NMU Departmental Emergency Plan

A. Basic Departmental Information

Department Name: Biology

Department Head: Dr. Jill Leonard

Department Location: Weston Hall and The Science Building (Main Office WSTN 2001)

List of all departmental spaces with phone numbers, room numbers, spaces, etc. refer to maps

Contact Information: Phone, general dept. e-mail address, fax number
906-227-2301, biology@nmu.edu, 906-227-1063

B. Your Departmental Order of Authority

University Level Issues:
1. Department Head: Dr. Jill Leonard, Weston Hall 2001A, office landline 906-227-1619

2. Assistant Department Head: Dr. Kurt Galbreath, Weston Hall 2119, office landline 906-227-1586

3. Department Faculty Chair: Dr. Josh Sharp (2024-25), Weston Hall 2111, office landline 906-227-2380

4. Prior year Department Faculty Chair: Dr. Erich Ottem (2023-24), Weston 2109, Office landline 906-227-2109

Departmental Level Issues:
For department level emergencies, contact the relevant lab supervisors or departmental supervisor. When in doubt, contact the Department Head. The Biology Office can also refer you to specific researchers. Specific pieces of equipment may also have posted call lists. Many facilities and pieces of equipment also have electronic alarms that call the correct person in an emergency.

Department Head: Dr. Jill Leonard, Weston Hall 2001A, office landline 906-227-1619

Laboratory Supervisor and Stockroom/Equipment Manager: Jingfang Niu, Weston 1316, office landline 906-227-2311

Assistant Department Head: Dr. Kurt Galbreath, Weston Hall 2119, office landline 906-227-1586

Biology Department Main Office: Weston 2000, Main office landline 906-227-2310, Janece Hancyz (Admin Asst) Weston 2001B, office landline 906-227-2310

Aquatics Laboratory: The Science Building 1659, Dr. Jill Leonard, Weston Hall 2001A, office landline 906-227-1619

Animal Room/Suite: Weston 1401, Dr. Erich Ottem, Weston 2109, Office landline 906-227-2109

Greenhouse: The Science Building 1601, Dr. Donna Maki, Weston 2013, Office landline 906-227-2443

Lab Core: Weston 2212, Jingfang Niu, Weston 1316, office landline 906-227-2311

Cell/Tissue Culture Facility: Dr. Robert Belton, Weston 2107, Office Landline 906-227-1582

Microscopy: Dr. Erich Ottem, Weston 2109, Office landline 906-227-2109

C. Commitment to Emergency Planning

The Biology Department plans to ensure commitment to emergency planning through an active training protocol. Because of the complexity of the department having a large faculty group with research and teaching labs, several staff, and both graduate and undergraduate employees, as well as non-employee students, we are planning on a multipart approach.

1. **Annual faculty, staff, grad review of Emergency Plan:** We have an annual Planning Meeting at the start of the Fall semester and we will add review of the Emergency Plan to that agenda. This meeting allows us to take a bit more time to discuss issues than we can usually manage during the semester and placing review here will allow everyone an opportunity to give feedback on what is working well and what is not. Additionally, all employee members of the department will need to read and be documented as reading the Emergency Plan annually. This documentation will be accomplished through the Public Safety Training System as a required training module for faculty, staff, graduate students, and paid students. Faculty, staff, graduate students, and student employees will review the Emergency Plan via a Qualtrics survey with a *September 15* deadline at the beginning of the academic year. Any faculty, staff, or graduate students who join the department in the winter semester will review the Emergency Plan via a Qualtrics survey with a *February 1* deadline.
2. **Lab/Facility-Specific Safety Plans:** We will develop specific materials for each research lab and common-use facility (e.g. Greenhouse) in the form of Lab/Facility-Specific Safety Plans. These plans will include specific issues that happen in these spaces while also providing links to more general safety guidance in our Departmental Safety Plan and other NMU University level protocols. We will also develop a template of the SOP for specific procedures that can be used by research leaders to address particular hazards. For all these documents, we will have a system where we can document training on these materials on an annual basis. We plan to manage this material through a new Biology Department web page on Safety that will allow viewing of documents (sanitized to remove phone numbers etc) as well as secure access to materials for training and documentation. Having a single page that serves as a jump off point for safety training will make it easier to ensure that all individuals can find the materials that they need for training and also allows us to ensure documentation and updating at the departmental level.
3. **Teaching lab safety planning:** Generally. teaching labs already have Lab Safety Talking Points. We will expand these to be a document that can be gone over in class by the lab instructor (our current strategy) but also used to include lab specific safety information for classes (as needed). These will pair with our existing online Biology Student Training System that we utilize through EduCat where each class instructor selects the appropriate modules for required training for their teaching lab. This is done every semester and documented by lab instructors. The online training is already documented and archived in EduCat.
4. **Standard Public Safety training modules:** The Department has worked with the Public Safety staff to establish required training already based on the Publica Safety training system. Faculty, staff, and graduate students will complete safety training modules required by the department at the beginning

