

QUEENS'S HARBOUR YACHT & COUNTRY CLUB

HURRICANE PREPAREDNESS PLAN

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GENERAL

In the event of a hurricane, it is the owner's responsibility to ensure that their vessel is attended to.

A "hurricane watch" is issued forty-eight (48) hours "before" the expected landfall of the storm.

A "hurricane warning" is issued twenty-four (24) hours "before" the expected landfall of the storm.

Should an evacuation order be issued, it would be issued twelve (12) hours prior to the expected landfall of gale force winds, (39-54 mph) preceding the hurricane. All persons are then required to evacuate. The Harbourmaster will secure the lock six, (6) hours prior to the expected landfall, and will reopen when the "all clear" is given.

NO ONE IS TO RETURN UNTIL THE "ALL CLEAR" IS GIVEN.

Queen's Harbour endorses the "Duval County Emergency Preparedness Policy" that wherever possible, vessels should be moved to areas less susceptible to hurricane damage.

Each owner should select, in advance and rehearse moving his vessel to that area.

Consideration for selection should include ease of access, inland distances from the ocean, adequate depth, adequacy of holding for anchorage, proximity to roads and communications, lack of congestion and low probability of windblown debris.

VESSELS LEFT IN THE HARBOUR.

Queen's Harbour nor the harbourmaster and his staff are to be held liable for any damaged vessel.

Queen's Harbour realizes that it will not always be feasible for owners to move their vessels. Those left in the harbour during severe weather conditions are subject to the following conditions:

- The owners are to be held responsible for any damage done by their vessel to other vessels, property or persons.
- Owners will hold Queen's Harbour and its employees harmless for any damage to their vessel or equipment.

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- Queen's Harbour employees, at the discretion of the Harbourmaster, may board or move any vessel in order to perform duties they feel necessary to increase safety or lessen damage to the vessel.
- The Harbourmaster or his staff may find it necessary to add equipment to unattended vessels. This equipment could include, but not limited to, additional fendering, dock lines, anchors and emergency bilge pumps. Owners accept full financial responsibility for both equipment and the installation, provided, however, that neither the Harbourmaster nor his employees shall be responsible or liable for any damage or costs arising from actions taken to provide such equipment.
- If the vessel is unable to move his vessel and it is to remain at the dock, in addition to extra mooring lines and fenders, it may be advisable to set additional anchors at such an angle as to hold the vessel off the dock. Any additional anchors **MUST NOT** block any fairway so as to impede the passage of any vessel.
- Within six, (6) hours after the "all clear" is given, any additional anchors that were set must be retrieved. Anchors that are not retrieved within this time period will be retrieved by the Harbour staff and the vessel owner may be charged for this service.

The previous paragraphs in no way absolve the owners of the necessity of properly preparing his/hers vessel for severe storm conditions.

RESPONSIBILITIES OF THE VESSEL OWNERS:

The following items are the responsibility of the vessel owners:

- Fill the fuel and water tanks.
- Ensure the batteries are fully charged.
- Remove all loose equipment, sails and any other loose gear from the deck of the vessel.
- Make sure that adequate dock lines, fenders, anchors and anchor lines are on board and readily available.
- Check that the bilge pumps are clean and in good working order.
- Record all equipment serial numbers for insurance purposes.

The following pages are from the Captain of The Port Heavy Weather Plan.

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Hurricane Categories – The strength of a hurricane is measured by its maximum sustained wind speeds. Hurricanes are categorized as follows in Table 1.1.

Table 1.1

HURRICANE CATEGORY SUSTAINED WIND SPEED

CATEGORY ONE 74-95 MPH

CATEGORY TWO 96-110 MPH

CATEGORY THREE 111-129 MPH

CATEGORY FOUR 130-156 MPH

CATEGORY FIVE ≥ 157 MPH

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

Hurricane Force Winds: Sustained cyclonic wind speeds ≥ 74 MPH (66 KTS).

