



FACILITIES MANAGEMENT

SEVERE WEATHER PREPARATION GUIDE

UPDATED August 29, 2024

Safety and Environmental Compliance

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HURRICANE PREPARATION

PREVENTIVE MEASURES

Central Utilities:

All generators will be topped off with fuel in May.

Grounds:

- Perform routine tree maintenance to remove potential hazards.
- Inspect dams and storm drains and remove blockage as needed.

Maintenance:

- The department's General Maintenance shop maintains a stock of bottled water and building materials for securing damaged windows, doors and any other usage as needed.
- The department's Electrical Maintenance shop maintains a stock of various voltage transformers and circuit breakers for the secondary electrical feeds with-in facilities.
- The department's Plumbing Maintenance shop maintains a stock of valves and replacement pumps for plumbing issues.
- The University has multiple service contracts in place that can be utilized for disaster recovery.
- In case of hurricane wind and rain, upon notice from the President, response teams are immediately activated.
- Each team is assigned a duty from sealing windows to making sure their equipment is secure from high winds.
 - Telecommunications Building - Hurricane screens are stored in mezzanine at Maintenance Building
 - Scope of work: Install Hurricane screens over windows on the south side of the building. Approximately three, 20 foot sections.

- Equipment and manpower needed: 6ft ladders, wing nuts for screens, and at least four people to install.
 - Faculty Club House - Hurricane screens stored in mezzanine at Maintenance
 - Scope of work: Install hurricane screens over fourteen total windows and doors around the perimeter of the building.
 - Equipment and manpower needed: one extension ladder, two 6ft ladders, wing nuts, and four to six people to install.
 - President's House - Cut and numbered plywood is stored in the mezzanine at the Maintenance Building.
 - Scope of work: Close all hurricane shutters around the perimeter of the house and install cut plywood on remaining windows (approximately twenty-seven pieces).
 - Equipment and manpower needed: two extension ladders, two 6ft ladders, one 8ft ladder, screws for plywood, and six people to install.
- Make sure all roofs are secure and roof hatches are pulled down and locked. (Roofing Superintendent).

Project Management:

- Check the supplies against the inventory list stockpiled at the beginning of the hurricane season.

Facilities Warehouse:

- The University's fuel service provider is under State Contract and has the ability to obtain and deliver fuel from outside our area if so affected.

HURRICANE WATCH

Project Management:

- In the event of a Hurricane Watch, the USA Senior Construction Project Manager will be designated as the observer to monitor real time weather radar and will be responsible for the initiation of the Construction Site Preparedness Plan.
- In the days prior to the Hurricane, as the path is being determined, Daily clean-up and proper bundling and stabilization of stored material must be performed by the General Contractor and inspected by the USA Project Manager.
- This effort should be done daily to minimize the amount of site cleanup and stabilization required once it is determined that the Construction Site Preparedness Plan is initiated.
- The Project Manager is responsible for these preparations and implementations of these plans.

- The site will not be occupied during the storm if it is in the hurricane path. Preparations will be made in time for personnel to prepare for the storm at their homes.
- Other methods of preparation include:
 - Ensure that the project office is outfitted with a portable, battery operated weather band radio and extra batteries.
 - Develop, maintain and distribute a list of emergency telephone numbers and email addresses for employees and authorities.
 - Organize a Damage Survey and Repair Team. This team will be the first on the site to assess damage after the storm and make the site safe enough for the return of the entire workforce.
 - Prepare a system to inform employees of when to return to work. (A company website with a bulletin or discussion board, etc.)
 - Identify and avoid long-term material storage in areas prone to flooding. Identify vulnerable work in progress and determine how to best protect it from damage whether by boarding up windows, sand bags, capping pipes, buried incomplete underground, etc.
 - Develop a list of necessary supplies, procure the items, and store the supplies in order to secure the site for a hurricane.
 - Ensure that fuel supplies, de-watering pumps and generators are adequate for repairs after the storm.
 - Be prepared to anchor or restrain everything that could blow away. Use netting for dumpsters, banding and banding tools for lumber, form work, scaffold planks, port-a-potties, etc. Determine what could fly, then restrain it. Be alert to job conditions that require advance attention or special material so as to reduce emergency preparation time.

