



Hurricane Preparedness Checklist

Time spent preparing your research area(s) and employees for a potential disaster is an essential role of the Principal Investigator (PI). Safeguarding your life's work, personnel, and laboratories is vital for your continued research. These checklists have been developed to ensure that you, your employees and your work area(s) are suitably prepared in the event of a hurricane. Hurricane Season is from June 1 – November 30. These checklists describe actions you can take before, during, and after a storm.

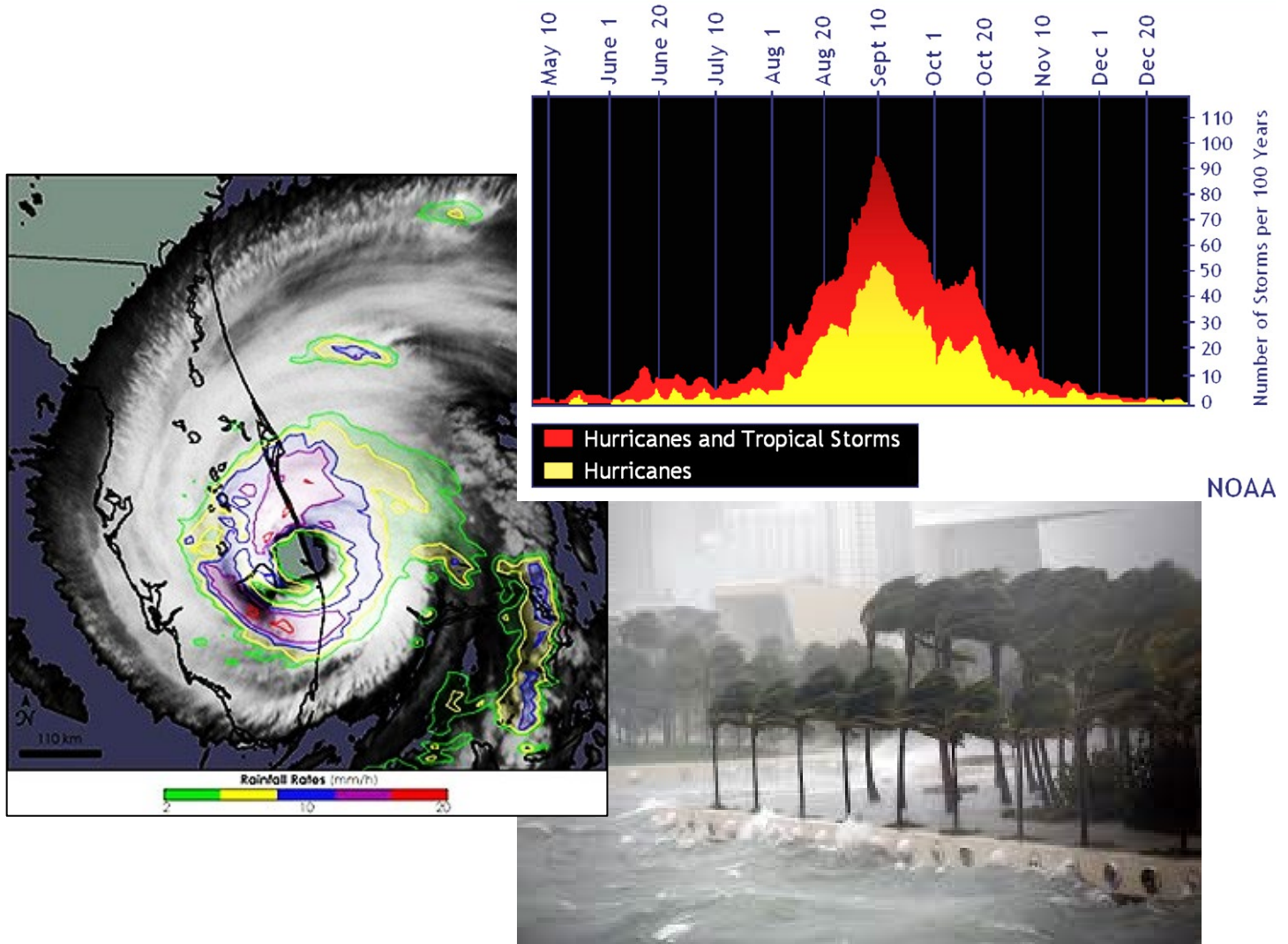




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Useful Information and Websites

