



The World Trade Center Baltimore

*401 East Pratt Street
Baltimore, Maryland 21202*

Hurricane Preparedness Plan

Last Revised: April 2017

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Maryland Port Administration The World Trade Center Baltimore Hurricane Preparedness Plan

Purpose:

The purpose of this plan is to establish a policy and procedures to prepare The World Trade Center Baltimore (**WTC**) in the event of a hurricane. Preparing the WTC for a weather event includes protecting occupants and securing Maryland Port Administration (**MPA**) property and equipment. The MPA Property Management Office (**PMO**) will disseminate advisory information to its WTC tenants and oversees preparation activities by Meridian Management Corporation (WTC maintenance) for the WTC. The goal of the preparedness plan is to minimize the risk of death, injury, and property damage and return the WTC to normal operations as quickly as possible after a severe weather event.

This plan is advisory in nature and does not supersede any directives or requirements established by the Maryland Emergency Management Agency's (**MEMA**) State of Maryland Emergency Operations Plan (**EOP**) or by any authority having jurisdiction. These plans should be consulted and their policies, directives, and recommendations adhered to, as they apply, in the event of a hurricane or severe weather event emergency.

Application:

This plan applies to The World Trade Center Baltimore, PMO, and other related personnel that are involved with the safeguarding of MPA property and personnel as it relates to the WTC.

Discussion:

Hurricanes pose a threat to life and property on the Atlantic and Gulf coasts of the United States from high winds, heavy rains, and flooding. Fortunately, hurricanes can be detected and their movements closely monitored making the threat they pose relatively predictable. With sufficient notice and preparation, people and property can be protected and losses potentially minimized.

June 1st through November 30th is the period of greatest hurricane activity and is referred to as hurricane season. The Coast Guard Captain of the Port (**COTP**) will establish and publish maritime conditions based on when gale force winds are predicted to arrive on the Maryland waters of the Chesapeake Bay (or the COTP Zone). The intent of setting port maritime hurricane conditions is to give the port community time to prepare. These conditions are described as follows:

1. **SEASONAL ALERT:** Set on June 1st and remain in effect through November 30th. At this time hurricane plans should be reviewed and weather reports closely monitored for any hurricane activity.



2. **STORM CONDITION:** Set when high winds 55 mph/48kts or greater are forecast. This condition includes all phases of the approaching storm.
3. **WHISKEY:** Set when gale force winds (34+mph) associated with tropical system activity is expected to arrive at the Port within **72 hours**.
4. **XRAY:** Set when gale force winds (34+mph) associated with tropical system activity is expected to arrive at Port within **48 hours**.
5. **YANKEE:** Set when gale force winds (34+mph) from a hurricane force storm are expected to arrive at the Port within **24 hours**, and as soon as practical after the storm passes.
6. **ZULU:** Set when gale force winds (34+mph) from a hurricane force storm are expected to arrive at the Port within **12 hours**.

The MdTA Police Department (P.D.) maintains a 24-hour watch and communications system. U.S. Coast Guard will make notification every time there is a change in the Port Maritime Hurricane Conditions (via telephone, Maritime Safety and Security Bulletins, and/or through teleconferences) changes to MdTA Police, MPA Ops or MPA Safety, Environment, and Risk Management Department (**SERM**). SERM will notify the PMO who in turn will notify the tenants of the hurricane condition and other relevant information.

It is important to have an up-to-date WTC Emergency Contact Form Attachment 2. WTC tenants are responsible for submitting in a timely manner any changes for its office relating to emergency contacts to the PMO via email to ddean1@marylandports.com or fax 410-333-1070. The WTC Emergency Contact Directory will be maintained at the PMO, WTC maintenance, the WTC Security Desk and MdTA Police Department Communications.

Preparation Actions:

WHISKEY: (also referred to as *HURRICANE SEASON*).

