



Hurricane Emergency Preparation Plan

This guide to Hurricane Preparedness and Recovery is intended for use by Management and employees at ARCO/Murray to prepare in the event or threat of a Hurricane impacting our facilities or jobsite locations. This emergency plan is intended to provide general guidelines only. It is the responsibility of each employee to protect themselves, their families and homes. We have provided useful information, tracking map and checklists to help guide us through the process of dealing with a Hurricane threat.

Hurricane Season: June 1 – November 30

Weather Resources:

- <http://www.accuweather.com/> <http://www.intellicast.com/>
- <http://weather.com/> <http://noaa.gov/stormwatch/>
- <http://www.floridadisaster.org/bpr/EMTOOLS/Severe/hurricanes.htm/>

Advisories & Warnings:

- The National Weather Service can usually provide 12 to 24 hours of advance warning. Advisories are issued by the Weather Service of NOAA when hurricanes approach land.
- A "**Hurricane Watch**" is issued whenever a hurricane becomes a threat to coastal areas. Everyone in the area covered by the "watch" should listen for further advisories and be prepared to act promptly if a hurricane warning or evacuation order is issued.
- A "**Hurricane Warning**" is issued when hurricane winds of 74 miles an hour or higher, or a combination of dangerously high water and very rough seas, are expected in specific coastal area within 24 hours. Precautionary actions should begin immediately.

General Readiness Plan: (Implement June 1st-November 30th.)

- Maintain & distribute emergency contact list to employees
 - Include mobile and home numbers
 - Provide a copy to Safety Manager
- Have on hand the following for protection of site office or facility for electrical equipment designated to remain in the office or facility building:
 - extra-large plastic bags,



- visqueen,
 - duct tape
- Post hurricane tracking map in facility office or building
- Include “Hurricane Preparedness” topic as part of the safety discussion at a weekly safety meeting, ensure all employees, subs contractors, vendors are prepared to react
- Keep courses, buildings and jobsites free from accumulation of debris / scrap materials that can become airborne to reduce preparation time in the event of a hurricane
- Confirm sub-contractors have an adequate supply of banding, strapping, tools, tarps, sandbags, generators and dewatering pumps available
- Obtain “weather radio” & spare batteries, maintain in site office
- Inventory significant site-office equipment, (phone system, copiers, fax machines, computers, printers, etc.) Provide a copy to the Safety Manager

Phases of Action

Phase 5 (Monitoring – storm possible within 36 to 72 hours)

Phase 4 (Storm likely within 24 to 36 hours)

Phase 3 (Storm probable within 12 to 24 hours)

Phase 2 (Storm impending within 6 to 12 hours)

Phase 1 (Storm imminent – take shelter)

Hurricane Conditions and Activity

Hurricane formation conditions identified in Gulf or Atlantic area:

- Upon identification of storm, review all site conditions in conjunction with Hurricane Preparedness Plan and identify specific hazards that required extended tie-down / protection efforts

Phase 5 (Monitoring – storm possible within 36 to 72 hours)

- Impose general readiness, consider shut-down possibility for extended operations
- Notify all facility & jobsite personnel of phase 5 condition. Give current update on hurricane status via email and telephone communication.
- Evaluate project site for hazards and start clean up and tie down procedures
- Maintain state of readiness to assist in preparations for condition phase 4
- Continue monitoring and tracking of storm path
- Verify contact numbers & emergency data
- Fill all vehicles and gas storage / diesel storage containers with fuel
- Notify Safety Dept. of Phase 5 status



Phase 4 (Storm likely within 24 to 36 hours)

- Notify key personnel of hurricane status
- Clean up and tie down procedures shall be implemented
- Assess storm water retention levels and lower if possible
- Perform inspection of all storm drain inlets, ensure inlets are clear to allow storm water to flow freely
- Obtain dewatering pumps and generators as needed
- Secure your Home & Family
- Notify Safety Dept. of Phase 4 status

Phase 3 (Storm probable within 12 to 24 hours)

- Reduce project operations to absolute minimum
- Distribute supplies to appropriate locations (visqueen, plastic bags, sand bags, etc.)
- Storm clean up and tie down procedures efforts shall be completed, dumpsters emptied or securely covered, portable toilets secured, water stations, etc.
- Complete bracing of masonry walls (if applicable)
- Complete bracing / tie-off of critical landscape material
- All equipment shall be topped off with fuel, test start all pumps/generators
- Assess / report areas that need additional clean up
- Secure / protect / cover critical files, remove sensitive files to a secure location, electronically backup all files to disk / CD media
- Perform comprehensive photo-documentation of existing site conditions, building conditions, etc - both interior and exterior
- Continue monitoring of weather and tracking of the hurricane
- Notify Safety Dept. of Phase 3 status