HURRICANE WARNING

Project Management:

- The USA Senior Construction Project Manager will direct each USA Construction Project Manager to submit a list of their project currently under construction. Each Project Manager will be responsible for the implementation of the Hurricane Preparedness Plan.
- When a Hurricane warning is issued the Facilities Department will decide to initiate the Hurricane Preparedness Plan and the Senior Construction Project Manager will be directed to prepare all projects for a hurricane or tropical storm.
 - Housekeeping ensures that all loose scrap material is gathered up and disposed of in the dumpsters.

- Ensure that the dumpsters are emptied. If the dumpster service is unable to pull dumpsters they shall be securely covered with nets to prevent the debris in them from becoming windblown hazards.
- The Site-Work Superintendent shall ensure that all loose forming materials are neatly stacked and banded.
- Ensure that all materials, tools, sheds, gang boxes, and small equipment that can be damaged by rising water are removed from excavations and low areas prone to flooding.
- Ensure that continuous berms are installed at excavations.
- Remove any non- essential barricades and anchor essential barricades.
- Ensure that incomplete underground piping and storm drain systems are protected against the infiltration of sand and silt.
- Ensure that all equipment is relocated out of excavations.
- Lower mobile crane booms, raise the hook, trolley in and allow tower cranes to weathervane.
- Top off the fuel tanks of all equipment and ensure fill caps are properly secured.
- Ensure dewatering, standby, and diesel-powered equipment is ready to operate. Operate this equipment as conditions warrant.

The Mechanical, Electrical, Plumbing and Elevator contractors shall:

- Identify vulnerable material and work in progress and determine how to best protect it from the effects of flooding.
- Ensure that all meter pits are outfitted with pumps so as to prevent damage to electronic equipment from rising water.
- Ensure that all electronic equipment in storage is protected from rising water.
- Ensure backup electrical generator power as required.
- Turn off the power and water to the office trailers.

On Site General Contractor Personnel shall:

- Ensure that critical project documents are protected from damage. Move them to a permanent structure if necessary.
- Backup computer files. Disconnect all computers and office equipment from the electrical outlets.
- Be prepared to board up windows or put storm shutters in place on office trailers, if not removed.
- Have strong bracing for outside doors for office trailers, if not removed. Stock sandbags for doors etc.

- Be prepared to supply fuel tanks for de-watering pumps, portable generators and vehicles during the storm and remobilization after the storm.
- Be prepared to anchor or restrain or dismantle and band anything that might blow away.
- Loose tools and lumber should be tied down or placed in storage containers.
- Tie erected formwork together to make it more resistive to high winds.
- Scaffold planking is to be dismantled, bundled and banded.
- Ensure that all office and storage trailers are tied down securely.
- Anchor portable toilets or have them picked up.
- Procure netting adequate to cover dumpsters that could not be emptied.

The USA Project Manager shall verify that all items listed have been properly completed at each stage of storm monitoring.

72-HOUR HURRICANE PREPARATION

Project Management:

- Confirm that all emergency contact information is current (i.e.) phone numbers, email addresses etc.
- Verify that all erosion and sediment control devices are in place and meet adequate standards.
- Verify that all storage and office trailers are correctly tied down.
- Confirm all pumps and generators are in working order.
- Prioritize work-plan to minimize any open excavations, loose formwork.
- Schedule trash dumpsters to be emptied.
- Ensure that the jobsite weather radio is working and has back up batteries.
- Ensure there is sufficient supply of banding, clips, duct tape, tarps and sandbags as well as the manpower to accomplish preparations.
- Ensure that there is sufficient room to lay crane booms down.

48-HOUR HURRICANE PREPARATION

Central Utilities:

- All emergency generators shall be test started and topped off with fuel.
- Have a meeting with employees, every employee in Central Utilities is considered essential personnel (except secretary).