1. Normal business operations may continue.
2. The SERM will advise PMO of the maritime condition.
3. The PMO will do the following:
 - Advise tenants to stay posted to the designated website http://www.mpa.maryland.gov/_media/client/locationinfo/hurricaneplan.pdf during the expected event.
 - Review preparedness plan for XRAY, YANKEE, ZULU with WTC maintenance and other pertinent personnel in relation to the WTC and preparedness.



XRAY: (also referred to as *HURRICANE WATCH*).

1. Normal business operations may continue.
2. The SERM will advise PMO of the maritime condition and periodic weather updates.
3. The PMO will direct the following activities to WTC maintenance through hurricane preparation work orders:
 - Remind WTC Tenants to stay posted to the website.
 - Identify work force that will report to the WTC during Condition YANKEE through Post hurricane.
 - Ensure equipment and supplies required under the WTC emergency preparedness plan are on site or available.
 - Survey both inside and outside the WTC. Make plans to protect outside equipment and structures.
 - Clear items such as loose gear, equipment, trash, trashcans, etc. from outside and loading dock.
 - Check all lobby and other exterior doors for design standard operation.
 - Lock down revolving doors when wind gusts exceed 45 mph; the swing doors will be used for ingress and egress.
 - Test emergency generator and fill fuel tank.
 - Test all drains to ensure proper operation.
 - Test all sump pumps for proper operation.
 - Contact State Highway Administration (SHA) to have an antenna contractor to re-inspect the roof antennas for safety. SHA shall contact all antenna owners and advise them of any issues.
 - Check and secure roof and all roof hatches.
 - Check Link-Seals at Columns 4, 6 & 8, joint caulking, and other watertight seals around the perimeter of the building.
 - Check floodgates and drop-in flood barriers to insure full closure, latch and seal in accordance with the manufacturer's operation instructions.
 - Check all flood barrier systems, components, equipment and materials.
 - Check storm drain manhole in west access ramp to confirm watertight seal and all bolts tight in place. Confirm access to all parts associated with installation of emergency cover plate hung on adjacent wall.
 - Review schedules of all functions to be held on the 21st floor and Top of the World (TOTW) during and after the hurricane. WTC maintenance is to notify the clients of the potential hurricane and to prepare for possible closure of the WTC to allow



clients to make alternate plans. Provide list to executive office in the event we have to cancel any events and refunds will be necessary. WTC maintenance is to have all contacts and phone numbers for each client readily accessible.

- Have in place fully charged radios, cell phones, flashlights, back up batteries for the above for a crew of 10 people. In addition, cell phones for two people must be fully charged and available.
- Check operation of hand portable submersible pumps, 120 volt, 60 foot head capacity with 1- 1/2" discharge with hose connection fitting and enough 1-1/2" hose (75 feet min. to reach an appropriate discharge point) to remove floodwater from the loading dock, basement, columns, lobby, etc.
- Check connection to emergency electric power at basement and lobby level to operate hand portable submersible pumps and wet vacs.
- Contact BGE to devise plan for shutdown of electricity, if necessary.

YANKEE: (also referred to as *HURRICANE WARNING*).

1. Once Condition YANKEE is set, a Command Post (**CP**) for the marine terminals may be established. The PMO may either send a representative or be in communication with the CP. SERM will advise PMO if a CP has been established.
2. The SERM will, if required, make regular status reports to the MEMA Emergency Operations Center (**EOC**) in accordance with Appendix 3 to Annex C of the Maryland EOP.
3. Normal business operations may continue.
4. SERM will advise PMO of the maritime condition and provide periodic weather updates.
5. The MdTA Police will patrol MPA facilities and report any problems or hazardous conditions noted to and SERM and PMO.
6. The PMO will do the following:
 - Direct the following activities to WTC maintenance through hurricane preparation work orders:
 - Remind WTC Tenants to stay posted to the website.
 - Plan for the possible closing of WTC in order to prepare for hurricane.
 - Review all actions taken in Condition XRAY
 - Remove any potential hazards from WTC grounds.
 - Direct Security to close arcade gates.
 - Implement procedures to deploy and /or stage the flood barrier systems as per



Attachment 3, Phase I, Items 1 through 7.