Personal Preparedness for Hurricanes

<https://prepare.miami.edu/before-emergency/hurricane-preparedness/personal-preparedness-for-hurricanes/index.html>

Environmental Health and Safety (EHS)

[Laboratory Safety | Environmental Health and Safety | University of Miami](#)

Division of Veterinary Resources

[The Division of Veterinary Resources \(DVR\) | UResearch | University of Miami](#)

UReady Continuity Planning

<https://prepare.miami.edu/before-emergency/uready/index.html>

National Hurricane Center

<https://www.nhc.noaa.gov/>

UM Emergency Management Facebook

<facebook.com/UMiamiENN>

UM Emergency Management Twitter

<twitter.com/UMiamiENN>

EMERGENCY INFORMATION NUMBERS

Campus	UM Police / Public Safety / RSMAS Campus Safety Emergency	UM Police / Public Safety / RSMAS Campus Safety Non-Emergency
Coral Gables	911	305-284-6666
Medical	911	305-243-7233
Marine (RSMAS)	911	305-710-7991
UNIVERSITY EMERGENCY INFORMATION HOTLINE – 800-227-0354		

The latest updates on what is occurring will be posted on the University of Miami homepage, Emergency Information Hotline, and Emergency Management Social Media Accounts.

During an emergency, we recommend all employees consult the Emergency Management Social Media and the Emergency Information Hotline for updates and other important information.



Prior to Hurricane Season

This checklist provides guidance on preparing for a potential impact from a tropical storm or hurricane. As we are unable to predict when a disaster may strike, each PI should complete this checklist annually prior to Hurricane Season. Although this checklist focuses on your employees, the preparation of your work area(s), and lab equipment prior to Hurricane Season, the steps you will have carried out upon completion of this document will better prepare you for any other potential disasters.

Detailed information about how to accomplish items on the checklists is on the following pages.

1.0 PREPARING SAMPLES & LAB EQUIPMENT

1.1	Register Critical Equipment (Medical School Only)
1.2	Inventory Freezers/Refrigerators/Cryogenic Tanks/Cold Rooms
1.3	Identify Critical Samples
1.4	Division of Veterinary Resources (DVR) Information

2.0 PREPARING LAB/OFFICE

2.1	Update Emergency Supply Inventory
2.2	Ensure Tanks and Compressed Gas Cylinders are Full
2.3	Radioactive Waste Preparation
2.4	Confirm That a Spill Kit is Stocked
2.5	Confirm Data Storage
2.6	Photograph/Video Office Area, Lab Area, and All Equipment
2.7	Update Lab Signage
2.8	Check Fire Extinguisher
2.9	Don't Stack Supplies Up to the Ceiling
2.10	Observe Good Housekeeping
2.11	Check Chemical Containers for Integrity
2.12	Keep Chemicals Below Shoulder Height
2.13	Properly Secure Gas Cylinders



2.14	Segregate Chemicals by Hazard Class
2.15	Use Secondary Containment for Chemicals and Liquid Waste

3.0 PREPARING ADMINISTRATION/PERSONNEL

3.1	Review/Maintain Individual Unit Plan via UReady
3.2	Update Emergency Contact Information in Workday
3.3	Designation of Emergency Workforce Personnel
3.4	Designate an Alternate Contact in Case of Your Absence
3.5	Maintain an Emergency Lab/Office Personnel Contact List/Phone Tree