- First and second shift along with alternate second shift employees shall be listed (1- Mechanic I, 2- Mechanic II and a supervisor) and the list shall be forwarded to the Facilities Director.
- All loose material around Central Utilities and department work sites shall be put inside or tied down.
- Make sure all vehicles are full of gas.
- First shift should bring a 24-hour food supply and prescribed medication with them.
- Air mattresses will be provided to first shift workers so they may take turns resting.
- The cafeteria will provide food when safe to do so.

Environmental Services

- Contact and notify designated essential personnel.
- Designate duties to be carried out by personnel.
- Set up shelter for Custodial department at the Maintenance building.
- Ensure custodial vehicles are fueled and ready to transport equipment and personnel to designated buildings to facilitate cleanup and/or removal of water or debris.
- Have all tools and supplies needed on hand for the appropriate disaster. All supplies and custodial cleaning chemicals are currently stored and supplied from the stockroom. All buildings on campus have a two-day or three-day supply of cleaning chemicals and paper products.
- Contact and coordinate with administration and other responding departments and assist other departments as needed.
- Custodial Services uses a T-drive system backed up by Computer Services.
- In the event of a catastrophic emergency and university computers are not accessible, we have the ability to access computers off campus that can connect to the University system.

Facilities Stockroom

- Order extra batteries.
- Order 4 pallets of water from Buffalo Rock (if they have stock).
- Order extra can liners (trash bags) for people to cover their computers/monitors.
- Order extra chain saws.
- Make sure essential personnel has access to the supplies that they need before the storm hits.

Grounds:

- Contact and notify designated essential personnel.
- Fuel up all vehicles and equipment.

- Designate duties to be carried out by personnel.
- Contact and coordinate with administration and other responding departments.
- Have supplies on hand for the different types of hazards to be handled.
- Help other departments, staff and administration with projects.
- Shut off and drain irrigation wells.
- Aid Athletics Operation Team in removal of windscreens.
- Pull exterior trash cans/lids & secure other loose items.

Project Management:

- Review 72-hour Checklist. Notify owners of unsecured trailers and storage containers to anchor them or remove them from the site.
- Review all scaffolding. Remove, stack and band planks, secure scaffolding or take it down.
- Verify that all equipment is fueled and all storage cans topped off and secure to prevent contamination of soil or wetlands.
- Begin banding loose materials.
- Review site drainage patterns and relocate materials stored in sheet low lands.
- Ensure all hazardous materials cannot contaminate water (hurricanes can produce 20 – 30 inches of rain).
- Store materials high and dry.
- Remove screening on fences, signs etc.
- Ensure there are enough computer disks to back up files.

Maintenance:

- Have a meeting with all essential employees.
- First and second shift employees shall be listed (2-Maintenance Mechanic I, 2-Mechanic II, 1-Electrician, 1-Plumber, 1-Roofer and a supervisor per-shift) and the list shall be forwarded to the Facilities Director.
- All loose material around Campus shall be put inside or tied down.
- Make sure all vehicles are full of gas.
- Make sure bottled water is available at the Maintenance Garage.
- First shift should bring 24-hour food supply and prescribed medication with them.
- Air mattresses will be provided to first shift workers so they may take turns resting.
- The cafeteria will provide food when safe to do so.

24-HOUR HURRICANE PREPARATION

Project Management:

- Review 48-hour checklist
- Document the status of the project with pictures and store them in a dry secure place.
- Back-up all computer files on diskette and store them in a dry secure place.
- Secure all windows with plywood and move all items vulnerable to water damage away from windows.
- Lower crane booms.
- Remove or anchor all trailers and storage containers that are not secured.
- Remove all non-essential barricades.
- Sandbag or tie down essential barricades.
- All incomplete piping is to be capped to prevent sand infiltration.
- Tie down all materials and place weight of some sort (rebar, block etc.) on items that cannot be physically moved.
- Tie netting on all trash containers that are not empty.
- Review stored materials for potential of windblown rain damage.
- Confirm the inventory of all equipment in the office and in the field.
- Take pictures of site conditions for insurance purposes.

