

Fire Safety & Evacuation Plan

Bowman Building

**4625 Union Bay Place NE
Seattle, WA 98105**

Evacuation Director: Michael B. Pomfret

October 1, 2017



**WASHINGTON
Clean Energy Testbeds**

Contents

Section 1 General Information	3
Section 2 Responsibilities and Duties	4
Responsibilities of Employees, Faculty, and Staff	4
Responsibilities of Faculty, Lecturers, and Teaching Assistants	4
Responsibilities for Laboratory and Other Locations with Hazardous Materials	4
Responsibilities of the Evacuation Director and Evacuation Wardens.....	5
Evacuation Director Duties.....	5
Evacuation Warden Duties	6
Section 3 Evacuation Procedures	8
Evacuation Route Maps.....	8
Section 4 Emergency Procedures	9
Fire/Explosion	9
Other Procedures.....	9
Section 5 - Emergency Evacuation for Persons with Disabilities	10
Evacuation Options.....	10
Emergency Procedures	11
Section 6 - Building Specific Information	12
Emergency Communications.....	12
Section 7 - Evacuation Methods & Assembly Locations	13
Building Evacuation.....	13
Outdoor Evacuation Assembly Points.....	13
Section 8 - Evacuation Director and Wardens.....	14
Appendix A – MyChem Location Contacts Report	15
Appendix B – Critical Equipment Shutdown.....	16
Appendix C – Additional Considerations	17

Section 1 General Information

Purpose

The purpose of this Fire Safety and Evacuation Plan (FSEP) is to establish procedures required by Chapter 4 of the Seattle Fire Code. More specifically, this plan is to document how to notify occupants of an emergency in the Bowman Building, establish evacuation procedures and routes, provide support for persons with disabilities, and account for occupants. It is also designed to identify critical equipment that may need to be shut down and provide information to emergency services about the nature of the emergency so that a safe and effective response may be initiated. This plan is also written to meet the requirements of Washington Administrative Code (WAC) 296-800-31075, procedures for sounding emergency alarms.

Section 2 Responsibilities and Duties

An effective fire safety and emergency evacuation plan requires the coordination of the occupants in the building. All building occupants, including faculty, staff, students, and external users need to be aware of their roles and responsibilities in case of an emergency. This section outlines specific responsibilities for employees, faculty, and staff, as well as the evacuation director and wardens. Visitors should also be instructed on proper response to alarms and the need to evacuate.

Responsibilities of Employees, Faculty, and Staff

1. Be familiar with building emergency procedures and act in the event of an emergency. See Sections 3 and 4.
2. Participate in drills and training as required.
3. Inform and assist visitors unfamiliar with building procedures as appropriate prior to and during an emergency.
4. Supervisors orient new employees of this plan upon hire.
5. Be familiar with guidelines herein to evacuate, take refuge, or stay in place if you are a person with mobility disabilities.

Responsibilities of Students and External Users

1. Be familiar with building emergency procedures and act in the event of an emergency. See Sections 3 and 4.
2. Respond to building alarms and promptly evacuate.
3. Follow directions of instructors, evacuation wardens, police, and fire representatives.

Responsibilities of Faculty, Lecturers, and Teaching Assistants

1. Be familiar with building and emergency procedures and be prepared to provide direction to students attending your class in the event of an emergency.
2. Orient students with a brief overview of emergency evacuation procedures on the first day of class to:
 - a. Provide general information relating to emergency procedures.
 - b. Inform students that evacuation is required when the alarm system is activated.
 - c. Inform students of the location of the nearest exits, and where to assemble outside.
3. Take responsible charge of the classroom during building emergencies and alarms.
4. Report an emergency by activating the alarm systems and calling 911.
5. Be familiar with evacuation options for persons with disabilities.

Responsibilities for Laboratory Locations with Hazardous Materials

1. Be familiar with building emergency procedures and act in the event of an emergency. See Sections 3 and 4.
2. If the emergency is in or near your research area, report directly to incident command (usually Seattle Fire Department) about hazardous materials and activities in the space. This will help ensure the safety of emergency responders and to resume to normal operations as soon as possible.

Responsibilities of the Evacuation Director and Evacuation Wardens

The evacuation director, evacuation wardens, and their alternates are employees, as well as building occupants who have been appointed (or have volunteered) to serve in these positions. They receive special training from EH&S to serve in their role. Additional information is available in Section 6.

Evacuation Director Responsibilities

The evacuation director is the administrative lead for this plan and acts as the liaison with the responding emergency services in the event of a building emergency. If an emergency occurs when the evacuation director or alternate is not available, an evacuation warden or a senior employee may serve as liaison.