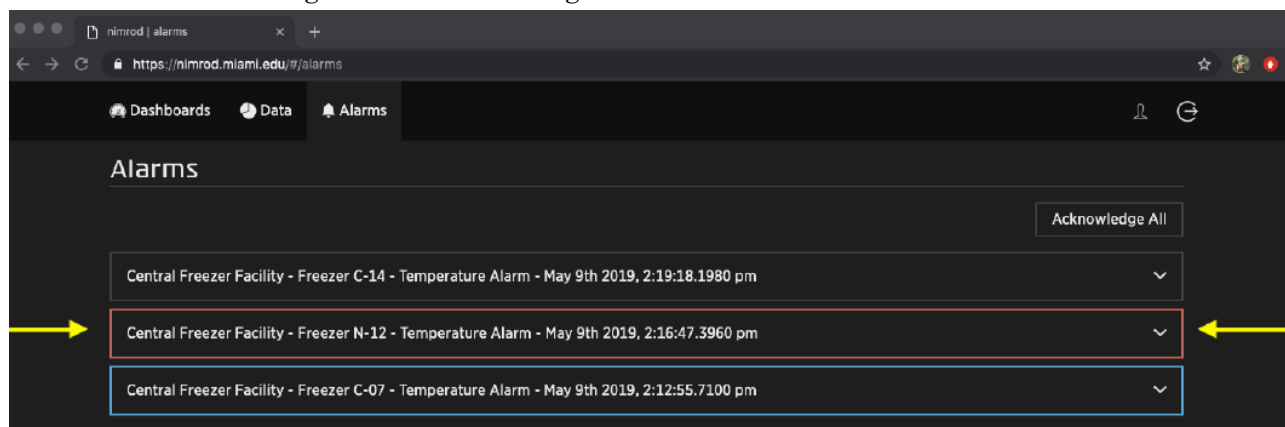


1.0 PREPARING SAMPLES & LAB EQUIPMENT PRIOR TO HURRICANE SEASON

1.1 Register Critical Equipment (Medical Campus Only)

- Applicable to critical equipment that is valued at greater than \$2,499 or necessary for the laboratory's function (e.g., -80 freezers).
- Ensure that all critical equipment has been registered with Miller School Public Safety and labeled accordingly.
 - Visit the link listed below and complete the information to inventory critical equipment such as freezers, refrigerators, and incubators in case of a loss of power (<http://publicsafety.med.miami.edu/critical-equipment-registration>).
 - Upon registering, a four-digit Critical Equipment Registration Form (CERF) number will be provided for identification of your unit.
 - Print and post your CERF on your critical equipment, which includes all emergency contact information and equipment normal operating values (temperature, % of CO₂, etc).
- Check your critical equipment alarm.
 - For refrigeration units connected to Public Safety's ProWatch monitoring system:
 - The alarm circuit is tested during initial installation. To ensure that the alarm system is fully active, a lab contact should trigger the alarm.
 - Contact Public Safety (305-243-6000, 305-243-7233) to confirm this is a "test" and for the dispatcher to verify that they have received systematic notification of the alarm.
 - If you require assistance testing your alarm contact the Public Safety Systems Supervisor at 305-243-8375.
 - For refrigeration units connected to other monitoring systems, run regular tests by placing your unit in alarm to confirm the system is contacting you, then place back to normal.

Below is an image of an alarm being tested.



1.2 Inventory Freezers/Refrigerators/Cryogenic Tanks/Cold Rooms



- Inventory and document all product/sample information, including serial/order numbers, location, quantity, and value. The value of such items is required for insurance and FEMA-related claims in the event of storm-related loss or damage. Sample inventory templates are attached in [Appendix A](#).
- Ensure that the inventory information for your freezer/refrigerator/LN₂ tank/cold room is current and reflects the content of the freezer and the owner of the material.

1.3 Identify Critical Samples

- Please identify (label) those samples that are most critical for your work/mission.
- In the case of a pending hurricane, power outage, etc., it may be necessary to move or relocate your samples.
- Consider sending critical or irreplaceable samples out of the area through pre-existing arrangements with a University-approved professional bio-repository and/or non-local collaborators/colleagues.

1.4 Division of Veterinary Resources (DVR) Information

- For animal study resources, visit:
[The Division of Veterinary Resources \(DVR\) | UResearch | University of Miami](#)
- No DVR animals or animal records should be removed from campus by a Principle Investigator at any time.

