

**University of Florida
Whitney Laboratory for Marine Bioscience
Disaster Preparedness Plan
2022**

**Buildings covered by this plan:
Administration Building office,
Whitney Laboratory building,
Sea Turtle Hospital
Center for Marine Studies
Whitney Hall
Research Village buildings**

**9505 Ocean Shore Blvd,
St. Augustine, FL 32080,
Phone 904-461-4000**

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I. Objective

The objective of this manual is to have contingency plans in writing to address disaster events that may occur, whether manmade or natural. This plan will identify individuals responsible for fulfilling emergency actions listed as well as list what actions should be taken to protect staff, departmental property, and lab animals (needed for research) from potential harm.

II. Emergency Phone Numbers

Emergency numbers listed below are essential personal to be contacted during times of the emergency.

Essential Personal Contact Information for Emergency Procedures			
Name & Title	Office	Cell	Email
Mark Martindale Director	904.461.4051	808.348.5465	mqmartin@whitney.ufl.edu
Adam Pacetti Facilities	904.461.4039	904.669.5385	apacetti@whitney.ufl.edu
Jessica Long Senior Advancement Director	904.461.4018	904.315.2578	jessicalong@whitney.ufl.edu
Patrick Thompson Operations Manager	904.461.4004	352.278.5200	patrick.thompson@whitney.ufl.edu
Todd Osborne Chemical Safety Officer	904.461.4047	352.256.3826	osbornet@ufl.edu
Brenda Cannaliato Education Organizer	904.461.4014	904.316.1944	brenda@whitney.ufl.edu
James Liao Associate Professor	904.461.4011	617.818.1656	jliao@whitney.ufl.edu
Cat Eastman Sea Turtle Coordinator	904.461.4028	904.540.6547	cbeastman@whitney.ufl.edu
James Strother Assistant Professor	904.461.4000	949.922.4735	james.strother@whitney.ufl.edu
Leonardo Ibarra-Castro Associate Professor	904-461-4000	-	l.ibarracastro@whitney.ufl.edu

Center	PI	Primary Care Giver	Phone	Email	Lab Rooms	Laboratory Animal
Labs						
Liao Lab	Dr. James Liao	Designated lab support	617-818-1656	jliao@whitney.ufl.edu	43	Zebrafish & Trout
Osborne Lab	Dr. Todd Osborne	Designated lab support	352-256-3826	osbornet@ufl.edu	32	Parrott Fish
Strother Lab	Dr. James Strother	Designated lab support	949-922-4735	strotherj@ufl.edu	51A	Zebra Fish
Aquaculture						
Aquaculture	Dr. Leonardo Ibarra-Castro	Designated lab support	+52 669 139 2973	l.ibarracastro@ufl.edu	T134, 2102, outside tanks	Variety of Marine Fish
Sea Turtle Hospital						
Sea Turtle Hospital	Dr. Dave Duffy	Designated Hospital Staff	(904) 422-9596	d.duffy@ufl.edu	36, outside tanks	Sea Turtle Hospital
Designated lab support						
Elias Lunsford	-	-			43	
Ana Beard	-	-			32	
Amelia Bunnell	-	-			51A	
Maddie Morrison	-	-			T134, 2102, outside tanks	
Cat Eastman	-	-			36, outside tanks	
Devon Rollinson	-	-			36, outside tanks	
Facilities						
Adam Pacetti						
Patrick Thompson						

Emergency Contact Resources	
Fire, Police, and Ambulance	9.911
Flagler County Sheriff's Office	9.386.313.4911
Flagler Beach Police Department	9.386.517.2023
Poison Control- Information Center Jacksonville	9.1.800.222.1222
Rape Crisis-Jacksonville	9.721.7273
Rape Crisis- Daytona Beach	9.1.386.254.4106
Suicide Prevention Center	9.1.800.539.4288
Victims Services	9.1.386.586.4801
National Response Center- Oil & Toxic Chemical Spills	9.1.800.424.8802
Flagler County Emergency Management	9.1.386.313.4200
Disaster-American Red Cross, St. Johns County	9.303.2131
Loss of Power-Florida Power and Light	9.1.800.226.6543

III. Crisis Management: Domestic Terrorism

To help prevent any form of domestic terrorism it is imperative that all members of staff, post-docs and graduate student, or visiting students, participate in detection, deterrent, and planning to prevent harm to others and themselves.

It is important for any staff member or students to inform the head of the department/director of any restraining orders that he/she may have against a significant other, family member, or a person who has threatened him/her.

