Hurricane Hole Storm Refuge User's Guide for Permit Holders 2016 Season

Background & Design

Anchoring is not permitted within Virgin Islands Coral Reef National Monument (VICR), including Hurricane Hole, except for emergency or administrative purposes. In order to protect resources and to allow safe harborage during storm emergencies, a limited number of vessels may use Hurricane Hole as an emergency storm refuge from June 1 to November 30 each year, subject to the provisions described below. The storm refuge system, a large, submerged chain on the ocean floor, is designed for berthing by vessels up to 60 feet in length, length on deck. The establishment of a storm refuge system in Hurricane Hole enables the continued use of this area as a safe haven with secure mooring for vessels during storm events while protecting the mangroves and other natural resources for which this monument was established. ***Hence, tying of vessels to mangroves or other shoreline vegetation live or dead is prohibited.***

Storm Mooring

A permit holder's boat must be present in US or British Virgin Island waters at least fifty percent of the hurricane season (90 days between June 1 and November 30) to be eligible to retain and use a berth. If a berth holder chooses to leave the area, they may notify the park and the berth will be assigned to a vessel from a waiting list; that vessel would then use that location for the rest of the season. If a berth holder does not retain an assigned berth for two subsequent years, he or she will forfeit the berth to the vessel temporarily assigned the berth from the previous year.

Registration Procedures

A list of holders of the 105 berthing spots on the chain was finalized on May 26, 2016, and all permits should have been issued. Those who have not yet received a permit should contact the Interpretation and Resource Management Division Administrative Assistant at 340-693-8950 ext. 232 or via email at viis_storm_permits@nps.gov.

Fees

No fees are collected at this time.

Attachment of Personal Gear

The NPS will mark assigned sites, or storm berths, before or during the week following registration, using small, numbered floats. These may be left in place to mark the permitted spot or may be removed by the vessel owner and stored on board. Mariners may place their gear at their storm berth; gear may be left through the duration of the hurricane season. Only shackles may be attached to the ground chain and ***must be placed at least three chain links out from each side of the compression springs***; nothing should be attached directly to the compression springs, by-pass chain, or embedment anchors. Maps of the system may be viewed at http://www.nps.gov/vicr/learn/management/hurricane-hole-storm-refuge-permits.htm

In locations where ¾ - inch chain is used to connect embedded customized Manta anchor plates to the (one-inch) ground chain (P-12 through P-21 in Princess and O-8 through O-22 in Otter), permit holders must attach their shackles only to the ground chain, and three or more links from where the ¾ - inch embedded chain attaches to the ground chain.

All personal gear attached to the ground chain or personal anchors must have small floats marked with the vessel name and VI registration or documentation number. If a vessel owner/responsible party do not remain aboard during a storm, the vessel's dinghy must be located outside of Hurricane Hole. If remaining aboard the vessel, dinghies must be secured to the vessel so as to prevent damage to other vessels or natural resources

When attaching or removing gear from the chain system, check the chain and mooring components in the immediate area. Notify the park immediately if any potential flaws with the system are observed, *e.g.*, loose shackles, missing safety wires, etc.

The day-use-only moorings in Hurricane Hole may not be used as part of the storm refuge system; boats may not use these moorings in winds in excess of 40 knots.

Single lengths of one-inch chain were installed in Hurricane Hole, as close to the eastern and southern mangrove shorelines as possible, in Borck, Princess and Otter creeks. In Water Creek, six parallel chains were installed across the bay, approximately 200 feet apart.

Borck Creek has one continuous chain measuring approximately 590 feet. Princess Bay has two sections totaling about 1020 feet, with an approximately 125 foot gap between the sections. Otter Creek has two sections totaling about 780 feet, with a gap of about 125 feet (due to a topographic 'corner' of the bay that constricts the row of vessels. Water Creek has six parallel chains approximately 200 feet apart; three measuring 180 feet each in length and three measuring approximately 240 feet in length. While the chains in Borck, Princess and Otter creeks run parallel to the mangrove shoreline, the chains in Water Creek are oriented across the bay to accommodate the prevalent wind directions in that bay and allow vessels to lay bow or stern to the wind. The chains in Water Creek are placed towards the southern side of the bay to allow vessel access to storm berths along the northern edge of the bay. Vessels between the chains in Water Creek should attach to both chains, either bow in or bow out, depending on the mariner's preference. Vessels on the last chain out should be attached to the chain and use anchors to seaward.

