

## Facilities: Hurricane Preparedness Procedures

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### Overview

EMPLOYEE INFORMATION HOTLINE - INSTITUTION DELAYS AND CLOSINGS: Call (508) 457-2120.

WOODS HOLE COORDINATES: 41.5N, 70.7W

In general, preparations will be made on a graduated response appropriate to the forecast track and timing made public by the National Weather Service. Based on that information WHOI will respond in four steps.

#### HURRICANE CONDITION

4- Predicted track north of 30°N, and west of 65°W

3- Actual position north of 30°N, and west of 70°W

2- Hurricane watch issued for our area

1- Hurricane warning issued for our area

Note: Responses 1 & 2 must be made taking the predicted track into account.

NOAA weather shall be monitored continuously throughout the period. Throughout the emergency condition:

Call (508) 457-2000 for Institution cancellation information.

Call (508) 457-2120 for updates and important messages.

#### Related Files

[#0187 Hurricane Preparedness Procedures - Revised October 2010](#)

### CONDITION 4 - Actions (Notify all personnel of condition)

1. Alert all members of the Hurricane Committee.
2. Committee members alert individual hurricane crew members for assembly.
3. Assemble tools and equipment for hurricane crew.
  - Chain saw
  - Hand tools
  - Flashlights & batteries
  - Gasoline (vehicles & saws)
  - Small boat with outboard
  - Lines, slings, come-alongs
  - Walkie-Talkies
  - First Aid equipment, including oxygen kits
  - Axes
  - Hand saws
  - Spare light bulbs
  - Shovels
  - Rain gear & boots
  - Sand & sandbags
  - Tarpaulins and 6 mil poly rolls
  - Radios (portable)
  - Oxyacetylene torch & tanks
  - Files for sharpening chain saws

Note: Designated members of the hurricane crew will be responsible for assembling the above items that fall within their normal areas of responsibility.

4. Test all emergency generators; have all fuel tanks topped off. (Note: As part of normal operations, generators are test-run weekly.)
5. Assemble all portable generators (including welding machines) and portable pumps at Blake.
6. Order sand for sandbags if necessary. (Note: Should be accomplished at end of snow season.) Purchase sandbags if necessary.
7. Clear roof drains on flat-roofed buildings (McLean, Crawford, Gosnold, Iselin, Smith, Redfield and stairwell on north side of

Redfield Auditorium, Clark, Clark South, Central Energy Plant, Watson Lab, and Marine Resource Facility)

8. Remove/secure loose items on roofs.
9. Clean storm drain in front of Receiving door at Clark.
10. Notify Department Chairs and Senior Managers to activate their Departmental call tree and notify their Staff of the pending storm. Include Public Information Office.

Individuals should be prepared to:

- Disconnect and move equipment indoors
- Secure their lab and equipment to include taping windows and moving sensitive gear to second floor.

Planning Note: In 1991, Facilities relocated files, gear and other items on the first floor to areas at 5' and above floor level. If a higher storm surge is predicted and/or the storm is forecast to track west on us, remove all items to higher levels above the floor or to 2nd floor or 3rd floor.

11. Arrange for small emergency generators for Buttery and Mail room.
12. Notify our tenant organizations of our plans.
13. Obtain Status Report from Port Office on the plan for each ship in port. Provide assistance as required to implement plan.
14. Notify owners of equipment and vans on Iselin dock to prepare for timely evacuation.
15. Call Solid Waste Vendor to have all dumpsters, compactors and roll offs emptied including dumpster on Dyers' Dock. Request three empty dumpsters placed at Blake upper parking lot.
16. Empty all recycle totes and secure inside buildings.
17. Procure additional fuel for propane powered fork trucks.
18. Gather first aid kit supplies located on first floor of village lab buildings and relocate to the designated hurricane crew staging area.
19. Given potential storm surge forecast, evaluate coordinated and timely relocation of telecommunication equipment in Smith and Redfield.
20. Ensure an adequate supply of spare tires for WHOI vehicles.
21. Test operation of back up UHF antenna for Quissett Campus radio repeater.
22. Confirm availability of private utility contractor to restore power to buildings not serviced by local utility.

### CONDITION 3 - Actions

1. Have Departments notify all personnel of condition and request securing/stowing their equipment and chemicals on higher ground.
2. Relocate all wastes from Redfield hot lab to higher elevation or to Quissett Campus.
3. Dispose of hazardous waste at Iselin dock and School Street main accumulation areas.
4. Relocate universal waste accumulation containers and clean out first floor satellite accumulation areas in Redfield, Smith, Iselin and Bigelow.
5. Remove Biology Department vans, if any, from west side of Redfield and relocate to Blake upper parking lot. Provide emergency power. Move Redfield small boat shed to high ground.
6. Arrange quarters for hurricane crew members.
7. Gather and store potable water containers located on first floor of village lab buildings and relocate to the designated hurricane crew staging area.
8. Fuel all WHOI vehicles. (Use volunteers from other Departments as drivers).
9. Remove all compressed gas cylinders to upper floors.
  - Mechanical shop to Instrument shop
  - Redfield 1st floor to 2nd floor
  - Bigelow Ground to 1st floor
  - Smith 1st to 2nd floor
10. Remove all small boats from water. NOTE: The Calanus (a 21' Privateer) with motor shall be left on a trailer at Blake.
11. Remove window and door awnings at Coop, Exhibit Center and Fenno House.
12. Remove mirror from Smith lab entrance driveway.
13. Planning note: It is critical to have the stockroom open during all hours of storm preparation once condition 3 actions are initiated!
14. Shut off and remove all propane gas cylinders and move to high ground.
15. Remove/secure all loose items on main dock, mall, and outside of all buildings.