Detection:

Be suspicious of anyone that may be exhibiting the following behaviors:

- Persons appear nervous or jumpy and is evasive if asked a direct question
- Wearing clothing that is unusual for the season or an event on the premises
- In a parked vehicle outside the building or across the street engaging in surveillance activities; photographing, observing location and infrastructure

- Walking onto the premises with a box and/or is noticed leaving the box in an area other than the designated delivery spot or delivering the box in a suspicious manner
- Walking onto the premises with an unmarked bag and/or being noticed leaving the bag in a hallway, door way or other suspicious place
- Walking through the halls while taking down notes and is not part of the general staff or is unaccompanied by a staff escort
- If they appear to be testing security procedures and alert times
- Picketing: In the event that a group(s) of people are actively demonstrating at Whitney Laboratories for Marine Bioscience or around the perimeter of the campus, the St John's Sheriff's department should be notified immediately

St. John's Sheriff's Department (904) 824-8304 or 911

- Suspicious Objects: Any suspicious objects should never be touched or moved. The St John's Sheriff's department should be notified. The only people to touch or move the object are the trained personnel of the Sheriff's department or their designates. Once the object has been reported, observe from a safe distance, and stay clear of it!

Examples of what a suspicious object could be are as follows:

- A bag, box, or object that no one claims
- Out of place object
- Equipment that has exposed wires or new/strange additives.
- Unusual odor or noise that is not common for that room or part of the building
- Threatening letters/emails should be reported to:
 1. Dr. Martindale: Office phone: (904) 461.4051
 - a. Email: mqmartin@whitney.ufl.edu
 - b. If Dr. Martindale cannot be contacted, either directly or by phone, email if applicable, contact:

Adam Pacetti
Cell Phone (904) 461.4039
apacetti@whitney.ufl.edu

Patrick Thompson
Office Phone (904) 201.8460
Cell Phone (352) 278.5200
Patrick.thompson@whitney.ufl.edu

- Emails should be kept on the computer that originally received it and not forwarded to anyone. The email should be printed out and kept in a file to show to the police.

Bomb threats:

- Called in: The St. Johns Sheriff's department should be notified immediately to determine if the bomb threat is creditable.

- Dr. Martindale (Adam Pacetti/Patrick Thompson if Dr. Martindale is not available) has the right to evacuate the building in the event of a bomb threat for safety and to allow police to search the building.
 - Emailed in:
 - Print out the email and bring to the attention of Dr. Martindale (the head of department or Patrick, if he cannot be located). Dr. Martindale will decide if the threat is creditable and will call the St. Johns Sheriff's department
 - Do not email the threat to another person's computer; keep it on the computer that originally received it
 - Emails should be kept on the computer they were sent to and not forwarded to anyone. The email should be printed out and kept in a folder as a record of the threats and to show to the police
 - Mailed in:
 - Threatening letters/emails should be reported Dr. Martindale (the head of department or Patrick Thompson, if he cannot be located) and then to St. Johns Sheriff's department
 - Handle the letters as little as possible
 - Place the letter(s) in a folder to keep record of the threats and to show to St. Johns Sheriff's department

Deterrents:

- Secured perimeters: Everyone at Whitney is responsible for keeping all entry points locked after entering and exiting the building (s). They should remain vigilant and report any suspicious activity or objects. By doing this the perimeter will remain secure and safe for all staff, students, and visitors.
- Increased cyber security at work
 - The lab has multiple Wi-Fi internet accounts. Those that extend outside the building are password protected
 - The public cannot connect to the Network through the Wi-Fi connects
 - The network is backed up every night onto 2 servers

Planning:

- Inform staff and students about how to protect themselves in the event of an emergency. They should be aware of all emergency plans and exit routes.
- Students (REU and grad students) are informed informally before they get to Whitney about tropical storm, hurricane, and other weather emergency procedures. A lecture/video is also presented to them their first few days at Whitney on lab safety and what to do in emergency situations.
- Contact list easily assembled to all staff and is up to date. These contact lists are sent to everyone via email each time they have been updated by Operations Manager, Patrick Thompson
- Staff and Students should stay aware of your surroundings at all times.

Adam Pacetti, the Building Emergency Coordinator (BEC), will contact Dr. Martindale (**contact information page 4**), PIs and Primary care givers (**listed on page 5**) and inform them to secure their respective animal spaces (also listed below). The above contact list will be updated annually.

If designated personnel cannot be reached, the BEC, Adam Pacetti or Alt BEC, Dr. Martindale will notify designated animal care personnel listed on page 9 or on the contact sheets that are posted at the animal housing locations listed above.