of each academic year using the Public Safety training system (list of required modules can be found in the appendices of this document). Note that some modules are on a longer training cycle of 3 years.

D. Your Department's Critical Emergency Roles

Items/Equipment/Organisms that required special care:

- **Chemicals** (stockroom, teaching labs, research labs): In the short term, any chemicals in active use that can be put away so that they are not a danger, should be; this is not intended to slow evacuations and should only be attempted when practical. In the longer term, emergency responders should be aware of chemical lists and SDS available through the NMU Public Safety System. Note that some chemicals are dangerous when exposed to heat, flame, or water (indicated on their labels). Chemical safety always follows existing NMU Chemical Hygiene Plan and safety procedures.

- **Organisms** (Animal Room, Aquatics Lab, some teaching labs, atrium, Greenhouse): In the short term, any animals currently out of their housing should be returned to a safe containment area. If the organisms are in danger, consideration may be needed for relocation, if safe for personnel. Each specific area with organisms should address this in their safety plan. In the longer term, provision for care of organisms must be part of lab/facility specific emergency plans. Note that all plans regarding vertebrates should also be in accord with IACUC procedures and policy.

- **Frozen samples** (research labs, Lab Core) - Frozen samples are of considerable research value and should be preserved if possible. In the short term, they may be able to be left in place unless power is cut or freezers are physically threatened. In the longer term, if possible, plans should be in place to relocate to an appropriate location.

- **Autoclaves** (Autoclave Room) - The autoclaves are high pressure generating pieces of equipment that can be dangerous if operated off cycle. In the event of an emergency, autoclave cycles should be aborted, if personnel are present.

- **Fluid preserved specimens** (WSTN1106 and WSTN1112) - The Department has numerous preserved specimens. For those preserved in liquid, the most common fluid in ethanol, which presents a special risk during fires. Additionally, there are a few specimens in formalin/formaldehyde which are carcinogenic. All specimens are labeled appropriately based on their fluid composition. For short and long term emergencies, there is no need to specifically protect these specimens; however, they do present a potential risk to responders.

- **Building gas and other gas canisters** (e.g. O2, CO2, etc.) - The Department contains a number of pressurized gas canisters of various types. In case of an emergency, if the canister is in use, it should be shut off at the regulator/ main valve. People should be aware of their placement and not shelter in place near gas canisters.

Items/Equipment that are available in Biology that may be useful to others:

The Biology Department has a wide variety of equipment and some could be useful in emergency situations across campus. Specific items include:

4WD Truck with hitch
6 12-passenger vans
Off-road wheelchair
Enclosed trailer (used for wheelchair, but could be repurposed easily)
18'6" Jon Boat w 25 hp motor and trailer
Canoes with trailer
Water pumps & hoses
Air compressor
Walkie talkies, digital SPOT/transponder
Cameras (trail cams, other digital cameras)
First Aid kits
Misc tools (Sawz All, etc.)
Snowshoes, waders, rubber boots
Rubber gloves, Safety goggles, other lab-type PPE
Chemical Spill kits

In-place Emergency Procedures

This section refers to situations when personnel should REMAIN IN PLACE or find a nearby shelter. These are situations when it is not advisable to evacuate the area. Examples could include an Active Shooter situation or a tornado.