2.0 PREPARING LABS/OFFICES PRIOR TO HURRICANE SEASON

2.1 Update Emergency Supply Inventory

- Supplies on hand should include plastic sheeting and tape to cover computers, non-critical lab equipment, desks, etc., and materials to protect the facility, contents, and for post-disaster cleanup. No equipment should be covered while plugged in.
- Some suggested Hurricane Supplies may be purchased through the Grainger Catalogue in the Workday Market Place.
 - Plastic storage box
 - General Purpose LED Flashlight
 - “D” Batteries
 - Plastic sheeting, 2 mil/10ft x 100ft
 - Plastic sheeting, 3 mil/10ft x 100ft
 - Clear carton sealing tape
 - Jumbo plastic bags
 - Large tarp
 - Bungee cords
 - LCD Refrigerator/Freezer Thermometer
 - Sheet Protectors, Clear
 - Portable Weather Radio, AM/FM, NOAA
- Some supplies, mostly plastic sheeting and clear packing tape, are available in limited quantities on a first-come-first-serve basis from the Physical Plant Stock



Room, which is located in the basement of the Rosenstiel Medical Research Building. Below is an example image of supplies to prepare your work area.



2.2 Ensure Tanks and Compressed Gas Cylinders are Full

- Our gas suppliers are expected to stop delivery 24 hours before anticipated arrival of tropical storm force winds. They closely monitor hurricane forecasts and their delivery schedules are based on them. Their cut-off point for research product deliveries is a few hours before winds are predicted to reach 35 mph, to ensure the safety of their employees.

2.3 Radioactive Waste Preparation

- Minimize waste stored in your lab.
- Make sure all radioactive waste is properly packaged and secured.
- Minimize the amount of stock material held in the lab and review storage and security of that material.
- Discuss any issues or concerns regarding radioactive waste with Radiation Control at 305-243-6360.

2.4 Check Spill Control Kit

- Spill kit should be stocked appropriately for the hazards in the lab.
 - Chemical spill kit guidance can be found at <https://business-services.miami.edu/assets/pdf/Chemical%20Spill%20kit.pdf>
 - Biological spill kit guidance can be found at <https://business-services.miami.edu/assets/pdf/Bio%20Spill%20Kit.pdf>
- Location of the kit should be visibly and clearly marked in the lab.

**2.5 Confirm Data Storage**

- Never store data on your computer's hard drive. Use approved cloud-based storage systems (Box, Microsoft OneDrive, Google Drive, etc.).
- Create digital versions of paper documentation in PDF format
- Check the data integrity of stored data files at regular intervals
- Ensure HIPAA compliance when the type of research requires it.
- Document grant information including study, agency, and award number.

2.6 Photograph/Video Office Area, Lab Area, and All Equipment

- Take photos and/or videos of office and laboratory areas. Include pictures of all equipment. Guidelines are available at http://publicsafety.med.miami.edu/documents/Photo_Documentation.pdf

2.7 Update Lab Signage

- Post signage indicating the hazards present, such as biohazard and/or radiation signage.
- Emergency contact signage should be up to date, accurate, and displayed at the lab entrance listing responsible persons knowledgeable of the contents in the lab.
- New signage can be provided by EHS upon request.

2.8 Check Fire Extinguisher

- Ensure that your nearest extinguisher is present, and the tag has been signed by the inspector.

2.9 Don't Stack Supplies Up to the Ceiling

- Remove items within 18" of the ceiling to allow for safe function of building sprinkler systems.

2.10 Observe Good Housekeeping

- Unnecessary clutter/obstructions on floors or surfaces must be removed.
- Biological labs need to be disinfected per established schedule.

2.11 Check Chemical Containers for Integrity

- Chemical containers are expected to be in good condition.

2.12 Keep Chemicals Below Shoulder Height

- To prevent spills or falling containers, chemicals and other hazardous liquids stored should not be stored above shoulder height.

2.13 Properly Secure Gas Cylinders

- Compressed gas cylinders are secured between the middle and shoulder of cylinder.
- No more than 2 cylinders may be attached to any one restraint.

**2.14 Segregate Chemicals by Hazard Class**

- Chemicals are segregated by hazards.

2.15 Use Secondary Containment for Chemicals and Liquid Waste

- Secondary containment is required for liquid hazards to prevent spills.

3.0 PREPARING ADMINISTRATION / PERSONNEL PRIOR TO HURRICANE SEASON**3.1 Review/Maintain Individual Unit Plan via UReady**

www.miami.edu/uready

- Distribute the unit plan to all personnel and periodically review its contents.