In the event of threats from animal activists, we will follow the recommendations of UF Safety Booklet and immediately report any suspicious activity to Dr. Martindale (Director), Adam Pacetti (BEC), the St John's Sherriff's department, and University Police Department.

IV. Active Shooter

The below check list was obtained from the University of Florida Police Department. In the event that an active shooter incident occurs at Whitney Laboratory, **Call 911 or the St. Johns Sheriff's department (904) 824-8304.**

If an active shooter / assailant is reported or encountered: Decide – Run. Hide. Fight.

RUN – If the assailant 's location is known and the opportunity to escape is available, flee the area.

- Have an escape plan in mind
- If you are outside near the threat, find cover immediate
- DO NOT pull the fire alarm to alert other
- Keep your hands empty and visible and follow all instructions from public safety officials

HIDE – If you are inside a building and the assailant(s) location is unknown, secure in place and deny access.

- Lock and barricade doors with heavy furniture
- Stay away from doors or windows
- Turn off lights
- Block windows
- Turn off radios and computer monitors
- Keep yourself out of sight (take cover/protection from bullets by using concrete walls or heavy furniture)
- Silence your cell phone
- Without jeopardizing safety, call or text 9-1-1 (if you cannot speak, leave the line open and allow the dispatcher to listen)

FIGHT – As a last resort and only if your life is in immediate danger, defend yourself.

- Work as a group if possible
- Improvise weapons
- Commit to your actions

Contacting Authorities

- Use Emergency 911

- (904) 824-8304 St. Johns Sheriff's department
- **A full list of Emergency contact numbers can be found on page 5**

What to Report

- Your specific location – building name and office/room number
- Number of people at your specific location
- Injuries – number injured types of injuries
- Assailant(s) – location, number of suspects, race, gender, clothing description, physical features, types of weapon(s) (e.g. long gun or hand gun), backpack, shooter's identify if already known, separate explosions from gunfire, etc.

Police Response

- Objective is to immediately isolate/engage assailant(s)
- Evacuate Victims
- Facilitate follow-up medical care, interviews, counseling, etc.
- Investigation

An active shooter presentation has been developed by the University of Florida Police Department's Community Services Division. This presentation lasts 45 minutes and provides information on the active shooter law enforcement response, and what you can do as an individual to help protect yourself in this kind of situation. If your office or group is interested in receiving this presentation, please contact our Community Service's Division at 352-392-1409.

The above information was found on the UF Campus Police website (<http://www.police.ufl.edu/community-services/active-shooter-response-checklist/>). Additional information was add from the St Johns Sheriff's department website (<http://www.sjso.org>) and from Susan Donlon Director of General Services for the St Johns Sheriff's department.

V. Emergency Response Plan for Animal Care

The following emergency animal care protocols are to be implemented in the event a man-made (vandalism, fire, work place violence, bomb threats, etc..) or natural disaster (tornado, hurricane, tropical storm, power outages from storms), loss of food because of an emergency event and any other circumstance that requires the evacuation and closing of Whitney Laboratory for Marine Bioscience for three days lasting power outage (longer than 3 days) or loss of water.

Emergency Power

In the event that the laboratory loses power due to an event, a lab wide generator is automatically switched on via a transfer switch that can then power the entire lab and run all auxiliary life support systems, i.e. pumps for sea water, filtration, heaters.

In the event of generator failure, backup generator are wheeled to appropriate locations and life support systems are manually plugged in.

Detection and Notification:

Any indication that there is a loss of system that includes: loss of potable water, power failure, ventilation malfunction (heating and cooling), or if food stores for the animals is lost or is no longer usable, should be addressed immediately and through the appropriate channels described in detail below.

Notify the professor responsible. If he/she is not available, contact the primary care giver responsible for the care of the laboratory animals. See below in Personnel and animal care for complete list of names and contact information. The professor should then notify the BEC Adam Pacetti or Alt BEC Dr. Martindale to address the problems with the ventilation (cooling and heating), lasting power outage (3 days or longer) or lack of potable water.

Personnel and Animal care

The animals should be checked throughout the day by the designated primary caregiver or Alt caregiver, for any signs of distress or pain. **The following issues are explained further below. All care givers should be aware of the following areas and check them daily or throughout the day;** water quality issues, environmental issues (lack of ventilation heating and cooling) or lack of potable water for the systems. The food should also be checked for freshness daily and replaced if it is past its expirations date. Any ailment observed should be addressed immediately. It is important for the Animal Caretakers to understand that responding to emergency events is a condition of employment and that they will be held accountable should they fail to care properly for the animals.