Hurricane Warning: An announcement that sustained winds of 74 mph or higher are expected somewhere within the specified area in association with a tropical, subtropical, or post-tropical cyclone. Because hurricane preparedness activities become difficult once winds reach tropical storm force, the warning is issued 36 hours in advance of the anticipated onset of tropical storm-force winds.

The warning can remain in effect when dangerously high water or a combination of dangerously high water and waves continue, even though winds may be less than hurricane force.

Hurricane Watch: An announcement that sustained winds of 74 mph or higher are possible Somewhere within the specified area in association with a tropical, subtropical, or post-tropical cyclone. Because hurricane preparedness activities become difficult once winds reach tropical storm force, the watch is issued 48 hours in advance of the anticipated onset of tropical storm-force winds.

Incident Command System (ICS): A combination of facilities, equipment, personnel, procedures, and communications integrated into a common system with responsibility for coordinating resources and support to emergency operations.

Marine Safety Information Bulletin (MSIB): A written or electronic communications to the public concerning current or future maritime safety information.

National Oceanic and Atmospheric Administration (NOAA): The Agency of the Department of the Interior that oversees activities of National Weather Service (NWS).

National Weather Service (NWS): The Agency established to collect local, regional & national climatologically data and provide weather forecasting services to the public.

Port Hurricane Conditions and Status: Port Hurricane Conditions are set by the COTP and are used to describe, generally, how prepared the port areas should be for severe weather. Port Hurricane Conditions will be changed as the threat of severe weather increases, or as storms approach our AOR.

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Table 1.2

Port Hurricane Condition When Set Port Status Condition 5 (General) 01 Dec – 31 May. Port status: open.

Condition 4 Hurricane seasonal alert. 01 June – 30 Nov (return to this condition after passage of storm during season). Port status: open.

Condition Whiskey Sustained Gale Force winds associated with Tropical Cyclone activity are **predicted** within 72 hours. Port status: open.

Condition X-Ray Sustained Gale Force winds associated with Tropical Cyclone activity are **predicted** within 48 hours. Port status: open.

Condition Yankee Sustained Gale Force winds associated with Tropical Cyclone activity are **predicted** within 24 hours. Port status: restricted, vessel/facility control measures in effect.

Condition Zulu Sustained Gale Force winds associated with Tropical Cyclone activity are **predicted** within 12 hours. Port status: closed to all vessel traffic and waterside ops except for activities approved by COTP.

Note: Maritime interests should anticipate that storm movement may accelerate and periods between Port Hurricane Conditions may be less than 24 or 12 hours as indicated above.

SLOSH: Sea Lake and Overland Surges from Hurricanes – a NWS computer program that predicts areas of flooding from hurricane surges, based on hurricane category.

Storm Alert Status: The NWS will issue storm warnings as storms intensify and move closer to our area. Table 1.3 is a summary of NWS alert conditions.

Table 1.3

NWS Alert When Issued

Tropical Storm Watch An announcement that tropical storm conditions (sustained winds of 39 to 73 mph) is *possible* within the specified coastal area within 48 hours.

Tropical Storm Warning An announcement that tropical storm conditions (sustained winds of 39 to 73 mph) is *expected* within the specified coastal area within 36 hours.

Hurricane Watch An announcement that hurricane conditions (sustained winds of 74 mph or higher) are *possible* somewhere within the specified coastal area. Because hurricane preparedness activities become difficult once winds reach tropical storm force, the hurricane watch is issued 48 hours in advance of the anticipated onset of tropical-storm-force winds.

Hurricane Warning An announcement that hurricane conditions (sustained winds of 74 mph or higher) are *expected* somewhere within the specified coastal area. Because hurricane preparedness activities become difficult once winds reach tropical storm force, the hurricane warning is issued 36 hours in advance of the anticipated onset of tropical-storm-force winds.