- Notify staff and tenants the loading dock is closed for deliveries and route through lobby, if possible. All deliveries must use service elevator.
- Connect semi-rigid fire hose to alternate sump pump discharge pipe coupling at Column #2 and stabilize hose end at column gate at elevation +13.5 feet.
- Normal telephone service may not be available after a hurricane. Review radio procedures and protocols and ensure radio batteries are available and charged.
- Notify work force to report to the WTC.
- Provide arrangements for sleep if the time to be on duty is over 16 hours.

ZULU: (also referred to as (*HURRICANE WARNING*)).

1. The SERM will advise PMO of the maritime condition and provide periodic weather updates.
2. Business operations may continue under Condition WHISKEY.

The PMO will do the following:

- Advise WTC Tenants to stay posted to the website for updates.
 - MPA Executive Department will make a determination to close WTC depending on the conditions that are expected and/or orders that may be received from another jurisdiction having authority.
 - Continue to review evacuation and other emergency plans.
 - Plan for the possible closing of WTC in order to finalize actions for the hurricane.
 - Prepare to establish a potential WTC Command Post (WTC CP) with pre-designated personnel. The WTC CP will continue to report to the terminals CP.
 - Direct the following activities to WTC maintenance for hurricane preparation work orders:
 - Implement Phase II, 8 and 9 as specified in Attachment 3.
 - Make contact with BGE to confirm plan to shutdown electrical power, if necessary. This shutdown would be needed in the event the basement floods and immediate response from BGE is required.
 - If floodwater rises to an elevation of +9.5 feet, redirect sump pump discharge flow to Column #2. Note: redirecting flow prematurely will dump sump water on to the plaza not yet flooded.
3. The SERM should make regular status reports to the MEMA EOC in accordance with Appendix 3 to Annex C of the Maryland EOP.



Post Hurricane Activities

The SERM will advise PMO of any official advice or recommendations and update MPA Office of Communications for changes on the webpage for tenants to review status of building operations.

1. The PMO will direct WTC maintenance to perform the following:
 - Perform post hurricane evaluation and assess any damage and determination if building can return to normal or limited operations. Report findings to PMO as soon as possible.
 - Return to seasonal alert.
 - Inspect and restore utilities as quickly as can be done safely.
 - Examine exterior (including, but not limited to roof, water dock and columns) and interior for any damage.
 - Initiate work orders for immediate repair.
 - Inventory and report damage to PMO, and PMO will advise terminal CP as long as the CP remains in operation.
 - If access to WTC or tenant spaces is affected, posting will be on website.
 - Provide copies of all completed work orders and estimate of costs to PMO.
2. The MPA Office of Communications will update news releases of WTC situation, condition, and employees' work status and post on designated website.
3. The SERM should make regular status reports to the MEMA EOC accordance with Appendix 3 to Annex C of the Maryland EOP.
4. Uninstall flood barrier systems in reverse order of installation then clean, inspect, inventory and store securely.



Attachment 1 - List of Essential Telephone Numbers

Department/Agency	Telephone Number
Baltimore City Fire Department (Non-Emergency # available 24/7)	410-396-5689
Baltimore Gas & Electric Report All Electric Outages & Gas leaks	1-800-685-0123
Request Outage Information (24/7)	410 685-1400
<ul style="list-style-type: none"> Senior Account Executive: Robert Pellegrini 	Pager 410 597-6600 ID# 1758 Home: 410-248-2843
City Public Works (line) (to report a problem) or 311	410-396-3100
Sidewalks (footways) or 311	410-396-6967
Water & Waste Water – Anthony Galloway or John Brewer	410-396-7870
Storm Drain - James.Patrick@baltimorecity.gov	410-396-7870
Maryland Department of the Environment	866-633-4686
Oil & Hazardous Materials Emergency Response Team	866-633-4686
Maryland Emergency Management Agency	410-517-3600
Emergency Operations Center	410-517-3600
MdTA Police Depart. Communications Section – Emergency	410-633-1092
MdTA Police Detachment Commander – Captain Victoria Davis	410-633-1071
Cellular Telephone	443-829-7591
Operations – Lt. Adam Watkowski	410-633-1070
Cellular Telephone 443-324-6498	
On Duty Supervisor	410-633-1130
MPA Office of Communications	410-385-4480
MPA Security Office	410-633-1150
MPA Safety and Risk Management Department	410-633-1147
MPA Terminal and Vessel Operations Department – Main	410-633-1077
Director of Operations	410-633-1124
Gen. Manager, Terminal Operations	410-633-1018
Marine Operations Duty Person	410-633-1077, 410-633-1078, 410-633-1076
Vessel Operations	410-633-1160