12-HOUR HURRICANE PREPARATION

Project Management:

- Review 24-hour checklist
- Turn off water, power, gas, etc. at source.
- Evacuate site.
- Take pictures of any changes to the construction site conditions for insurance purposes.

4-HOURS PRIOR TO LANDFALL

Central Utilities

- First shift should be onsite. Their personal vehicles should be parked in a safe and easy to reach location for after the storm.
- Clean and fill the water keg with fresh potable drinking water.
- The first shift will put their university assigned vehicles, the Generator Mechanic vehicle and the Superintendent's vehicles inside the plant.
- There should be a roll of plastic in operator's office to cover the computer equipment.

Maintenance

- First shift should be onsite. Their personal vehicles should be parked in a safe and easy to reach location for after the storm.
- Put a case of bottled water on ice.
- Store as many of the Maintenance Department vehicles inside the Maintenance Garage as possible.

2-HOURS PRIOR TO LANDFALL

Central Utilities

- Outside activities will be curtailed, except for life threatening situations.
- The center brace that goes across each large roll-up door on the inside should be installed to help prevent wind from damaging doors.

Maintenance

- Outside activities will be curtailed, except for life threatening situations.
- Secure exterior and roll-up doors.

PRIOR TO CAMPUS CLOSING

In-House Construction:

- Meet with all departmental personnel prior to campus closing to assign responsible parties to contact departmental personnel after storm has passed to make any necessary repairs or to secure buildings.
- Have all vehicles, equipment, tools and containers topped off with fuel and secured.
- Confirm that inventory of construction materials needed to make immediate repairs are in storage (plywood, batteries, extension cords, fasteners, tools, water).
- Board up our office windows to minimize damage from flying objects.
- Secure all offsite or outside construction supplies and construction sites.
- Properly shut down machines and/or disconnect from electrical source.
- Empty and pull all waste dumpsters from sites.
- Check for structural integrity of building.

Safety and Environmental Compliance Preparation:

- Monitor and disseminate weather reports.
- Anchor or restrain anything that could blow away, mainly at the TS&D site
- Turn off fire and security alarm system. Disable batteries.
- Close all office window blinds

- Unplug and cover all computers and equipment
- Back up computers. Secure thumb drives or external drives in a safe location.
- Ensure department radios are operational and batteries charged.
- Fill or top off fuel tanks of all department vehicles and golf carts.
- Park department vehicles in higher elevation areas and or under protected building canopies.
- Coordinate schedules for staff time to leave and prepare their homes
- Validate and distribute emergency telephone numbers for all department staff
- Establish a system to inform staff when to return to work (USA website, media, Everbridge notifications, etc.)
- Notify any staff that may be considered “essential personnel” and designate their duties
- Director or designee will coordinate response with administration, departments and other campuses.
- Assist with determining when campus locations are safe to drive on the roadways and pedestrian walks are clear.

Support to other Departments and Campuses:

- Distribute portable battery-operated digital radios and chargers to USAPD, President’s Advisory team and other essential department’s leadership.
- Conduct digital radio test, verify repeater system functioning correctly.
- Stand up backup USAPD Emergency Operation Center in HAHN.
- Distribute shelter kits and cots to any opened student shelters on campus
- Collect essential personnel list for food service provider meals. Verify serving locations have current list.
- Conduct a pre-storm aerial assessment with department drone if time allows.
- Work with Transportation department to transport students to campus shelters if needed.
- Assist leadership team in sending out any messages to staff and/or students as needed via Everbridge

AFTER THE STORM PASSES

Documentation:

- Pictures should be taken immediately after the storm and before any cleanup begins.
- Any expenses incurred should be documented and forwarded to Facilities- Accounting personnel for payment and proper expense coding.

Central Utilities:

Second shift should be ready and available to report to work immediately after the storm passes.