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Storm Terminology – The NWS provides advance warning of tropical storms and hurricanes. When atmospheric conditions develop to the point of rotary circulation with wind speeds (**sustained**) above 34 knots (39 miles per hour), the National Hurricane Center in Miami officially identifies and tracks the storm as it approaches land. Please note that a storm need not be considered a hurricane for the provisions of this plan to be enforced by COTP Jacksonville. Table 1.4 is a summary of the terminology that is used throughout this plan:

Table 1.4 Terminology Wind Speed

Gale Force Winds above 39 MPH (34Kts)

Tropical Storm Force Winds Cyclonic winds 39 to 73 MPH

Hurricane Force Winds Above 74 MPH (66Kts)

Tropical Cyclone: A warm-core non-frontal synoptic-scale cyclone, originating over tropical or subtropical waters, with organized deep convection and a closed surface wind circulation about a well-defined center. Once formed, a tropical cyclone is maintained by the extraction of heat energy from the ocean at high temperature and heat export at the low temperatures of the upper troposphere. In this they differ from extra tropical cyclones, which derive their energy from horizontal temperature contrasts in the atmosphere (baroclinic effects).

Tropical Storm Force Winds: Cyclonic winds with speeds ranging from 39 mph to 73 mph.

Tropical Storm Warning: An announcement that sustained winds of 39 mph to 73 mph are expected somewhere within the specified area within 36 hours in association with a tropical, subtropical, or post-tropical cyclone.

Tropical Storm Watch: An announcement that sustained winds of 39 mph to 73 mph are possible somewhere within the specified area within 48 hours in association with a tropical, subtropical, or post-tropical cyclone.

Unit Hurricane Condition: The District 7 Commander sets Unit Hurricane Condition. For the purpose of setting Readiness Conditions, threatening winds are defined as sustained gale force winds (34-47 knots) from a hurricane force storm that is expected to arrive on any area of the AOR. Unit Hurricane Conditions will be changed as the threat of severe weather affecting the area increases. Table 1.5 is a summary of the Unit Hurricane conditions.

Table 1.5 Unit Hurricane Condition When Set

Condition 5 01 Dec to 31 May; Stand down from Hurricane Season

Condition 4 01 Jun to 30 Nov; Seasonal Condition for all units

Condition 3 48 hours prior to the arrival of sustained Gale Force (34 kt) winds associated with Tropical Cyclone activity.

Condition 2 24 hours prior to the arrival of sustained Gale Force (34 kt) winds associated with Tropical Cyclone activity.

Condition 1 12 hours prior to the arrival of sustained Gale Force (34 kt) winds associated with Tropical Cyclone activity.

All Clear The storm has passed and is no longer a threat to the area. Set HURCON IV

PLANNING FACTORS.

Tidal Surge and SLOSH Tables – Most often, more damage is caused by Tidal Surge than by wind during Tropical Storms and Hurricanes. For this reason, storm surge is regarded as the greatest threat to marine interests, during severe weather. Storms approaching from the Southeast are particularly dangerous to the ports of Jacksonville, Fernandina, and Canaveral. The NWS Sea Lake and Overland Surges from Hurricanes (SLOSH) models indicate that a storm surge in excess of 20 feet is possible in downtown Jacksonville if a Category 5 storm were to make landfall just south of the entrance of the St. Johns River.

Although many factors impact the storm surge that accompanies tropical storms and hurricanes, including height of tide and stage of the moon, the following table provides useful information for planning purposes.

Geographic Considerations within the COTP Jacksonville Zone.

Note: Based on 1998 SLOSH Model Data

Due to the low topography of the area, the Port of Jacksonville and the Naval Station Mayport Basin are not suitable refuge for hurricanes or other tropical cyclones. The NWS SLOSH model indicates that water surges of over 21 feet can be expected in the St. Johns River near Port of Jacksonville Entrance and Naval Station Mayport Basin if a Category 5 hurricane were to strike the area.