3.2 Update Emergency Contact Information in Workday

- Emergency Contact and Evacuation Information is maintained in Workday. Ensure your information is up-to-date and accurate.
 - If your location changes, please update the system as soon as physically possible. Guidance on how to do so can be found [here](#).

3.3 Designation of Emergency Workforce Personnel

- Guidelines for identification of employees who are and/or may be required to provide critical services during a declared emergency and pay during a declared emergency can be found [here](#).
- The [Designating Personnel Tip Sheet](#) provides detailed instructions on how supervisors update an employee's tier designation. Supervisors shall also explain to employees what potential role(s) they will have during an emergency.

3.4 Designate an Alternate Contact in Case of Your Absence**3.5 Maintain an Emergency Lab/Office Personnel Contact List/Phone Tree**

- The Contact List ensures all employees are safe and receive up-to-date information in the event of a hurricane.
 - Include detailed instructions on the use of the phone tree and the responsibilities of the individuals listed within the tree.
 - Include the following information for each employee: Name, Office, Home, and Cellular Phone numbers, E-mail Address.
 - The primary contact (employee at the top of the tree), initiates the sequence.
 - In-turn, each employee calls the next contact in line relaying the information they receive from the prior employee.
 - In the event the assigned contact does not answer, the employee must leave a message advising the contact to call the “primary contact” and then call the next employee in the sequence.
 - When the subsequent contact is called, the employee must advise they were unable to contact the previous employee on the tree and confirm they relay this information to the next in the sequence until the end of the loop.



- The last employee to be contacted should notify the primary contact and inform them of who were unreachable.
- The primary contact is responsible to ensure all their assigned employees are contacted.
- See [Appendix B](#) for a sample phone tree.



When a Storm is Imminent

Once you have completed the “Prior to Hurricane Season” checklist, you will be prepared to respond when a storm is imminent. As we are unable to predict when a disaster may strike, we have compiled the next step checklist, being mindful of what to do in the event of an approaching storm. Many, if not all, of the points contained within this document would be relevant for other disaster situations. It is recommended that these activities commence no later than 72 hours prior to the anticipated arrival of tropical storm force winds.

Detailed information about how to accomplish items on the checklists is on the following pages.

1.0 PREPARING LAB/OFFICE

1.1	General Operations
1.2	Shut Down Equipment
1.3	Windowed Labs and Offices
1.4	Chemicals and Glassware
1.5	Biohazardous Waste
1.6	Radioactive Materials and Waste
1.7	Off-Site Storage for Critical Samples
1.8	Preserving Critical Samples
1.9	Ensure Cryogenic Storage Tanks are Full
1.10	Ensure Gas Cylinders are Full
1.11	Prepare Special Care Animals
1.12	Conduct Final Walkthrough
1.13	Put Up Hazardous Materials
1.14	Lock Doors on Exit
1.15	Organize Lab

**2.0 PREPARING ADMINISTRATION/PERSONNEL**

2.1	Distribute Phone Tree
2.2	Confirm Contact Information in Workday
2.3	Safeguard Critical Files
2.4	Protect Equipment
2.5	Secure Information
2.6	Relocate Equipment From Flood Prone Areas

3.0 REMAINING ON CAMPUS DURING A STORM

3.1	Confirm Emergency Workforce Personnel are Ready
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1.0 PREPARING LAB/OFFICE WHEN A STORM IS IMMINENT

1.1 General Operations

- Remove any food and perishable supplies from your office
- Completely clean all laboratory benches (where practical)
- Lock all file cabinets, desk drawers and office/lab doors

1.2 Shut Down Equipment

- Turn off and unplug all equipment that does not require emergency power (including computers)
- Refrigerators and freezers should be left ON at the coldest setting that will not cause damage to the contents. To ensure a better seal, you may consider taping the door closed.
- Equipment that is running and requires ventilation should NOT BE covered (ex. refrigeration, incubators, etc.)

1.3 Windowed Labs and Offices

- Clear desk/tabletops of books, files, papers, etc. and place them inside desks, drawers, cabinets etc.
- Remove all items from window ledges and verify that all windows are closed and sealed.
- If practical, move desks, file cabinets and equipment away from the windows and off the floor.
- Store as much equipment as possible in closets or windowless rooms.
- Cover desks, drawers, cabinets etc. with plastic sheeting and tape securely. Do not cover any equipment that is still energized.