University Level Communication
All department personnel should be aware of and actively listen for the Emergency Announcement System. They should also monitor the NMU Text Alert System and monitor their NMU email for additional emergency information. Additional information may be available through the NMU Police Department, which includes Public Safety https://nmu.edu/policedepartment/.

Departmental Level Communication

All faculty, staff, graduate students, and student employees will receive communications about the start of a shelter in place emergency using the messaging app Signal. This system will allow Department leadership to communicate directly with all employees in the department. This system will only be used for emergency purposes, but all department employees should have this installed and available on their phones.

During an in-place emergency, all faculty, staff, graduate students, and student employees should be prepared to communicate their general location using Signal and whether they are safe or not. This system would not be available to an Active Shooter and thus we would be able to communicate through it more freely than is possible in the general NMU communication system. The NMU Police Department will be able to contact department leadership to gain information on the whereabouts of Department personnel using this system.

General shelter in place procedures

- Secure your location: Lock all doors, if safe to do so (if feasible, doors should be locked at all times)

- Generally do not move to another location unless it is immediately available (close) and substantially more protective than where you are.
- Block entrances and cover windows, if possible
- Shelter in area out of line-of-sight
- Shelter in area with appropriate extra protection from emergency (e.g. away from windows in a tornado, behind additional structure for Active Shooter).
- Communicate location through GroupMe/WhatsApp/Signal/etc
- Monitor NMU and departmental communication channels.

General policy in preparation for Remain In Place situations

We strongly advise that all individuals become aware of the layout of their immediate work areas. Consider the locking mechanisms on doors and possible areas that may provide additional shelter, in an emergency (e.g. an interior room in a suite or a space without windows).

Generally, door locks should be kept locked. We also recommend not propping doors. In some cases, it may not be feasible on a daily basis to do both of these (especially if you are dealing with students coming and going), in which case please consider which of the two options, locking the door but propping it or leaving it shut and unlocked, would be quickest and safest to shift to a locked door in the event of an active shooter situation. Essentially, how would you minimize potential exposure to harm in your location?

Shelter in Place is part of the required training procedures that are completed annually in the department via the Public Safety training system. Please ensure that you are attentive to this training and consider how it may apply in your own situations.

E. Emergency Evacuation Procedures

This section refers to situations when personnel should EVACUATE. These are situations when it is not advisable to stay in your immediate location. Most of the time, this will require leaving the building, but could in some cases mean evacuating a specific room. Examples could include a fire, gas leak, flooding, or impending weather where there is time to return to your home.

The department has developed evacuation routes from all current departmental spaces. These are available in the appendix to this document and are also posted in most rooms. Frequent users of particular spaces should be aware of at least two evacuation routes from their location. Evacuation routes include exits from the building. Note that you should be aware if evacuation routes require going downstairs as elevators should not be used to evacuate. Individuals requiring additional assistance on stairs or other barriers should work with the department and the university ahead of time to ensure that there are means for evacuation.

The Department will use several main gathering areas in the event of evacuation from Weston Hall and/or The Science Building. They are listed below. Please gather in one of these areas and monitor the departmental Signal for more information.

- Outside the main entrance to Weston (near the library doors) - note that we should not gather directly by the Weston doors.
- Outside Weston in the circular Rock Garden area.

- Outside the Seaborg Center entrance, on the grassy area near the circular drive loop.

During an in-place emergency, all faculty, staff, graduate students, and student employees should be prepared to communicate their general location using Signal and whether they are safe or not.

Those working in non-Biology areas are strongly encouraged to evaluate their situation in these other spaces to be prepared for evacuation.