Grounds:

- Essential personnel will begin assessing and removing high priority debris.
- Management team will assess hazards and tree damage throughout campus and off-campus locations.
- Prioritize debris removal to open up campus roadways and essential buildings.
- Remaining department personnel should be ready and available to report to work on the morning following the storm.

In-House Construction:

- Assist in cleanup of building interiors and exteriors after the disaster as needed.
- After the storm has passed, the Department Head and Supervisors will meet on site to determine a plan of action after surveying damages.

Maintenance:

- Check all buildings for damage and secure as needed.
- Report damage and any concerns to the supervisor.
- Start cleanup of building interiors and exteriors as needed.
- Department head and supervisor to determine a plan of action after surveying damages.
- Second shift should be ready and available to report to work immediately after the storm passes.

Safety and Environmental Compliance

- Director or designee will participate in damage assessment following the storm and determine if safe to return to site. Coordinate a Post-storm assessment.

ICE STORM PREPARATION

Central Utilities:

- **Forty-eight hours prior to storm:**
 - All emergency generators shall be test started and topped off with fuel.
 - Check all AHU freeze stats.
 - Have a meeting with employees, every employee in Central Utilities is considered essential personnel (except secretary).
 - First and second shift along with alternate second shift employees shall be listed (1-Mechanic I, 2- Mechanic II and a supervisor) and the list shall be forwarded to the Facilities Director.
 - Make sure all vehicles are full of gas.
 - First shift should bring a 24-hour food supply and prescribed medication with them.
 - Air mattresses will be provided to first shift workers so they may take turns resting.
 - The cafeteria will provide food when safe to do so.
- **At least four hours prior to storm:**
 - First shift should be onsite. Personal vehicles should be parked in a safe and easy to reach location for after the storm.
 - Clean and fill the water keg with fresh potable drinking water.
 - The first shift will put their University assigned vehicles, the Generator Mechanic vehicle and the Superintendent's vehicles inside the plant.
- **After the storm passes and weather and road conditions allow for travel:**
 - Second shift should be ready and available to report.

In-House Construction:

- Meet with all departmental personnel prior to campus closing to assign responsible parties to contact departmental personnel after storm has passed to make any necessary repairs or to secure buildings.
- Turn off water and drain lines in our building.
- Have all vehicles, equipment, tools and containers topped off with fuel and secured.
- Confirm that inventory of construction materials needed to make immediate repairs are in storage (plywood, batteries, extension cords, fasteners, tools, water).
- Secure all offsite or outside construction supplies and construction sites.
- Properly shut down machines and/or disconnect from electrical source.
- Empty and pull all waste dumpsters from sites.
- Assist in cleanup of building interiors and exteriors after the disaster as needed.
- After the storm has passed department head and supervisors will meet on site to determine a plan of action after surveying damages.

Grounds:

- Shut off and drain all irrigation wells on campus and off-campus sites.
- Determine essential personnel and return schedule.
- Following the storm, essential personnel will inspect campus roads, sidewalks, outdoor staircases, and essential buildings for hazards, and apply Melt Away ice salt as needed.

Maintenance:

- Having a meeting with all essential employees.
- First and second shift employees shall be listed (2-Maintenance Mechanic I, 2-Mechanic II, 1-Electrician, 1-Plumber, 1-Roofer and a supervisor per-shift) and the list shall be forwarded to the Facilities Director.
- Make sure all vehicles are full of gas.
- Make sure bottled water is available.
- First shift should bring a 24-hour food supply and prescribed medication with them.
- Air mattresses will be provided to first shift workers so they may take turns resting.
- The cafeteria will provide food when safe to do so.
- **At least four prior to storm:**
- First shift should be onsite. Their personal vehicles should be parked in a safe and easy to reach location for after the storm.
- Put a case of bottled drinking water on ice.
- Store as many of the Maintenance Department vehicles inside the Maintenance Garage as possible.
- **After the storm passes and weather and road conditions allow for travel:**
- Check all buildings for damage and secure as needed.