Temperature Conditions in Fish Housing Room

Aquatic system temperature should be between 25 -30 °C. The heaters in each aquatic system should be monitored weekly to ensure they are working properly. The temperature should be checked daily. If there are temperature variations in the aquatic system, the heaters should be checked in each system. If they are found to be not working, replace with the backup heaters found in the storage containers in the Zebrafish room 51. Remove the broken heater from the tank immediately and replace with backup heater. If a heater is not available, the primary caregiver, **see page 5 for list**, should go to petsmart, Wal-Mart, or a local approved pet store and purchase a new one.

During emergency situations such as loss of ventilation which can cause the system water heaters to overwork and stop working, portable air conditioners can be brought in from the maintenance shed to cool the rooms. Monitor the room temperature to be sure overheating or excessive cooling does not occur. If ventilation failure causes fish deaths to occur, the fish should be removed from the system when first observed to prevent water quality problems and stored in a ziplock bag with the date of death and cause of death (if that is known) and placed in the freezer to await examination by a veterinarian.

During a hurricane, tornado, or an emergency closure of at least 3 days, and due to the likelihood of power-outages resulting in the cessation of electric filtration systems, all water pumping devices and systems will be shut off.

If the fish cannot be spared/evacuated from an emergency situation, they should be euthanized (see directions on page 16).

Rats are not housed at Whitney Laboratory for Marine Bioscience. Rats are brought to Whitney in pairs and are kept for 24 hours only. They are euthanized within the 24-hour period and tissues collected. If there is an emergency situation of any kind the rats are euthanized.

Water Supply / Water Quality

The zebrafish system water quality should be checked daily for pH, conductivity and temperature. The reservoir for the zebrafish systems should be checked weekly for pH level. The pH levels for the system and reservoir should be kept between pH 6.5 - 8.0; water changes should be performed if the pH goes above pH 8.0. The reservoir water for the system should also be checked and corrected if needed. The water conductivity should be kept in the range of 200-600, if the water is not within that range, water changes should be performed, and the system reservoir checked and corrected with water changes. The Parrotfish are in a flow through tank so nitrates/conductivity/pH will not be an issue. Whitney Lab's direct source of Atlantic Ocean water and filtration system maintain water quality more efficiently than non-flow through/direct source systems. Salinity will be monitored weekly along with water temperature to ensure parameters that could change environmentally before it enters Whitney Lab source.

During an event where the Potable water (Deionized water: DI) system breaks down due to mechanical failure or because of an emergency situation leaving Whitney without power, Adam Pacetti or Alt BEC Dr. Martindale should be notified. They will provide alternative water sources to be used until the DI system can be fixed or power has been restored. Water bottles from Culligan have been used in the past during this type of event.

Animal Food lost due to emergency or disaster

If food has been lost due to an emergency situation, the food supply should be replaced immediately by an alternative food source. The primary care giver (**Contact info Pg 5**) for that research animal should acquire the new food source as soon as possible to prevent any discomfort or death of the research animal(s). The alternative food source (fish food or other) should be obtained from a local pet store until the regular food supply can be obtained from the normal vendor. Food supplies should be checked regularly to ensure that they are not expired.

To prevent animal food supplies from being lost during emergency situations, the food containers or bags should be kept in plastic bins to prevent water damage. The containers should then be stored in fridge or freezer units, depending on the instruction provided by the food manufacturer.

Loss of Power/ Anticipated power loss

All animals that are housed in Whitney Laboratory are poikilotherms, primarily aquatic, and can exist for extended periods without food. During an emergency closure at least 3 days, and due to the likelihood of power-outages resulting in the cessation of electric filtration systems, all water pumping devices and systems will be shut off. Animals will not be fed for the first three days of an emergency closure to reduce the possibility of water quality deterioration. In the event of an extended emergency closure, animals will be assessed after the third day of the closure by Adam Pacetti or Dr. Martindale (**page 4 for alternatives for Dr. Martindale and Adam Pacetti if they are not available**) and food will be provided on a species-specific basis. Principal investigators (**Contact information for PI's and Primary Caregivers pg 4-5**) will secure their animal spaces according to the species-specific protocols listed below. **If the PI's are available, contact the Primary Caregiver for the lab.** Protocols for securing animal spaces are also posted in the respective labs.

Animals of Concern

Locations: Room 43

Trout

These animals can exist for extended periods without food. During an emergency closure at least 3 days, and due to the likelihood of power-outages resulting in the cessation of electric filtration systems, all water pumping devices and systems will be shut off. Animals will not be fed for the first three days of an emergency closure to reduce the possibility of water quality deterioration.