Evacuation Director Duties

1. Administrative
 - a. Prepare, maintain, and distribute the Fire Safety and Evacuation Plan (FSEP).
 - b. Work with management in all departments occupying the building to include the FSEP in new employee orientation.
 - c. Call periodic meetings with evacuation wardens to review and update the FSEP.
 - d. Distribute the FSEP annually to all building occupants with assigned work stations and highlight any changes to the document.
 - e. Be familiar with duties and emergency procedures.
2. Training
 - a. Evacuation Warden Training (**Required**): Register and take the Evacuation Warden Training course offered by EH&S. The schedule can be found at www.ehs.washington.edu/psotrain/corsdesc.shtm. Fire Extinguisher Training (**Not required**): Optional training is available for all UW personnel on the use of portable fire extinguishers.
3. Preparation Guidelines
 - a. Be familiar with the FSEP and all relevant emergency procedures. Coordinate with building/department administrators responsible for employee, student, and visitor health and safety to ensure all units occupying the building are addressed in this plan.
 - b. Assist with the development of emergency procedures for persons with disabilities. See guidelines contained in Section 5.
4. Oversee Evacuation Wardens
 - a. Solicit volunteers or request that departments solicit volunteer evacuation wardens and alternates for all areas of the building. Ensure all areas have adequate coverage by printing out floor maps.
 - b. Ensure wardens have attended EH&S training and know what their duties are in case of an emergency.

5. Planned Evacuation Drills
 - a. Serve as liaison between building occupants, building coordinator, and EH&S for evacuation drills. EH&S is responsible to schedule the drills and will activate the fire alarm.
 - b. Critique the drill and complete the drill form, noting any problems or issues. Completed forms are to be returned to EH&S Building & Fire Safety (BFS), Box 354400.
6. Building Emergency Evacuation
 - a. Evacuate and report to the evacuation assembly point and act as a building occupant liaison with responding emergency services.
 - b. Receive status reports from area evacuation wardens.
 - c. Identify yourself and communicate your role to incident command (usually Seattle Fire Department) and provide any relevant information you may have about the status of the emergency.
 - d. Offer a hard copy of this plan and attachments to emergency services. Ask if they need any information about the building and help facilitate information sharing between occupants and emergency services.
 - e. Communicate with EH&S, Facilities Services, personnel who work in the affected space, and others who may have information.
 - f. If necessary or requested by incident command, assign evacuation wardens or other personnel as needed to be stationed by all entrances to prevent unsuspecting personnel from reentering the building.
 - g. When the fire department has communicated "ALL CLEAR," announce that occupants may re-enter the building. Do not allow re-entry if the alarm is silenced without confirmation of an all clear from emergency services.

Evacuation Warden Duties

1. Training
 - a. Evacuation Warden Training (**Required**): Register and take Evacuation Warden Training offered by EH&S. A schedule can be found at www.ehs.washington.edu/psotrain/corsdesc.shtm.
 - b. Participate in routine meetings with your evacuation director regarding your FSEP.
 - c. Fire Extinguisher Training (**Not required**): This optional training is available for all UW personnel on the use of portable fire extinguishers.
2. Preparation Guidelines
 - a. Be familiar with the FSEP and all relevant emergency procedures.
 - b. Familiarize yourself with building exits and locations that are likely to have visitors or persons with disabilities who may need some assistance during a building emergency.
 - c. Be aware of persons with mobility disabilities and their evacuation plan.
 - d. Sweeping an area of the building to motivate non-responsive occupants to exit is optional. If conducted the sweep should not take longer than two minutes.
 - e. Be familiar with your building alarm system and building safety features (general awareness) so that you may accurately interpret alarms.
 - f. Become familiar with operations in your area that may require additional time to shut down requiring occupant actions which would delay their exiting.
 - g. Participate in evacuation drills as requested by the evacuation director.