Marine Operations Cellular
WTC Meridian Engineer on site

410-302-9581
(cell) 410-262-3818



Attachment 2 - Emergency Contact Form

**EMERGENCY CONTACT FORM
THE WORLD TRADE CENTER BALTIMORE**

COMPANY NAME: _____ SUITE #: _____

FLOOR: _____ BUSINESS PHONE: _____ BUSINESS FAX #: _____

1st CONTACT NAME: _____ TITLE: _____

BUSINESS # _____ EXT: _____ HOME #: _____ CELL#: _____

EMAIL ADDRESS: _____

2nd CONTACT NAME: _____ TITLE: _____

BUSINESS # _____ EXT: _____ HOME #: _____ CELL#: _____

EMAIL ADDRESS: _____

3rd CONTACT NAME: _____ TITLE: _____

BUSINESS # _____ EXT: _____ HOME #: _____ CELL#: _____

EMAIL ADDRESS: _____

Please note it is the tenant's responsibility to notify Property Management Office of any information that changes.



Attachment 3 – Implementation of Flood Barrier Systems

Phase I

1. **East and West Loading Dock Egress Stairs:**
Install drop-in flood barrier, latch and inflate seals at each location. This barrier will provide flood protection to Elev. +11.5’.
2. **SE and SW Double Swing Doors on Arcade:**
Install demountable conversion frame and stop log system at each pre-fitted location. This barrier will provide flood protection to Elev. +11.5’.
3. **East Main Entrance Door at Column #2:**
Install demountable conversion frame and stop log system at pre-fitted location. This barrier system will provide flood protection to Elev. +11.5’.
4. **West Main Entrance Door at Column #10:**
Install demountable conversion frame and stop log system at pre-fitted locations. This barrier system will provide flood protection to Elev. +11.5’.
5. **North Main Entrance Doors at Column #2 and #10 facing Pratt Street:**
Install side demountable conversion frames on the two (2) north entrances between columns 2 and 10 and on fire stairs # 1 and 2 egress doors at arcade level. Full deployment must not be completed until the building is officially closed. Stage remaining stop logs neatly in WTC west lobby for implementation under Phase II.
6. **Access Ramp Floodgates:**
Close, latch, and seal floodgates at top of east and west loading dock access ramps. These barriers will provide flood protection to Elev. +11.5’.
7. **Auxiliary Cover Plate:**
Install auxiliary emergency cover plate over watertight manhole cover in west access ramp.
8. **Divert Sump Pump Discharge:**
Connect semi-rigid fire hose to alternate sump pump discharge pipe coupling at Column #2 and stabilize hose end at column gate at elevation +13.5 feet. Redirect flow by closing one valve in the mechanical room and opening the other valve in the load bank room.

Phase II: Executive decision is made to close WTC

9. **North Main Entrance Doors at Column #2 and #10 facing Pratt Street:**
Install stop log system at each pre-fitted location. This barrier system will provide flood protection to Elev. +11.5’.



10. SE and SW Fire Stair Egress Doors:

After the building has been officially closed, install stop log system at each pre-fitted location. This barrier system will provide flood protection to Elev. +11.5’.