Location: Room 32

Parrotfish:

Parrotfish are poikilotherms, primarily aquatic, and can exist for extended periods without food. During an emergency closure at least 3 days, and due to the likelihood of power-outages resulting in the cessation of electric filtration systems, all water pumping devices and systems will be shut off. Animals will not be fed for the first three days of an emergency closure to reduce the possibility of water quality deterioration. In the event of an extended emergency closure, animals will be assessed after the third day of the closure by Adam Pacetti or Dr. Martindale (**page 4 for alternatives**) and food will be provided on a species-specific basis. Dr. Osborne or Anna Beard will secure their animal spaces within this period to ensure feeding and tank water quality.

Locations: Room 51A

Zebrafish

All freshwater fishes are housed in silica-, plexi- or fiber-glass aquaria, or, in plexi-glass flow-through systems. In case of emergency, these animals can exist without moving water for up to 72 hours if the initial water quality is good. In the event of a power loss, or if loss of power is anticipated, all units will be unplugged to prevent the possibility of untreated or contaminated water from re-entering the system via back-siphoning by the biological filter. Filtration will be resumed only following a 50% water change. Fish housed in high-density tanks will be distributed among additional tanks to reduce overall fish density and to aid in maximizing the duration that acceptable water quality can be maintained.

The fish will be difficult to remove from the research building if there is a fire. If the primary care giver can safely access the fish room (Trout or Zebrafish) with the transport cart stored in the trout room, they should do so. The cart will allow for the primary caregiver to move more fish and the containers they are housed in to safety. If the primary caregiver cannot get to the cart, he/she should bring out as many containers that he/she can carry with aid from other people in the lab if possible. The zebrafish and parrotfish should be evacuated through the exit door at the end of the hall adjacent to the Molecular Lab (Rm 55). There is a ramp there for the cart to roll down. The fish should then be moved to the CMS building and monitored by the Primary Caregivers and or PI.

Zebrafish lines of interest are listed below in order of priority for removal:

Zebra Fish lines	
Huc Kaede	GFP+ HA215- (SAIGA GAL4)X(KAEDE GFP)
Claudin B Oshu	GFP- HA215- (SAIGA GAL4)X(KAEDE GFP)
UAS GCAMP/HS	GFP+ HA215+ (HA 215 GAL4) x (UAS KAEDE x UAS GFP)
UAS *GFP- X HUC * GAL4	GFP+ HA215 (SAIGA: GAL4:HA215: wt) x (GCAMP)
UAS *GFP + X HUC * GAL4	Sqet4
Mariners	Islets
Y254	Nacre
HA215 x UAS GCAMP HS	Casper

Locations 32, T134, 2102, Outside Tanks

Marine Fish

Fish housed in these locations have redundant systems in place. In the event of a power lose a generator back up will be on to allow for the sea water pump to remain active, providing life support to these room. In the case of a power outage in which the generator does not provide power to the sea water pumps supplemental Oxygen vessels that can be brought in to allow oxygenation of the water. In the lose of power, all flow through tanks have drainage to prevent empty of tanks.

Locations 36, Outside tanks

Sea Turtles

Sea turtles will be evacuated by placing into large plastic containers and moved to an offsite climate-controlled location that is not under evacuation orders. Transport and “dry-dock” storage of the sea turtles will be in accordance with the Florida Fish and Wildlife Conservation Commission Marine Turtle Guidelines. Sea turtle care staff will accompany patients during the period of evacuation.

Preservation of laboratory animals crucial for research

To preserve animals that are necessary for critical research activities or are irreplaceable, breeding programs should be implemented if a specific species is needed for research and if it is a viable option. If a specific animal is required for research, the research faculty should take appropriate measures to ensure that the animal has the appropriate housing, nutrition, physical, physiological, and behavioral needs. This will ensure that the animal is allowed to grow, mature and reproduce as normally as possible in captivity.

- Zebrafish are housed in Room 50 and crossed by the primary care giver, Elias Lunsford, during the week to ensure that the zebrafish lines have fish that are 6 months apart in age for research and breeding purposes. Procedure for Euthanization is below under "**Euthanization procedure: During Emergency & Non emergency Situations.**"
- Trout are housed in Room 43 at Whitney Laboratory for Marine Biosciences; however, they are not bred here. The trout are acquired from Chattahoochee Forest NFH in Suches, GA.

- Parrotfish are not required for our lab research, this is a 3 month study and will be over after data is collected.