Gear Requirements

Prudent seamanship would have vessel owners use nylon line, sized for the vessel, with thimbles and shackles to attach to the ground chains. Multiple lines may be used and shackled onto the ground chain. To prevent electrolysis, non-stainless steel galvanized shackles and thimbles should be used. Mariners must provide their own shackles to attach to the chain. Shackles must be sized to accommodate the one-inch link diameter ground chain; ¾ – inch shackles are the smallest size to accommodate one-inch chain without damaging the galvanized coating on the chain. Shackles should only be attached to the one-inch ground chain, farther than three chain lengths from any integral storm refuge component. ***Under no circumstances should the shackles that are connected as an integral part of the chain system be opened and used for the attachment of lines.***

Lines should be long enough to allow sailing vessels to be staggered fore and aft along a row to avoid rig collisions if conditions cause vessels to rock out of synch.

Vessel owners must provide their own anchors to secure the boat away from the shoreline. NPS regulations prohibit attachment of ropes to vegetation (live or dead). Mariners may not install anchors or chains in such a way as to cause damage to sea grass, coral reef features or mangrove roots. Landward ground tackle must be installed at least five feet from mangrove prop roots. All personal ground tackle must be removed by December 19, 2016 or as otherwise directed by the NPS.

Use Periods

Hurricane season is from June 1 to November 30. During this period, vessel owners may move their vessels to their assigned storm berth no earlier than 96 hours prior to projected landfall of a tropical storm or hurricane. Unless directed otherwise, vessels must be removed from Hurricane Hole no later than 72 hours following lifting of hurricane warnings for the northern Virgin Islands, or until the evening of the following Sunday, whichever is later. Notification that Hurricane Hole is "open" for storm refuge use may be made via e-mail, the monument web page (www.nps.gov/vicr), and via social media.

Vessels arriving late (within 24 hours of storm landfall) and with no assigned site may anchor at a location that does not interfere other anchored or moored vessels.

Vessels left unattended beyond the period specified above may be assessed a fine of up to $50 per day. Vessels left unattended more than 14 days may be considered abandoned and removed by the NPS.

Storm Berth Reassignment and Changes in Vessel Ownership

Persons temporarily vacating their assigned storm berth must notify the Interpretation and Resource Management Division Administrative Assistant at (340-693-8950 extension 232) or via email at viis_storm_permits@nps.gov; all personal gear must be removed from the berth. The NPS may then temporarily reassign the site to another vessel for a portion or remainder of the storm season. Mariners who vacate their berth retain their permit and eligibility for their berth the following year. If they do not use it the following year, the berth will be assigned to the temporary permit holder from the previous year.

In the event that a vessel that has a permitted storm berth is sold, the permit will remain with the vessel. The new owner must inform the park of the change in ownership as soon as possible.

Gear Removal & Notice of Penalties

All personal gear must be removed by December 19, 2016 unless they are otherwise notified by the park. All gear remaining after the removal date will be removed by the NPS. The numbered floats must be reattached to the ground chain, with their original lines, in the same manner and location as at the start of the season.

Liability

The mooring ground chains are designed and installed such that every component has a minimum 20,000 pound breaking strength or (in the case of embedment augers or Manta anchors) holding capacity. Any failure of gear attached to the ground chains will be the sole responsibility of the vessel owner. Vessel owners who elect to remain aboard their vessels during a storm event do so at their own risk.

Mariners who choose to remain with their vessels in Hurricane Hole may place themselves at significant risk during a severe storm, including loss of vessel and possible loss of life. Although hurricanes are not unique storm events, they present a degree of risk that is impossible to accurately predict. While the degree of uncertainty regarding hurricanes and their associated impacts may be large, previous and highly active

hurricane seasons have increased public knowledge and preparedness. Virgin Islanders have experienced several direct hurricane strikes and near-misses over the past 25+ years, and have gained considerable knowledge regarding preparation for storms and their impacts. Hurricane Hole represents only one of several options for the local mariner during hurricane season.

Failure to Comply

This system of storm moorings was created to preserve and protect Monument resources and allow for the safe mooring of vessels during tropical storm or hurricanes. The system has been designed to be used in the manner set forth in this guideline and vessels that do not adhere to the directions provided herein put the system and other vessels at risk. Vessels operators who do not take the time or care to use Hurricane Hole in the manner prescribed in this guideline may have their annual permit revoked and may not be eligible to participate in the lottery for the next storm season.