leave port unless they have received the Captain of the Port's permission to remain. This can only be obtained by submitting a "Request to Remain in Port – Commercial Vessel Survey" (see page Annex C-9) to the Coast Guard at 808-842-2624 (unless noted differently in a Marine Safety Information Bulletin). "Dead" ships or vessels or barges unable to put to sea, need to request this permission.
- Facilities must obtain permission from the COTP regarding vessels that will remain moored to the facility during heavy weather, after their plan and mooring arrangement has been inspected and approved.
- Oceangoing vessels with permission to remain in port should be moored to piers designed to moor vessels of their respective size during heavy weather.
- Open areas of piers should be cleared of possible debris hazards. Timely correction of hazardous conditions may significantly eliminate or reduce the loss of life and property during heavy weather.
- Vessel transits may be permitted so long as it is safe under forecasted weather conditions.
- Qualified vessels that desire to anchor within Pearl Harbor in accordance with the MOA must submit their information and intent to COTP for clearance by Joint Base Pearl Harbor Hickam.

**Port Condition X-Ray – 34 knot winds are expected within 48 hours:**

- The Coast Guard will issue a Broadcast Notice to Mariners (BNTM) and fax out Marine Safety Information Bulletin (MSIB).
- All vessels should prepare to complete cargo operations and depart port within 36 hours.
- Close coordination with Harbor Pilots is required during port evacuations.

**Port Condition Yankee – 34 knot winds are expected within 24 hours:**

- The Coast Guard will issue a Broadcast Notice to Mariners (BNTM) and fax out Marine Safety Information Bulletin (MSIB).
- **Port is closed** to **incoming** traffic without specific written approval of COTP.
- All cargo operations must stop, within the next 12 hours.
- All lightering and bunkering are to cease.
- All vessels must evacuate the port within the next 12 hours, unless in receipt of specific written approval of the COTP to remain in port. Masters should not expect to transit the port after that time period, and should plan accordingly.
- In cases where vessels or facilities refuse to follow the safety recommendations and fail to make adequate preparations, the COTP will issue orders to require the appropriate precautions.

**Port Condition Zulu – 34 knot winds are expected within 12 hours:**

- The Coast Guard will issue a Broadcast Notice to Mariners (BNTM) and fax out Marine Safety Information Bulletin (MSIB).
- **Port is closed**.
- A safety zone will be established for all affected harbor(s) within the COTP zone when winds are 12 hours away, and will remain in effect until terminated by the COTP.
- No terminal, facility or vessel operations are permitted and any vessel entering or transiting within the port without specific permission will receive a fine for violating safety zone set by COTP Honolulu.

***Response (During & Immediately After the Storm):***

- During the time when the storm is affecting the Captain of the Port (COTP) Honolulu zone, the COTP will monitor activities.
- Just before landfall, Coast Guard services may be impacted or degraded due to precautionary measures to preserve Coast Guard personnel and equipment for post-storm operations.
- Immediately after the storm passes, the Coast Guard will be focused on reestablishing the port operations. Coast Guard mission emphasis will be on: (1) conducting urgent search and rescue (SAR), (2) channel port survey, (3) spill response, and (4) port opening. Port operations will be focused on opening the port for commercial use.

***Recovery (After the Storm):***

During recovery, the Coast Guard, United States Army Corps of Engineers, and State will jointly conduct surveys of channel blockage, and prioritize steps to resume essential—then normal—vessel traffic. Plans for re-opening the port will be closely coordinated with MTSRU. Minimize risk of damage to vessels and assess the conditions of channels, aids to navigation, waterfront facilities, piers and other infrastructure. The COTP, in conjunction with the State DOT-Harbors in Hawaii and Territorial Management Coordination Office/Department of Port Administration in America Samoa, will begin sending Port Assessment Teams (PAT) to accessible areas of the zone. PATs will document all activities using logs, photographs and any other appropriate means. The Coast Guard will issue a Broadcast Notice to Mariners (BNTM) and fax out Marine Safety Information Bulletin (MSIB) to notify the reopening of the port and any special conditions.