1.4 Chemicals and Glassware

- Remove bottles & chemicals from shelves and place in cabinets, or on the backs of benches against a wall.
 - Refer to <https://ehs.miami.edu/services/laboratory-safety/hurricane-preparedness/index.html>
- Due to the possibility of power outages, volatile, toxic materials as well as those that may cause respiratory hazards should not be stored in fume hoods or refrigerators, but in tightly sealed, impervious and break-resistant containers.
- All hazardous materials should be secured in cabinets or moved to inside labs.
- Chemicals should be segregated based on their compatibility.

1.5 Biohazardous Waste

- Secure all biohazardous waste and take to designated biohazard bins.

**1.6 Radioactive Materials and Waste**

- Secure all radioactivity stocks.
- Call the Radiation Control Center (305-243-6360) to organize a pre-storm pick-up of any radioactive waste.
 - Radiation Control will continue operations and pick up waste on the Medical Campus as time permits while the campus is open.
 - Waste from other campuses will not be picked up once a Tropical Storm Watch is issued for Miami-Dade County.

1.7 Off-Site Storage for Critical Samples

- Send critical samples for off-site storage as needed.

1.8 Preserving Critical Samples

- Transfer critical samples to freezers, refrigerators and cold rooms that are connected to emergency power
- Do not use an extension cord to connect to emergency power (red outlets). This may overload the system!

1.9 Ensure Cryogenic Storage Tanks are Full

- Top off liquid nitrogen cryogenic storage tanks for submerged vials

1.10 Ensure Gas Cylinders are Full

- Replace gas (carbon dioxide, nitrogen, etc.) cylinders with full tanks

1.11 Prepare Special Care Animals

- Prepare animals that require special care beyond established husbandry practice
- Contact a DVR veterinarian for prearranged special care.

1.12 Conduct Final Walkthrough

- Before leaving, conduct a final walk-through
- Ensure all items are secured, cabinets and doors are locked, and that all preparations have been completed.

1.13 Put Up Hazardous Materials

- Clear hazardous materials from benchtops and equipment
 - Biosafety cabinets, fume hoods, and other equipment must be cleared of hazardous materials.

1.14 Lock Doors on Exit

- Doors to the lab should be closed and locked to prevent unauthorized access when leaving.



1.15 Organize Lab

- Leave the lab organized when exiting.
- Unnecessary clutter/obstructions on floors or surfaces should be removed.

2.0 PREPARING ADMINISTRATION/PERSONNEL

2.1 Distribute Phone Tree

- Issue paper copy of emergency phone tree to all lab/office members.
- Reference the “Prior to Hurricane” checklist for guidelines.

2.2 Confirm Contact Information in Workday

- Confirm emergency contact information is correct in Workday.
- Ensure that your information is up-to-date and accurate. If, for whatever reason, your location changes, please update the system as soon as possible.

2.3 Safeguard Critical Files

- Safeguard all critical files and photographic documentation
- If you have not already done so, back up data from your hard drive to your shared drive or cloud-based storage.
- Ensure you have all photo documentation of the lab, including a high angle view and close-ups of individual equipment.

2.4 Protect Equipment

- Turn off, unplug, and elevate non-critical equipment.
- Cover with plastic sheeting and secure with clear sealing or duct tape.

2.5 Secure Information

- Place items containing valuable information in plastic bags.
 - Lab notebooks
 - Books
 - Valuable papers
 - Protocols in progress
 - Sources of data
- Proposals
- Workday program name of project for active awards
- Recent budget account statements
- Agency program contact information



2.6 Relocate Equipment from Flood Prone Areas

- In locations where flooding is a possibility, some critical equipment may need to be relocated to a safer location.

3.0 REMAINING ON CAMPUS DURING A STORM

3.1 Confirm Emergency Workforce Personnel are Ready

Once you have been officially notified that the University of Miami Miller School of Medicine will close, you will not be allowed access to the research facilities until the buildings are assessed by Public Safety and Facilities & Operations and deemed safe for reentry. Confirm that designated emergency workforce personnel are available and ready during this period.