In case of a Fire Alarm or other evacuation alarm from the main NMU alarm system, evacuate and follow standard procedures following the best evacuation route for your location. Remember that in the case of a Fire Alarm, you should not reenter the building until you have been given the all clear by the NMU Police Department or their representative. Do not reenter just because the alarm has stopped sounding as it may still not be safe.

Personnel should be aware that the FIre Alarm is the general indicator for a full building evacuation. It may be pulled if it is your best judgment that the building should be evacuated, as for fire. In the case of an emergency where you are unsure whether the entire building should be evacuated, but your immediate space is unsafe, immediately leave that area and call 911. Be present to explain the situation to the responders and also communicate with your supervisor/departmental leadership group. For example, a small spill of mercury would require people to leave the space, but would likely not require immediate evacuation of the entire building. Note that care should be taken to prevent transfer of contaminating materials to new areas. If you are working in situations where this is a possibility, this should be referenced in your Lab/Facility-specific Safety Plan and/or Procedure SOP.

F. Potential Emergencies Specific to Your Department

The Biology Department conducts a wide variety of activities related to the teaching and research of biological systems. This work ranges from chemical and molecular biology involving hazardous chemicals, to microbiology dealing with microbes that may be pathogenic, to ecological research that may work with hazardous organisms or take place in the field in natural environments. In this section, we briefly review these areas and discuss how these issues are handled in teaching and research settings.

Settings:

- Lectures and discussions in the department as well as office spaces should not experience any emergencies unusual to the general campus.

- Teaching laboratories could present risk based on the lab activities. Teaching labs taking place on-campus will follow standard safety procedures and participants will be trained as previously discussed. For classes that go to the field (off-campus), they will also follow our basic ***Field Course Safety Plan*** which explains basic safety procedures for off-campus work applicable to class groups.

- Research laboratories and research facilities present substantial risk; however, the risk is research laboratory specific. Each research lab and facility will develop an annually updated ***Lab/Facility-Specific Safety Plan*** that will be available through the Biology Department web page with required training for those engaged with the lab/facility.

- If there are specific procedures with known hazards that are conducted in either teaching or research labs, faculty may choose to develop Procedure Standard Operating Procedures (SOP) that include safety measures to reduce risk of harm. A template for ***Procedure SOPs*** is provided on the Departmental Safety Website.

Types of potential hazards in the Biology Department:

- **Chemical hazards** - A variety of chemicals are used in laboratories including some that are toxic or otherwise dangerous. Examples include the use of toxic ethidium bromide for electrophoresis, use of cyanide for metabolic biochemistry, or use of strong acids and bases. All chemicals should be used in ways that are appropriate to the task and follow established safety guidelines including use of appropriate personal protective equipment. Training will be provided for the use of chemicals in accord with the NMU Chemical Hygiene Plan.

- **Explosion/Fire/Electrical Hazards** - A variety of areas use chemicals that are flammable and potentially explosive. We also use pressurized gasses. In addition to general electrical hazards from equipment, several laboratories use large batteries. Generally, care should be taken with these types of hazards and attention paid to any electrical connections. Specific hazards will be addressed in specific ***Lab/Facility-Specific Safety Plans.***

- **Physical hazards** - There are a variety of physical hazards that are present in laboratories including sharp such as scalpels, filet knives, and microtome blades, water hazards such as fish tanks and hoses, heavy equipment such as trailers, boats, and cryostats, hand tools and mechanical tools such as circular saws, reciprocating saws and drills. If users are unfamiliar with equipment, they should receive direct training from their supervisor to prevent physical harm. Any particular hazards should be addressed in the ***Lab/Facility-Specific Safety Plans.***

- **Microbiological hazards** - Several laboratories (teaching and research) specialize in microbes including viruses, bacteria, and fungi/yeast. Any known microbiological hazards will be addressed in safety plans. All use of microbes in lab situations should follow the NMU Biohazard plan. Specific hazards should be addressed in ***Lab/Facility-Specific Safety Plans.***