If animals in aquaria cannot be relocated, all labs that have research projects with aquatic animals should have air stones and tubing in place in all tanks in case of water shut off. It would be helpful to consolidate animals so as to minimize the number of tanks in operation. During a period of evacuation, Adam Pacetti the BEC will run the diesel generator to ensure its smooth operation. If Adam is not available, Dr. Martindale will run the diesel generator. If aquatic animals cannot be kept in this manner during a power loss or evacuation/relocation, the responsible personnel should humanely euthanize the animal according to IACUC procedure. **Euthanization protocols for research animals are below.**

VI. Euthanization procedure

Zebrafish

Zebrafish are euthanized with the following solutions containing MS-222. The fish should be placed into a container with the following solution and left for 10 minutes or until the gills of the fish no longer move. If there is a large number (~50-100) of zebrafish that have to be euthanized during an emergency situation, the formula below should be doubled or tripled. Only euthanize 10 fish at a time with solution number 2 below.

Euthanize:

1. ~10 mL MS-222 stock solution in 50 mL system water
2. ~100 mL MS-222 stock solution in 500mL system water

Trout euthanization procedure:

0.26g MS-222 and 0.54g of sodium bicarbonate per Liter of chilled system water.

VII. Emergency Plans: Animal, staff evacuation and procedure

The following are emergency animal care protocols that are to be implemented in the event of a man-made or natural disaster or any other circumstance that requires the evacuation and closing of Whitney Laboratory for Marine Bioscience, such as fire, tornado, flooding, or hurricane. We will follow the recommendations that are laid out in the Whitney Laboratories Hurricane 2012 evacuation plan.

Fire

In the event that a fire is detected and/or the fire alarms go off in the Administration building, Research Studies building or the Center for Marine Studies building, the staff, students and any visitors should immediately stop current activities and exit the building.

Alarm System:

The emergency alarm system complies with 29CFR 1910.165. All employees must be aware of the signal and immediately respond by evacuating the building and gathering at a pre-determined set location for each building. The assembly location areas are:

- Research/lab building: the **grass area in front (East Side) of the modular homes**
- CMS building: Staff, students and volunteers inside the building should meet at the **near the education sheds between the CMS and Research building**
- Administration buildings: Staff will meet in the center courtyard of the Whitney Village

- If Fire blocks the front entrance, staff, students and volunteers should meet by the marina
- If Fire is in the back of the building, staff, students and volunteers should meet by the front entrance of the Research building

Procedure for all Whitney laboratory buildings:

- Once a fire has been detected by the fire alarms, the buildings alarms will sound and the St. Augustine fire department will be notified automatically.
- If a fire is detected by any persons in the building either by odor or observation, CALL 911 and GET PEOPLE OUT
- During a fire, people should leave the building by whatever exit (door or window) they can get to and out of safely
- Once outside, all staff, students, and volunteers should meet at the pre- determined location for a head count and to determine that everyone made it out of the building safely
- **DO NOT** Approach the building
- **DO NOT Go Back Into the building. The firefighters will put out the fire and check that the building is safe for the employees to go back in.**
- **Floor plans of the 3 buildings listed are located at the end of this emergency plan.**

Animals:

In the event of an emergency affecting the Laboratory, the safety and well-being of human occupants is obviously of the highest priority. **No attempt should be made to save animal life or property at the risk of human life. If human life is not at risk, the saving of animal life over other property is then of the highest priority.** The following steps should be adhered to.

Zebrafish effect on Environment if escape

The water reservoir pumping system for the Zebrafish tanks is located on the lab's floor and the tanks housing the zebrafish from floor to the top of the tank are 3 feet off of the ground. Therefore the water level during a flood surge would have to be 3 feet or higher within the building to release any zebrafish from their tanks. Zebrafish are freshwater fish and can tolerate salinities ranging from 0.5 to 1 part per thousand (ppt). A study done by D.V. Almeida et al. determined during their research that transgenic and non-transgenic zebrafish Mean Lethal Salinity (MLS), has shown that salinities of 11ppt will kill transgenic and non-transgenic zebrafish within 96 hrs (2013 Almeida, D.V. et al).

If Whitney should flood from a hurricane, tropical storm, or other type of flooding event and the water level rises above 3 ft in the building, the system that houses the zebrafish water reserves will become contaminated with seawater. According to the research listed above, the salinity of the surging seawater (35ppt on average according to the Office of Naval Research) which is approximately three times the salinity concentration of 11 ppt, would result in the zebrafish in dying in minutes because they are freshwater fish and not saltwater fish.

Trout

If trout are being housed in the lab when a fire breaks out, the trout should be evacuated after the zebrafish have been evacuated. The trout should be placed into large plastic tupperware containers containing

sufficient water. They too should be placed on a cart and evacuated through the exit door at the end of the hall adjacent to the Molecular Lab (Rm 55).