## Evacuation vs. Lay-up

### General

The determination to leave a vessel in port or send it out to sea during a hurricane should be made long before the start of hurricane season. This requires foresight and planning on the part of vessel owners/operators to determine what is the safest action for the vessel and its crew and what resources are necessary to execute those plans. If a vessel owner/operator plans on leaving the vessel in port, then they need to consider whether or not the facilities the vessel will be laid up at will be sufficient and have the proper resources needed to hold the vessel in hurricane winds. Then they need to make the proper arrangements with the facility owner/operator to ensure that those resources will be available when a hurricane approaches the area. Finally, facility and vessel owners/operators need to receive authorization from the Coast Guard Captain of the Port (COTP) to allow them to implement those plans. Otherwise, vessel owners/operators need to have plans for safe evacuation from the port prior to the hurricane. This means properly planning cargo/transfer operations so as to have them completed to allow for the safe evacuation. It is important to note that the COTP generally will not order a terminal operator to layberth a vessel during severe weather. COTP approval of a request to remain in port will be based, in part, on providing a suitable layberth.

The following sections provide guidance to the vessel owner or agent on what they need to consider when making their decision on what actions they will take. Read through them carefully and know that they are not all encompassing and that there may still be other factors to consider depending on the individual needs of each vessel.

### Vessel Evacuations

There are few safe havens within the COTP Zone in Honolulu and America Samoa. As a result, the risk of damage to our ports is minimized when the inventory of commercial vessels in port during heavy weather events is at a minimum. Accordingly, commercial ocean-going vessels and ocean-going tug/barge combinations over 200 GT will generally be required to depart the port when hurricanes approach.

The following factors should be considered when planning vessel evacuations:

1. Harbor Tugs – Masters and agents of deep draft vessels and tug/barge that require assistance during docking and transit should keep in mind that there is very limited availability of harbor tugs. For this reason, vessel owners/operators should make arrangements in advance with the harbor tug owners/operators for departing the port prior to **Port Heavy Weather Condition Yankee** (24 hours prior to storm making landfall). Failure to do so may result in difficulty in scheduling harbor tugs and/or delays that may make it difficult to evade the storm at sea. *Plan to depart the port early, and anticipate some scheduling conflicts caused by the simultaneous departure of many deep draft vessels.*
2. Pilots – Pilots generally stop working when conditions at the sea buoy prevent safe

transfer from ship to pilot boat, or at the on-set of sustained Gale Force Winds. For this reason, vessel owners/operators should make arrangements in advance with the Pilots for departing the port prior to **Port Heavy Weather Condition Yankee** (24 hours prior to storm making landfall). Failure to do so may result in difficulty in scheduling harbor tugs and/or delays that may make it difficult to evade the storm at sea.

## **Lay-Up Vessels**

No vessel will be permitted to enter or remain in lay-up status during the hurricane season, except as provided below. Laid-up vessels unable to depart, before June 1 in the Hawaiian Islands and November 1 in America Samoa, each year must obtain written permission from the COTP to remain in port. This is done by completing the “Request to Remain in Port” form, attached to this appendix. Requests that are not fully or properly completed will not be considered, and the vessel will not receive the written permission. Requests, at a minimum, shall include a lay-up plan containing specific provisions for all categories of hurricanes.

If a vessel of over 200 gross tons experiences an unplanned situation where it is unable to evacuate, the vessel owner/operator is required to complete the “Request to Remain in Port” form, attached to this appendix. This request must be made no later than when **Port Heavy Weather Condition Whiskey** (72 hours prior to storm making landfall). Requests submitted after that will not be considered. This is vital due to the time it will take for the Coast Guard to evaluate each vessel’s request.

For purposes of this policy, a vessel is considered in lay-up status if it is not operational or undergoing repairs or contracted to commence repairs within seven (7) days. A vessel is considered operational only if it is manned, has valid certificates from the flag administration, and is prepared to conduct cargo operations or sail within 14 days of entering port.

Vessels that are under the 200 gross ton and plan on mooring up during a heavy weather event are also required to submit a mooring plan for approval from the COTP. Even though these vessels will most likely be allowed to stay in port, they still need to have a plan how they will moor their vessel and have it reviewed and approved by the COTP. These plans should be made to the COTP prior to the start of the **Hurricane Season Preparedness** (June 1 in Hawaii; November 1 in America Samoa). The “Request to Remain in Port” form may be used in submitting these plans, but more information maybe required by the COTP.