Attachment 4 – Checklist for Pre-Hurricane Season

March thru May Actions

Direct the following activities to WTC maintenance for hurricane preparation work orders:

1. Annually review Hurricane Preparedness Plan and update as needed.
2. Inspect and test emergency generator & automatic transfer switches. Perform a building power outage to insure proper transfer of emergency power to all connected systems and proper operation of those systems on emergency power. Verify full and complete return to normal power.
3. Inspect and test all sump pumps. Inspect all building drains and traps. Jet wash loading dock drain lines. Clean out debris and sediment, then test flush to confirm efficient flow. Inspect steam line penetration at west loading dock entrance and BGE conduit penetrations in transformer vault room to confirm sealant integrity and note any evidence of leaks.
4. Contact SHA to verify inspection of roof antennas and structure for safety has taken place and request written confirmation. SHA Communications Dept. can be reached at 410-747-8590. Any problems found should be discussed to determine if any issues are cause for concern during the hurricane season.
5. Inspect and check roof hatches, roof membrane, flashing, drains, penetration seals, etc.
6. Inspect link-seals at Columns 4, 6 & 8, joint caulking, and other watertight seals around perimeter of the building. Make any repairs as necessary.
7. Inspect and test floodgates and drop-in flood barriers to ensure full closure, latch and seal. Inspect and test stop logs and to ensure proper alignment, fit and seal. All in accordance with the manufacturer’s operation and maintenance instructions.
8. Inspect and verify that watertight manhole cover is sealed, all bolts are tight in place, and all parts for auxiliary emergency cover plate are in good condition. Conduct an exercise to install auxiliary cover plate to verify installation protocol.
9. Inspect and inventory 10 mil plastic sheeting (1 - 15’ x 100’ rolls per flood event), seal & peel sealant (one case per flood event), sand bags (500 – 50 lb. bags per flood event) and other related equipment for use as required or needed during a hurricane.



10. Contact the Baltimore City DPW and request an evaluation of storm drain condition and if any problems exist, what action will be taken. Contact Chief of Storm Water Engineering, Utility Engineering Section at 410-396-4700 and advise him of the specific intention.
11. Inspect and remove all trash and check water flow through drains at Columns 4, 6 and 8. These drains do not enter the building, but should be cleaned and checked periodically to ensure proper drainage if the columns should become filled during a flood event.
12. Check operation of forklift and ensure spare tank of propane is available.
13. Advise PMO when above is completed.



Attachment 5 – Definitions

Definitions:

Elevation: Fixed structure elevations are based on Baltimore City vertical datum.

Floodwater Elevation: Potential floodwater elevation at time of hurricane arrival is calculated by adding predicted tide level (NOAA website) at time of arrival, at Baltimore, MD., Site #8574680 (Fort McHenry) plus 1.0 feet at WTCB plus average storm surge for predicted hurricane category (expected in Baltimore at time of arrival) from Saffir-Simpson Hurricane Scale. Note: Adjustment at WTCB is reference on 1983-2001 Epoch period. Beginning at 0.8 feet in year 2000 and increasing 0.1 feet every 5 years based on predicted sea level rise over the next century. This reference to be corrected at the next Epoch reported by NOAA anticipated in Year 2021 to 2026.

Example:

- +2.5 feet - Fort McHenry Tide Prediction (standard prediction, excluding storm surge)
- +1.0 feet - Adjustment at WTCB
- +4.5 feet - Avg. Storm Surge Category 1 Hurricane (Saffir-Simpson Hurricane Scale)
-
- +8.0 feet - Flood Water Elevation

Saffir-Simpson Hurricane Scale: See Below

Saffir-Simpson Hurricane Scale			
Scale No. (Category)	Sustained Winds (mph)	Damage	Storm Surge
1	74-95	Minimal: Unanchored mobile homes, vegetation and signs.	4-5 Feet
2	96-110	Moderate: All mobile homes, roofs, small crafts, flooding.	6-8 Feet
3	111-130	Extensive: Small buildings, low-lying roads cut off.	9-12 Feet
4	131-155	Extreme: Roofs destroyed, trees down, roads cut off, mobile homes destroyed. Beach homes flooded	13-18 Feet
5	> 155	Catastrophic: Most buildings destroyed. Vegetation destroyed. Major roads cut off. Homes flooded.	> 18 Feet