Port Canaveral is located on the east coast of Brevard County, Florida, approximately 145 miles south of Jacksonville. **Port Canaveral is not a suitable refuge for either hurricanes or tropical storms.** In addition, Port Canaveral is a port of significant national interest, and every effort must be taken to minimize the damage caused by severe weather. In most cases this means that vessels or barges greater than 500 GT will not be permitted to remain anywhere within Port Canaveral.

The **Port of Fernandina** is approximately 40 miles north of Jacksonville, Florida. The NWS SLOSH model indicates that water surges of over 17 feet can be expected in the St. Marys and Amelia Rivers near the downtown area of Fernandina Beach, if a Category 5 hurricane were to strike the area. **The Port of Fernandina is not a suitable refuge for either hurricanes or tropical storms.**

3. Vessel Sortie Policy – Effective June 1st, the COTP will release a Marine Safety Information Bulletin (MSIB) setting Hurricane Condition IV in the ports of Northeast and East Central Florida. Additionally, the MSIB will address the actions required by all vessels greater than 500 GT operating within the COTP Jacksonville Zone. The COTP will not order vessels, including tug and barges, to depart a facility if doing so would not ensure the safety of life at sea is protected and/or would unduly hazard the vessel.

As discussed above, in accordance with the [Department of the Navy Hurricane Havens Handbook](http://www.nrlmry.navy.mil/port_studies/tr8203nc/mayport/text/frame.htm), (http://www.nrlmry.navy.mil/port_studies/tr8203nc/mayport/text/frame.htm), the COTP Jacksonville Zone should not be considered a safe hurricane haven during hurricane

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conditions (forecast winds 64 kts or greater). Accordingly, all oceangoing vessels greater than 500 gross tons, including oceangoing tugs and barges greater than 500 gross tons, within the COTP Jacksonville Zone must follow the requirements at each Hurricane Port Condition for the port in which they are currently moored, operating within, or intending to moor. All ocean-going vessels and ocean-going tug/barge combinations over 500 GT should plan to depart the port during the approach of a tropical cyclone. Vessels desiring to remain in port during a tropical cyclone must request and receive permission from the COTP. For vessels already in port, this request must be received within 12 hours of the COTP setting Port Hurricane Condition WHISKEY. Vessels arriving after the setting of Hurricane Port Condition WHISKEY must submit a request to remain in port prior to entering the port. The request must be submitted in writing and explain the reasons why the vessel is submitting the request and must include a completed Remain in Port Request and Checklist (Annex H).

Once the COTP sets Port Condition ZULU, **no vessel, regardless of size or service**, will be allowed to enter, transit, or conduct cargo operations in the COTP Jacksonville Zone without permission from the COTP. No vessels will be allowed to remain at facilities which are within one half mile of any bridge without special consideration by the COTP.

In addition to the conditions outlined above, all vessels, regardless of size or service, in the Port of Canaveral during Hurricane Port Condition WHISKEY shall begin making preparations and safely depart.

Vessel Evacuations – The following factors should be considered when planning vessel evacuations:

- a. Bridges – When civilian evacuation of coastal areas is ordered by local emergency management authorities, the operation of bridges in the escape routes will be impacted. Typically, mandatory civilian evacuation is ordered about 18 hours prior to the arrival of sustained Gale Force Winds, when tropical storm or hurricane conditions are expected to follow. At that time, the COTP will permit all bridges to switch from “on-demand” openings to scheduled openings, once per hour. In the Jacksonville area, the schedule will stagger bridge openings to accommodate the transit of vessels up the St. Johns River (toward Green Cove Springs).

Remember:

**** It is approximately 18.5 miles to the F.E.C. Railroad Bridge** next to the Acosta bridge downtown, if your intended destination is further down river, (towards Green Cove Springs) you MUST adjust your departure from Queen's Harbour to arrive at the Rail bridge at least six hours before the predicted arrival of the Gale Force Winds.

- * Consult local charts to find adequate anchorage.
- * Too many mooring lines is never enough.
- * Make sure water and fuel tanks are full.

The Harbourmaster and staff will be happy to consult and advise any of our vessel owners on how to correctly secure their vessels.