- h. Inform persons with acknowledged mobility disabilities about the guidelines for evacuation (see Section 5). Contact EH&S for assistance.
 - i. Be prepared to communicate to occupants outside of the building to keep them moving to the evacuation assembly point and to not obstruct roads or emergency responders.
- 3. Building Emergency Evacuation
 - a. Check your area for visitors and others who may need assistance responding to the emergency. Students and visitors and other transient occupants who may not be familiar with how to evacuate should be informed on the location of the nearest exit. Direct occupants to the exits and tell them where to assemble outside.
 - b. Direct persons with disabilities to follow their individual plan. If they don't have one direct them to an area of refuge.
 - c. Optional: Sweep your area by walking, calling out, knocking on doors, and closing doors if possible as you exit the building. Encourage others to respond promptly. Be assertive when communicating the need to evacuate. As a general rule, evacuation wardens should not fight fire with fire extinguishers or otherwise. Their primary role is to encourage occupants to move towards exits quickly and to communicate with the evacuation director at the evacuation assembly point.
 - d. Exit the building and communicate with exiting occupants where to assemble outside. If fire or smoke is observed, wardens must discontinue their activities and evacuate immediately before the space becomes untenable.
- 4. At the Assembly Point
 - a. Once outside, assertively direct people to the evacuation assembly point so they don't obstruct traffic or emergency responders. Remain at least 30 feet from the affected building.
 - b. If you or anyone from your area have specific information about the nature or location of the emergency, immediately report the information to the evacuation director who will relay the information to first responders at the incident command location.
 - c. Accounting for all personnel is optional. It is impractical to do so in many buildings. Attempt to identify persons who may have remained behind. This is especially important if the building emergency is known and the persons unaccounted for work in or near the affected area. Confer with supervisors and co-workers and use any available lists or floor plans.
 - d. Immediately report to the evacuation director any missing persons who you believe, or have reason to believe, may be in the building or in jeopardy.
 - e. When notified by the evacuation director help communicate the all clear so the building may be reoccupied. Don't reoccupy in response to the alarm being silenced. Await a definitive message.

Section 3 Evacuation Procedures

These procedures focus on evacuation of occupants as a result of a fire or other building emergency.

1. Assume all alarms are real unless an announcement has been made just prior to the alarm.
2. Begin immediate evacuation of the building or area when outlined in building emergency procedures.
3. Take your keys and valuables and close doors behind you as you exit.
4. Evacuate via the nearest stairwell or grade level exit. Do not prop doors open; doors must remain closed to keep prevent smoke migration in the event of a fire. Do not take elevators or go to the roof.
5. Go to your pre-determined Evacuation Assembly Point (EAP), the gated road north of the Goodwill drop-off lot.
6. Persons with disabilities who are unable to evacuate will follow their personal plan to take refuge or report to an area of evacuation assistance (see section 5).

Evacuation Route Maps

Evacuation floor plans help to identify exits and exit routes for the building. Occupants should go to the nearest exit when the alarm sounds. If access to the nearest exit is obstructed, an alternate exit should be taken. Your building's floor plans and evacuation routes are posted throughout the building.

Section 4 Emergency Procedures

Fire/Explosion

All fire alarm activations should be taken seriously. Never assume it's a false alarm. Building occupants must evacuate when the alarm sounds.

Fire/Explosion

- If something is on fire, use the **nearest pull station to activate the fire alarm** then **call 911**. Communicate the details you know.
- **Use a fire extinguisher for small fires only.** Before you fight a fire, make sure that you:
 - Have **called 911**/or pulled the fire alarm.
 - Have been **trained to use an extinguisher**
 - Have an **evacuation route** planned
- If **trapped by smoke or fire; stay low** and try to **cover your mouth** with a wet cloth.
 - **Find a room** where you can **seal the cracks under the door** and **call 911**
 - If **near a window**, open but **do not break it**. **Wave or hang something outside** to alert fire personnel.
- If your clothes catch fire; **STOP, DROP and ROLL** to smother the flames.

All Fire Alarms

- If you hear the fire alarm, **evacuate the building or area**. Closing all doors as you go.
- **Do not use elevators.** Evacuate by using the **nearest stairwell**.
- **Go to your evacuation assembly point (EAP).**
- **Report to the evacuation warden**, evacuation director, or the fire department.
- **Do not re-enter the building** until authorized by emergency personnel.

A Fire in a Building without a Fire Alarm

- **Call out "FIRE – GET OUT"** loudly, using your voice **to inform other occupants**.
- **Phone 911** and report the building name, address and specifics of the emergency.
- **Follow the general procedures listed above.**

Other Procedures

University standard emergency procedures may be found by visiting the University's Safety Portal.

Section 5 - Emergency Evacuation for Persons with Disabilities

This section provides a general guideline of evacuation procedures for persons that may have difficulty exiting during building evacuations. Faculty, staff, students, and visitors with disabilities are expected to consider these options in advance to determine their best response to a building emergency. Assistance is available through EH&S and the University's Disability Services Office.

Planning

Persons with mobility disabilities are encouraged to:

1. Consider evacuation options for each building they occupy.
2. Identify a volunteer who will be responsible to communicate with emergency services on their behalf during a building emergency.
3. Document their evacuation plans on the Evacuation Plan for Persons with Disabilities form and provide it to the building evacuation director who will inform evacuation wardens and retain it for reference.