Phase 2 (Storm impending within 6 to 12 hours)

- Suspend any normal operations still underway, clear site of anyone not working in part with hurricane preparedness
- Inspect project grounds, buildings, stored materials, etc.
- Seal windows / doors on facility trailers and/or buildings, install plywood if determined necessary
- Seal doors / windows on buildings, sand bag doorways where water intrusion is possible
- Send all non-essential personnel home
- Remove all lap top computers from facility offices or buildings, unplug all electrical equipment, securely cover all desktop computers, monitors, printers, phone equipments, etc with plastic bags or visqueen.



- Move sensitive office equipment away from windows
- Unplug all electrical equipment from electrical outlets
- Ensure natural or propane gas supply is shut off and secured
- Fully charge cell phones and two-way radios
- Notify Safety Dept. of Phase 2 status

Phase 1 (Storm imminent – take shelter)

- Suspend all activities
- All personnel have been cleared
- Site is secured and protected
- Monitoring and updating has been terminated
- Be with your Family & Home
- Communicate with Safety Dept. that all personnel have taken shelter and all preparations have been completed

Post Hurricane Phase

- Inspect course, jobsite, facility buildings ascertain degree of damage, verify structural wall stability / integrity
- Identify and barricade downed utility lines
- Assess site condition / situation and establish plan to resume field operations
- Thoroughly document, photograph areas of damage, interior and exterior and notify the Safety Dept. of all damage
- Track all recovery costs, maintain all backup electronics
- Notify subcontractors of expectations for returning to work
- Check / replenish hurricane supplies
- Assess emergency preparation procedures update / revise program if necessary with the Safety Dept.

SAFFIR-SIMPSON HURRICANE SCALE

KNOW THE HURRICANE SCALE

Category 1 –

Winds: 74-95 MPH

Storm Surge: 4 to 5 feet

Damage: Minimal; primarily to foliage, unanchored mobile homes and poorly constructed signs.



Category 2 –

Winds: 96-110 MPH

Storm Surge: 6 to 8 feet

Damage: Moderate; heavy damage to mobile homes; some damage to house roofs and windows.

Category 3 –

Winds: 111-130 MPH

Storm Surge: 9 to 12 feet

Damage: Extensive; mobile homes destroyed; structural damage to buildings; foliage torn from trees.

Category 4 –

Winds: 131-155 MPH

Storm Surge: 13-18 feet

Damage: Extreme; heavy damage to homes; large trees uprooted.

Category 5 –

Winds: 156 MPH or greater

Storm Surge: Above 18 feet

Damage: Catastrophic; small buildings blown away or overturned; few, if any, trees left standing.



Hurricane Preparation Checklist

Office, Fabrication and Job Sites:

- Photo-documents entire site and adjacent properties / adjacent site materials (if applicable)
- Verify removal of all trash and debris and dumpsters are emptied or covered with secured tarps
- Verify all materials stored on site are secure (utilize metal banding, nylon ropes, cables, etc.)
- Review / ensure all chemicals and fuels are secured / properly stored
- Ensure all motor driven equipment have boom lowered to the ground (forklifts, backhoes, etc)
- Return all rental equipment such as scissor and boom lifts.
- Ensure that all water coolers and other loose type items are removed and stored
- Verify all storm drain inlets are open / free of debris
- Verify all lightweight barricade devices are stacked and properly secured
- Verify subcontractors have arranged for potential temporary labor support during recovery efforts subsequent to storm

Offices:

- Remove sensitive drawings, submittals, and office equipment when possible and store at remote location or rental storage facility
- Securely cover all office equipment, drawings, files, etc. designated to remain in site office during duration of storm
- Cover computers or remove them to a safe location (Corporate office or rental storage facility)
- Relocate remaining office equipment (printers, copiers, fax machines, phones, etc.) away from windows and doors
- Back up all electronic files
- Shut off electrical power and water source to office
- Shut off propane / natural gas feed to office (where applicable)
- Determine need to cover / board up windows and doors, prepare accordingly.



EMERGENCY EVACUATION PLAN

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See Project Diagram (insert below or attach)