- **Larger organismal hazards** - Several laboratories (teaching and research) specialize in working with larger organisms ranging from plants and fungi with potential toxicity to fish (bite hazards), amphibians (toxicity), reptiles (venomous is possible), birds, and mammals (including large predators). Specific health hazards involved with dealing with these organisms are dealt with in ***Lab/Facility-Specific Safety Plans.***

- **Environmental hazards** - Many groups in the department engage with the natural environment through field work. This work may be short duration, likely for teaching labs, or longer (often for research needs). These field experiences are often specific to the group doing the work and are addressed in their Safety Plans. Examples of potential risk include being lost in the wilderness, encountering dangerous animals, physical injury during field activities (broken leg, etc.), etc. Specific hazards related to field sites are dealt with in ***Lab/Facility-Specific Safety Plans*** as well as the ***Field***

Course Safety Plan.

- **Vehicles** - The department maintains and uses vans, a truck, canoes, boats and other vehicles. Each of these raises hazards when in use. Examples include vehicle accidents, sunk boats, drowning, etc. Vehicles should always be used in the manner for which they are intended and according to manufacturers guidelines. Additional safety risks may be addressed in ***Lab/Facility-Specific Safety Plans*** as well as the ***Field Course Safety Plan.***

G. Departmental Crisis Communication Plan

The Department of Biology maintains several different mechanisms for communication with departmental personnel, in addition to the NMU Alert. All personnel are required to be aware of these mechanisms and ensure that they can be reached in an emergency situation. Departmental leadership (see above) will communicate using these mechanisms and may ask for information in return. These mechanisms are:

Department email distribution lists (biologynmu@nmu.edu; biofac@nmu.edu, biograd@nmu.edu)

Departmental Text System (via Signal) which includes lists for Bio Faculty, Bio Grad Students, and Bio Undergrad Employees

H. Student Employees Dealing with Emergencies

The Department of Biology typically employs over 60 undergraduate students each semester in a wide variety of roles. These individuals must be aware of our safety plans in order to facilitate their own safety and, in some cases, provide assistance to others. Graduate Student employees are trained the same as faculty and have previously been addressed. This section deals with the training of undergraduate students.

Undergraduate students are required to complete general training to work in the Biology Department through the completion of specific modules in the Public Safety Training System. Currently they must complete the following modules

- Science Lab Safety (Chemical Hygiene)
- Hazard Communication (Chemical Communication and labels)

Currently, student employees are informed of this training requirement by the Department Administrative Assistant who also collects documentation of their training upon completion.

Additionally, students working in research labs/facilities must review and document training on the Lab/Facility-Specific Safety Plan and any associated Procedure SOPs. This documentation will occur through a Qualtrics system accessed on the Department Safety Website.

I. Maps, Appendices, Links to Online Resources

Please check out the following resources for more information and links to useful materials.

Biology Safety webpage. nmu.edu/biology/biology-safety-plans-and-training This webpage has links to this Emergency Plan, Teaching Talking Points, the Basic Field Safety Plan, and Lab/Facility-Specific Safety Plans as

well as Procedure SOPs. It also has links to the Chemical SDS System and to the Safety training documentation system.

NMU Links
NMU Police Department *nmu.edu/publicsafety*
NMU Public Safety nmu.edu/campus-safety
NMU Emergency *nmu.edu/emergency*
NMU Human Resources *nmu.edu/hr*

Appendices to the Biology Department Emergency Plan:

- Maps of Biology Spaces including evacuation routes
- List of all Departmental rooms with uses and phone numbers
- List of Departmental Training Modules through Public Safety System

J. Students & Employees Dealing with Trauma

Department personnel well-being is an important aspect of safety and one that we value highly. Mental trauma is a common outcome after experiencing an emergency and some people can even experience stress from emergency planning itself. If you need help regarding any of these issues, it is important to communicate your need and seek additional help. NMU provides a variety of different resources through our NMU Wellbeing program that may be useful. Please visit https://nmu.edu/wellbeing/home for information on available resources.