16. Empty all recycle totes and secure inside buildings.
17. Close and secure storm windows in all buildings.
18. Confirm licensed operator for Ham Radio communications.

## **CONDITION 2 - Actions**

1. Disconnect all Utilities and relocate the following items from Iselin dock areas to higher ground utilizing parking areas at Blake, L'Hirondelle, Nobska House and Meteor House:
  1. Diving Locker Van
  2. Diving Office Trailer
  3. Carpenter Shop Storage Sheds
  4. Hazardous Waste Accumulation Containers
  5. Small Boat Storage Shed
  6. Port Security Sheds (2)
  7. Tioga Support Van
  8. OBS Support Vans
  9. ABE Support Vans
  10. Oil boom boxes
2. Remove unused vessel fenders from Iselin dock.
3. Fill sandbags.
4. Sandbag or board doors - Iselin, Bigelow, Smith, Redfield, Co-op and the rear entrance to RCRC.
5. Double-up lines on all vessels berthed at main dock. Consider our position relative to the storm (east or west of us) to determine which side of dock to berth vessels.
6. Remove ground-level condensing units for air conditioners at Bigelow and Redfield. Place on 2nd floor. Secure A/C unit on north roof of Iselin.
7. Procure food and beverages for hurricane crew.
8. Place sandbags around telephone switch equipment and install plywood door barricades panels (stored in Redfield 1-09) in Redfield 1-07 and Redfield 1-09.
9. Ensure alternate potable water supply.
10. Tie down roof fans on Iselin.
11. Lower communication antenna on Iselin HiBay roof and secure to building.
12. Gather communication radios for use by hurricane crew
13. Secure following:
  - Iselin high and low bay roll up doors (Secure every 6-8 ft).
  - Lash doors closed north and south decks of Iselin
  - Lash all Smith windows closed if they do not have latches
14. Remove/secure all loose items on main dock, mall, and outside of all buildings.
15. Arrange to photograph building exteriors including equipment that may be vulnerable to storm surge.
16. Monitor status of Town of Falmouth emergency shelter and communicate contact information to students, guests, visitors and employees in coordination with WHOI Housing Coordinator.
17. Arrange for alternative seawater supply for Redfield Laboratory.
18. Arrange for emergency spending procedures(cash).

## **CONDITION 1 - Actions (Road traffic will be very heavy)**

1. Tape/board all weather-side windows.
2. Shut off natural gas at service entrances at Smith, Bigelow, & Redfield.
3. Remove oil/gas burners and move to high ground (Co Op, Swift, 38 Water St, Smith, & Bigelow).
4. Secure one dock crane behind Iselin (storm surge forecast dependent). The other crane is to be parked at Blake lot.
5. Move WHOI vehicles to Clark Parking Lot.

6. Move Grove crane and shop forklifts to higher ground at Blake, L'Hirondelle, Nobska House and Meteor House.
7. Secure all elevators on the top floor. Close and secure oil control valves.
8. Pull main electrical disconnects Bigelow, Iselin, Smith, Redfield, Shore Lab, Clark Central Plant, McLean, Crawford Gosnold, CRL, ESL after first failure of power. (NSTAR will not shut off electricity to entire Cape when hurricane-force winds are approximately 2 hrs away).
9. When NSTAR power is interrupted place fans and open doors to reduce heat in Clark 128A, 128C and 151.
10. Disconnect & remove motor on one seawater pump in Iselin.
11. Raise Iselin elevator door and barricade elevator pit to prevent water entry.
12. Disconnect & remove one motor on seawater pump at ESL pumphouse. (One pump required to continue water supply). The small crane is required for removal.
13. The Director of Facilities, the Assistant Facilities Manager or other designee will monitor New York and Providence TV stations for current weather conditions.
14. The security guards will supply one person to answer WHOI switchboard (Note: the switchboard will be relocated to Clark lobby).
15. The Bourne & Sagamore bridges will be closed by the Army Corps of Engineers when wind velocity reaches 74 MPH. Notify all off-Cape residents to leave when wind speed reaches sustained 65 MPH velocity.
16. All personal vehicles must be removed from the following institution lots:
  - Smith
  - Redfield
  - Coop
  - Iselin Mall and Dock
  - Dyers Dock
  - School Street
  - Shiverick
17. Raise lockers and steel benches in Iselin high/low bays a minimum of 12" above floor level.

## Post Storm Activity

1. Perform re-occupancy survey to determine if storm damage prevents occupying buildings due to non-functioning building systems, mold or other factors.
2. Request all Departments perform an assets condition assessment and submit a status report with a prioritized list of critical assets needing restoration.
3. Change messages on auto attendant and employee information line to reflect status of WHOI operations.
4. Provide status report of building conditions and related assets.
5. Information regarding the work status of the Institution will be broadcast on Cape radio stations, assuming they are on the air. (Only WCIB was operational in 1991). Optionally, call WHOI extension (508) 457-2120 for status reports.
6. If you can render assistance to Facilities, call extension 2205 and leave your name & extension.
7. Report damage (yours or other observed problems by calling extension 2205).
8. The facilities crew needs to drain gasoline/fuel oil from all portable pumps/generators prior to putting such items back in storage.
9. Facilities personnel are responsible for returning all hurricane gear back in the designated warehouse space.
10. Facilities personnel shall return all door barricade boards and window covers to the designated storage location. (Window covers should have building name & specific location stenciled on them).

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