For more information about continuing critical services during an emergency, such as a hurricane, please refer to the [University Declared Emergency, Employee Responsibilities, and Compensation Policy](#).



Post Disaster

This checklist focuses on the activities that must be carried out before and after you and your employees return to work. The University is committed to restoring research activities as soon as is safely possible. After Facilities & Operations and Public Safety deem the buildings safe, Public Safety will return each building to “weekend access” status for magnetic card entry. As each building is cleared, information is posted to the website and social media and relayed via **EMERGENCY INFORMATION HOTLINE 1-800-227-0354**. The time required to re-open depends upon the severity of the storm.

1.0 BEFORE YOU RETURN TO WORK

1.1	UM Emergency Information Hotline
1.2	Contact Supervisor
1.3	Initiate Phone Tree

2.0 RETURNING TO WORK

Depending on the severity of impacts, the following items should be considered as you work to reconstitute regular research operations within your lab.

2.1	UReady Business Continuity Plan
2.2	Conduct a Damage Assessment
2.3	Minimize Further Loss
2.4	Report Impact
2.5	Damaged Capital Equipment Procedure
2.6	Contact Supervisor for Work Requiring Suspension
2.7	Complete a Risk Management Claims Worksheet
2.8	Contact Grants Program Administrator and Office of Research Administration
2.9	Relocate Lab Activities if Needed
2.10	Retrieve Critical Samples
2.11	Verify Equipment and Storage is Functional

1.0 BEFORE YOU RETURN TO WORK AFTER A HURRICANE



1.1 **UM Emergency Information Hotline**

- If you have questions that are not already answered through UM mass communications, you can reach out to the UM Emergency Information Hotline for answers.
 - UM Emergency Information Hotline: 1-800-227-0354

1.2 **Contact Supervisor**

- Notify your supervisor to confirm when it is okay to return to the lab.

1.3 **Initiate Phone Tree**

- Use the previously developed phone tree to verify all lab members are safe and accounted for.

2.0 **RETURNING TO WORK AFTER A HURRICANE**

2.1 **UReady Business Continuity Plan**

- Review and implement the UReady plan developed prior to the emergency to ensure no critical items are missed.
 - Website: www.miami.edu/uready

2.2 **Conduct a Damage Assessment**

- Upon arriving at the lab, conduct a damage assessment of your work areas. Take pictures of all damaged equipment and complete the [Damaged Inventory Worksheet](#).

**2.3 Minimize Further Loss**

- If needed, implement steps to minimize any further loss of property and equipment as a result of sustained impacts.

2.4 Report Impact

- As applicable, report the damage impacts to your work area supervisor or department head.

2.5 Damaged Capital Equipment Procedure

- Do not discard damaged capital equipment until Risk Management has been notified.

2.6 Contact Supervisor for Work Requiring Suspension

- If the damage impacts your ability to return to work, contact your supervisor or department head detailing why and when you expect to resume work.

2.7 Complete a Risk Management Claims Worksheet

- If applicable, the appropriate person should complete the Risk Management Claims worksheet.

2.8 Contact Grants Program Administrator and Office of Research Administration (ORA)**2.9 Relocation of Lab Activities if Needed**

- If damage to lab or work areas is extensive, lab work may need to be temporarily relocated to allow facilities and/or contractors access to make requisite repairs.

2.10 Retrieve Critical Samples

- When the lab is ready to continue work, retrieve critical samples that were moved or stored off-site.
- Ensure your samples will have working equipment for safe storage prior to reception.

2.11 Verify Equipment and Storage is Functional

- Prior to the initiation of work, ensure all equipment and storage areas are functional to conduct work and safe storage inside the lab.