Tropical/Hurricane Terminology

Tropical Storm Watch – an announcement that tropical storm conditions (sustained winds of 39 to 73 mph) are possible within the specified coastal area within 48 hours.

Tropical Storm Warning – an announcement that tropical storm conditions (sustained winds of 39 to 73 mph) are expected somewhere within the specified coastal area within 36 hours.

Hurricane Watch – an announcement that hurricane conditions (sustained winds of 74 mph or higher) are possible within the specified coastal area. Because hurricane preparedness activities become difficult once winds reach tropical storm force, the hurricane watch is issued 48 hours in advance of the anticipated onset of tropical-storm-force winds.

Hurricane Warning – an announcement that hurricane conditions (sustained winds of 74 mph or higher) are expected somewhere within the specified coastal area. Because hurricane preparedness activities become difficult once winds reach tropical storm force, the hurricane warning is issued 36 hours in advance of the anticipated onset of tropical-storm-force winds. The warning can remain in effect when dangerously high water or a combination of dangerously high water and waves continue, even though winds may be less than hurricane force.

Evacuation

An evacuation order means that life-threatening conditions are possible in our area. This should be taken seriously. You will not be ordered to evacuate unless there is a real threat to your well-being, or you might become stranded where help could not reach you. When you are told to evacuate, do so immediately. When weather conditions become severe, Fire Rescue and Law Enforcement personnel cannot respond until conditions improve. You don't want to be on your own until the storm passes. Your safety, and the safety of others, depends on following instructions.

Evacuation route for the Whitney Lab – North on SR-A1A to Crescent Beach, turn West on SR-206, proceed across Crescent Beach Bridge to US-1, proceed to I-95 or points West.

On or before June 1st.

1. The Maintenance Supervisor will have a supply of polyethylene sheeting in storage.
2. The diesel generator should be checked and/or serviced.
3. The Maintenance Supervisor should ensure that the diesel tank in the emergency generator is full.
4. Each Laboratory should have at least one operational flashlight at all times.
5. Each Laboratory should verify that they have sufficient air stones and tubing for their animals.
6. The Director will call a meeting of the entire Lab, including all faculty, students and staff, and review this plan.
7. The list of home (and cell) phone numbers for all personnel will be updated and distributed.

8. Any lab personnel who plan to be away during the summer (for any amount of time) and who wish to leave a car at the lab should leave a set of keys with the maintenance shop.
9. Locating sites in Gainesville where critical supplies (including fish and other animals) could be transferred will be coordinated by the Operations Manager. The Sea Turtle Coordinator will make arrangements for the sea turtles.

When a Tropical Storm Watch is issued for the area.

1. All computer data files etc. should be backed up onto network storage devices. DO NOT waste time and resources backing up program files since these can be reloaded.
2. The Education Coordinator will identify evacuation sites for students and other residents of Laboratory housing. Specific sites (with contact numbers) must be identified for each resident.
3. Labs should consider duplicating stocks of plasmids etc. for transportation to Gainesville.
4. The Maintenance Supervisor will ensure that all battery-operated drills and other relevant equipment are fully charged and operational.

When a Hurricane Watch is issued for the area.

1. The Maintenance Supervisor will identify a team to assist with securing the Laboratory.
2. The plywood and necessary equipment and supplies will be brought out of storage. Plywood sheets should be positioned close to their desired location. **The Maintenance Supervisor will solicit help from all able-bodied personnel for this task.**
3. Each Laboratory is responsible for its own equipment and animals.
 - a. All water-sensitive chemicals should be raised at least 3 feet off the floor.
 - b. Solvent cabinets should be locked.
 - c. Bring in outdoor aquaria or fill them with sufficient water to secure them in place.
 - d. Bring all portable outdoor equipment and supplies indoors.
 - e. All Labs with animals in aquaria will have air stones and tubing in place in all tanks in case of water shut off. It would be helpful to consolidate animals so as to minimize the number of tanks in operation.
4. Tanks without animals will have their water turned off.
5. The Maintenance Supervisor will run the diesel generator to ensure its smooth operation.
6. The Maintenance Supervisor will make arrangements for a diesel refill before, and as soon as possible after, the onset of the storm.
7. The Education Coordinator will verify the evacuation sites for residents of Laboratory housing.
8. The Director will identify a central contact-phone for post-storm information and will circulate the number to all lab personnel.
9. Refrigerators and freezers in the *Center for Marine Studies* will be turned on.
10. Supplies in -80 and -20 degree freezers in the research lab will be moved to ensure that at least one of each type has space should it need to be relocated to the CMS.