- Report damage and any concerns to supervisor.
- Start cleanup of building interiors and exteriors as needed.
- Department head and supervisors to determine a plan of action after surveying damages.
- Second shift should be ready and available to report to work immediately after the storm passes.

SUPPLEMENTAL

INFORMATION

SERVICE INTERRUPTION

Normal Working Hours

Central Utilities:

- Craft trades for the affected service shall immediately analyze the situation to determine the nature of the problem.
- Notify appropriate Manager(s) if service may be interrupted for an extended period of time.
- Manager(s) will attempt to estimate a timeframe for problem resolution and notify affected departments and send out mass email notification if needed.

Maintenance:

- Contact the Maintenance Department and/or submit a Maintenance Request in TMA.
- Craft trades for the affected service shall immediately analyze the situation to determine the nature of the problem.
- Notify appropriate Manager(s) if service may be interrupted for an extended period of time.
- Manager(s) will attempt to estimate a timeframe for problem resolution and notify affected departments and send out mass e-mail notification if needed.

After Hours

Central Utilities:

- Maintenance on call personnel will analyze immediately upon arrival to the affected area and determine nature of problem and utilize service contractors as needed.
- Notify appropriate Manger(s) if service may be interrupted for an extended period of time.

- Manager(s) will attempt to estimate a timeframe for problem resolution and notify affected departments.

Maintenance:

- Monday through Friday from 3:30pm to 11:30pm - Contact the Central Utilities Operator on duty. The Central Utilities Operator will then contact the appropriate on-call personnel with Central Utilities Department or the Maintenance Department night shift personnel.
- After 11:30 pm Monday - Friday and all-day Saturday and Sunday - Contact the Central Utilities Operator on duty for immediate response. The Central Utilities Operator will then contact the appropriate on-call personnel with Central Utilities Department or Maintenance Department.
- The on-call personnel will determine nature of problem and use university resources need to correct the problem.
- Manager(s) will attempt to estimate a timeframe for problem resolution and notify affected departments.

Extended/Total Service Interruption

Central Utilities:

- Notify all affected Facilities Management Managers immediately.
- All Managers will notify affected departments and downtime procedures implemented.
- Notify the Director of Facilities.

Maintenance:

- Notify all affected Facilities Management Managers immediately.
- All managers will notify affected departments and downtime procedures implemented.
- Notify the Director of Facilities.

Catastrophic Event (Fire, Flood, etc.)

Central Utilities:

- Notify the Director of Facilities immediately.
- Notify University Risk Management.
- Contact major vendors for any assistance.

Maintenance:

Fire

- In case of a fire, notify the university police department immediately along with the Fire Marshal and Director of Facilities.
- Response teams are to work directly with the university police department and emergency personnel as directed.

Flood

- In case of a flood notify the university police department immediately along with the Director of Facilities.
- Start cleanup, contact Water Restoration Services and notify Risk Management.
- In case of flood notify the Facilities Manager.
- Start cleanup, contact Water Restoration Services and Notify Risk Management.

RECOVERY TEAMS

Environmental Services:

- Superintendent
- Team A
 - Assistant Superintendent
 - Four Custodial II Employees
 - Four Custodial I Employees
- Team B
 - Supervisor II
 - Four Custodial II Employees
 - Four Custodial I Employees

Grounds:

- Manager
- Assistant Manager
- Assistant Manager
- Construction Crew Coordinator
 - Two Heavy Equipment Operators
 - Construction Crew Technician
- Landscape Supervisor
 - Two Irrigation Technicians
 - Three Groundskeeper II
 - Three Heavy Equipment Operator I

Maintenance:

Disaster Recovery Team #1

- Assistance Director, Maintenance (Team Leader)
- Maintenance Superintendent
- Two Electricians
- One Plumber
- Two Mechanics
- One Roofing Technician
- One Access Control Technician

Disaster Recovery Team #2

- Superintendent, Maintenance (Team Leader)
- Maintenance Superintendent
- Two Electricians
- One Plumber
- Three Mechanics
- One Access Control Technician