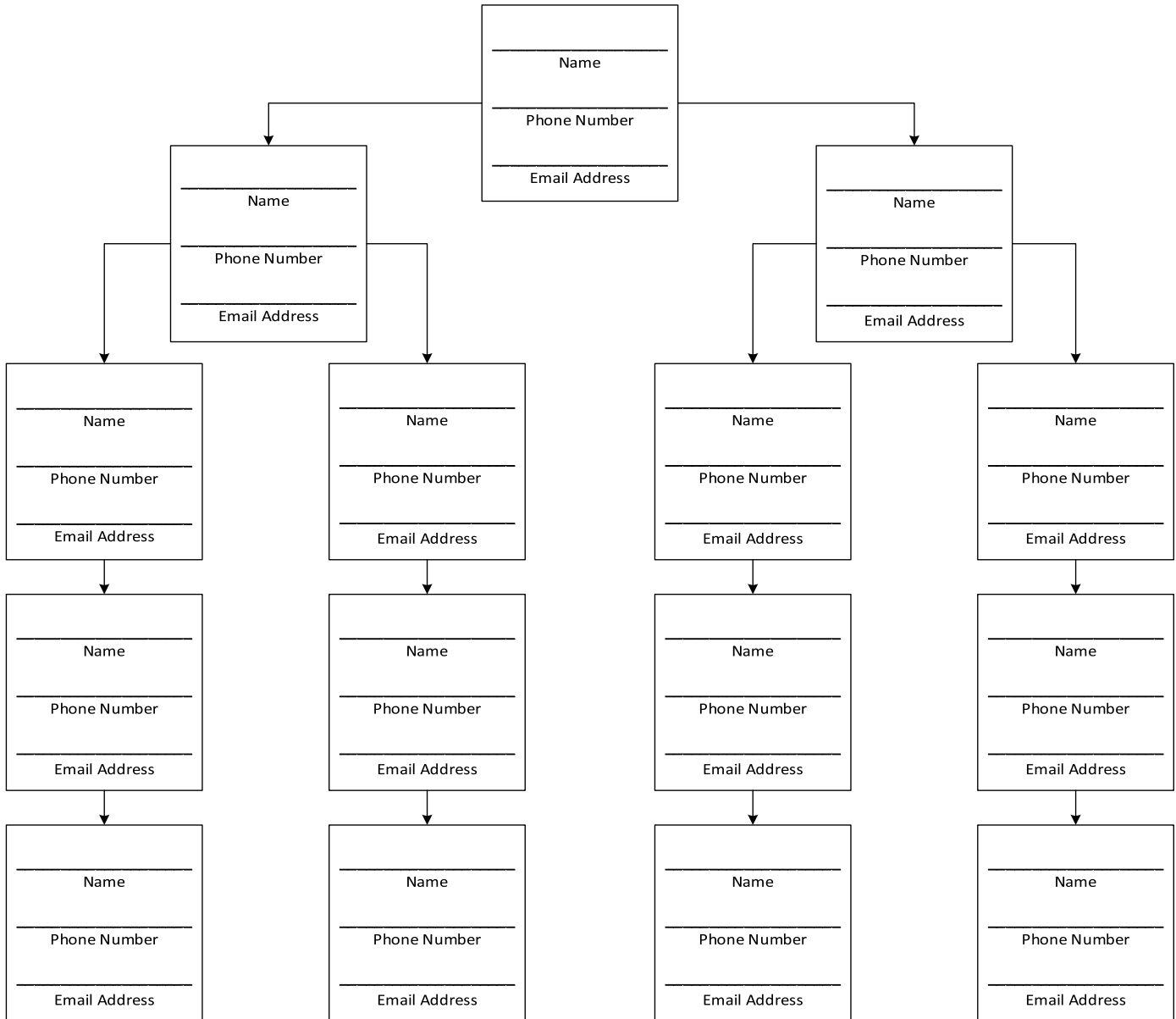


INVENTORY SHEET TEMPLATE (example)

Lab:	
Inventory:	
Location:	Serial/ID #:
Emergency Contact 1:	Contact #:
Emergency Contact 2:	Contact #:
Box #___	Samples:
	Number of Tubes:
	Label:
	Misc.:
Box #___	Samples:
	Number of Tubes:
	Label:
	Misc.:
Box #___	Samples:
	Number of Tubes:
	Label:
	Misc.:
Box #___	Samples:
	Number of Tubes:
	Label:
	Misc.:
Box #___	Samples:
	Number of Tubes:
	Label:
	Misc.:

Appendix B: Emergency Phone Tree (example)

Primary Contact: _____



The last person to be contacted should contact the Primary Contact and inform them of who was unreachable.