When a Tropical Storm or Hurricane Warning is issued.

1. **ALL REGULAR LABORATORY ACTIVITIES WILL CEASE IMMEDIATELY. That means everyone!**
2. The Director will ensure that all Laboratory personnel are assisting with hurricane preparations.
3. The Maintenance Supervisor will activate the team to secure the buildings.

4. Each Laboratory will unplug all non-essential electronic equipment, move it at least 3 feet above the floor, and cover it with plastic.
5. All valuable documents should be moved at least 3 feet off the ground and secured in plastic boxes or file cabinets (except bottom drawers).
6. Disconnect all computers from their network cables and power sources. Turn off all UPSs to prevent damage to batteries in case of a prolonged outage and raise them off the ground.
7. All sensitive equipment will be moved into the top floor of the Center for Marine Studies.
8. All portable data storage devices should be moved to top floor of Center for Marine Studies.
9. The Education Coordinator will assist residents of Laboratory housing make arrangements for evacuation. He/she shall have a list of all students' locations, with phone numbers (cell phones and land lines) where they can be reached.
10. Students will notify parents as to their location.
11. Residents of the modular homes should move ALL personal possessions into Whitney Hall.
12. Water and power to the modular homes will be turned off once the Laboratory is secured.
13. **Once the lab is boarded up, all personnel must leave the building. NO EXCEPTIONS.**
14. The Maintenance Supervisor will organize the removal of all Lab vehicles, including the boats, to higher ground. St. Johns County Fair Grounds is willing to store vehicles. ***No personnel should leave a car at the lab at any time without a key for emergency removal.***

NOTES:

1. Lab personnel should not swim or surf in the vicinity of the Laboratory once a warning has been posted.
2. Everyone should be aware that once a Tropical Storm warning is posted (the first level alert), access to the Laboratory by the authorities may be restricted, simply by closing various bridges (Palm Coast, SR 100 etc.). Since this could happen overnight, you are advised not to leave preparations until "tomorrow" – you may not be able to get into the Lab "tomorrow". Hence, if a major storm is threatening, you would be advised to make preparations before leaving the Laboratory that day.
3. Access to the Laboratory after an evacuation will be controlled by local authorities (i.e. Flagler and St. Johns County Emergency Services). The Maintenance Supervisor, Operations Manager, and the Director will be assigned Emergency Management passes to permit them to return as soon as it is safe. Others will be allowed to return when the general evacuation order has been lifted.

Flagler County Emergency Management Services 386-313-4200

www.flaglercounty.org/emergency_information/emergency_management/index.php

Evacuation

Please refer back to the Evacuation plan for hurricanes above for how evacuation of staff and laboratory animals should be handled.

▪ Tornado

In the event of a tornado, recommendations from ready.gov will be followed. Be aware if a tornado warning is given in the Whitney laboratory area:

- Be alert for changing weather conditions. Look for approaching storms or any of the following danger signs:
 - Dark, greenish sky
 - Large hail

- Large, dark, low-lying cloud (especially if rotating)
- Roaring sound, similar to freight train
- Take shelter immediately if any of the above signs are observed, your shelter should be:
 - In an interior room with no windows
 - Once you are in the room in which you are seeking shelter:
 - Close and lock all doors and windows
 - Turn off any ceiling fans
 - Each person should crouch down with his/her back against the wall, and cover head with hands.
 - If in a room with windows, cover windows with plastic sheeting and duct tape the sheeting to the walls
- **Do not leave your shelter until the tornado has passed.**
- Tornadoes can occur with little to no warning, do not try to save equipment if a tornado is seen in the area or if there is a clear and immediate warning.
- Recommended Shelter Areas in the event of a tornado:
 - CMS building:**
 - a. For large groups, i.e. visiting school groups, staff, and volunteers, meet in the auditorium. People should file in single file against the interior wall (on right when enter auditorium).
 - b. If only staff, volunteers or students are present: either file into the first floor bathroom (men's or women's).
 - Administration Building:**
 - a. Staff, students, volunteers should assemble in the bathrooms, located in the middle of the building.
 - b. Staff, students, volunteers can also go into the vault located beside the mail room.
 - Research Building:**
 - a. Staff, students, volunteers should assemble in one of the labeled '**storm rooms**', locations are the zebrafish room 50, Liao lab room 12b, and Martindale lab room 51.
 - b. Staff, students, volunteers should assemble in the hallway in the middle of the building outside Liao lab 12 and 14.