This will make it possible for the COTP to ensure that all appropriate actions are being taken through out the port and that all safety concerns are being addresses ahead of time and not at the last minute. This will also make it possible to ensure that the port or harbor that a vessel operator or owner plans to use is sufficient for safe mooring during heavy weather. It is important to note that some harbors may not be safe due to their location, exposure to open waters and/or the direction that a storm might approach. If you have questions on this please contact Sector Honolulu Prevention Department at 522-8264 ex. 260.

## Request to Remain in Port--Commercial Vessel Survey

This vessel information is required by the Captain of the Port for commercial oceangoing vessels and oceangoing barges, greater than 200 gross tons, remaining or requesting to remain in port during the storm. This form should be completely filled out and faxed to 808-842-2624.

Vessel Name: \_\_\_\_\_ Call Sign: \_\_\_\_\_

Official Number: \_\_\_\_\_ Flag: \_\_\_\_\_

Vessel Master: \_\_\_\_\_ Phone: \_\_\_\_\_

Location/Facility: \_\_\_\_\_

Facility POC Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Agent Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Address: \_\_\_\_\_

Charter/Operator Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Address: \_\_\_\_\_

Owner Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Address: \_\_\_\_\_

### Vessel Particulars

Length: \_\_\_\_\_ Gross Tonnage: \_\_\_\_\_ Hull Type: \_\_\_\_\_

### On board Vessel

Bunkers: \_\_\_\_\_ Lube Oil: \_\_\_\_\_ Diesel Oil: \_\_\_\_\_

Ballast Capacity: \_\_\_\_\_

Estimated draft when ballasted: \_\_\_\_\_

Availability of vessel main propulsion: \_\_\_\_\_

Current condition/why requesting to remain: \_\_\_\_\_

Number of crew to remain aboard and qualifications: \_\_\_\_\_

Operational status of machinery aboard: \_\_\_\_\_

Firefighting capability of vessel: \_\_\_\_\_

Any unusual conditions affecting vessel seaworthiness: \_\_\_\_\_

## (cont.) Request to Remain in Port--Commercial Vessel Survey

### Facility Particulars

Storm berth name and location: \_\_\_\_\_

Facility POC name: \_\_\_\_\_ Phone: \_\_\_\_\_

Description of moorings: \_\_\_\_\_

DOT Harbors Approval if at State piers: \_\_\_\_\_ Approved by: \_\_\_\_\_

NOTE: A diagram showing mooring arrangements with size and number of mooring lines or wires is required as part of the checklist.

Fendering configuration and condition (attach plan if needed):

Shoreside firefighting capability: \_\_\_\_\_

Tugboat assistance available: \_\_\_\_\_

Distance to nearest obstruction (crane, drydock, building, tank, etc.) that may cause damage to vessel: \_\_\_\_\_

Distance to nearest oil storage facility, oil pipelines, hazmat facility, oil or hazmat storage tanks at facility where vessel is to be moored: \_\_\_\_\_

Open areas of docks, wharves and piers cleared of missile hazards: \_\_\_\_\_

Has the facility had an engineering study done to determine the maximum size of vessel with maximum winds which could safely moor at facility: \_\_\_\_\_

Study done by: \_\_\_\_\_

Condition of bollards, dolphins and deadmen: \_\_\_\_\_

Is facility capable of holding vessel: \_\_\_\_\_

Vessel person in charge

State DOT persons in charge

Facility person in charge

### POST-STORM SURVEY

Survey team comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Survey team: \_\_\_\_\_

Team leader: \_\_\_\_\_

Survey date: \_\_\_\_\_ Survey time: \_\_\_\_\_

## **Request to Anchorage of Commercial Vessels in Pearl Harbor for Pre-Hurricane Situations**

*(This Section To Be Developed)*

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## **Request to Activate Alternate Port in Pearl Harbor for Post-Hurricane Cargo Off-load Operations**

*(This Section To Be Developed)*

*Consider adding info (maybe in a separate Annex) on potential Alternate Port in Pearl Harbor including need to request it by State, notice from COTP to JBPHH and CG Alternate Port Working Group describing this.*

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