Evacuation Options

Persons with disabilities have five evacuation options as follows with preferred options listed first:

- **General Evacuation:** Use accessible routes to exit the building if the route appears safe. Note that the accessible route may not always be the nearest exit.
- **Area of Refuge:** Move to an area of refuge (also known as Areas of Evacuation Assistance). Building stairwells with large landings serve as very good areas of refuge. Wait near the exit stairwell until everyone has evacuated the floor and traffic has cleared, then enter. For assistance identifying an area of refuge, call EH&S at 206-543-7262.
- **Stay in Place:** If evacuation or moving to an area of refuge is not possible, staying in place may be appropriate. An enclosed room with an exterior window, a telephone, and a solid or fire-resistant door may be a good choice. With this option the person may keep in contact with emergency services by dialing 911 and reporting his or her location directly. Emergency services will relay this location to on-site emergency personnel who will determine the necessity for evacuation.
- **Assisted Evacuation Device:** In the event of a major earthquake or other campus-wide event that would prevent first responders from responding quickly, an assisted evacuation device, such as a specially designed chair, can be used by **trained personnel** to evacuate mobility disabled persons.

Elevators can be unsafe to use in an emergency. Emergency personnel have special keys to over-ride the elevator functions and can use them to assist with evacuation.

Emergency Procedures

1. Persons with mobility disabilities should evacuate if able, report to an area of refuge (if available), or stay in place in the event of an emergency requiring evacuation or when the building alarm system is activated.
2. If reporting to an area of refuge or staying in place, contact emergency services by calling 911 and inform them of your plans.
3. Volunteers may assist persons with disabilities reach an area of refuge but should evacuate and report to the evacuation assembly point and report to emergency services the location and status of the person with disabilities.
4. The evacuation director should provide any relevant information to emergency services.

Other Disabilities

The information above is primarily to address evacuation for persons with mobility disabilities. Persons with other visual, hearing, cognitive or other disabilities are encouraged to seek counsel and accommodation through the Disability Services Office (206-543-6450).

Areas of Refuge

Area of Refuge	Location Description
Kitchen	The kitchen is located across from the elevator on the 2 nd floor
Small meeting room	Located on the south side of the 2 nd floor in the back of room 227 (classroom).
Room 229 (Mail Room)	Located just south of the main stairwell on the 2 nd floor

Section 6 - Building Specific Information

Emergency Communications

The following is used to describe the method used to notify first responders of an emergency within our building. Check the box that applies.

- ☐ Our building is equipped with a fire alarm system **monitored** by the University. In the event of a fire alarm activation, signals are sent to UW Police Department and a central monitoring station who notifies the Seattle Fire Department. Evacuate and call 911 to report specific information about the emergency.

The fire alarm system notification audible tone is a:

- ☐ **Temporal 3** (hear an [example](#)).

Section 7 - Evacuation Methods & Assembly Locations – CHECK ON THIS

Building Evacuation

The building fire alarm system is design for (check one):

- ☐ **Complete Building Evacuation.** All occupants evacuate to exterior of building for fire and other emergencies as outlined in the building emergency procedures.

Outdoor Evacuation Assembly Point (EAP)

The Evacuation Assembly Point (EAP) should be an open area away from the building and out of the way of responding emergency personnel. Occupants meet after evacuation so that they may be accounted for or lend assistance as needed.

The Bowman building has one assembly point, described below.

EAP Location	Serves those exiting from:
Gated Road	Gated access road near the junction of Union Bay Pl and 30 th Av. North of the Goodwill drop-off location.

Section 8 - Evacuation Director and Wardens

Floor	Assigned Area	Evacuation Director Name	Email	Cell Phone
2	2 nd floor offices, classroom, meeting rooms, and common areas	Michael Pomfret	mpomfret@uw.edu	206-685-6833
		Felippe Pavinatto	felippe@uw.edu	206-685-8798
Floor	Assigned Area	Evacuation Warden Name	Email	Cell Phone
1	Scale-Up & Characterization Testbed, Rooms 110-113	Felippe Pavinatto	felippe@uw.edu	206-685-8798
		Phillip Cox	coxp51@uw.edu	916-390-7452
1	Systems Integration Testbed, Rooms 100-109	Phillip Cox	coxp51@uw.edu	916-390-7452
		Michael Pomfret	mpomfret@uw.edu	206-685-6833

Last Updated (date): 10/1/17

Assign wardens for the building so that their area may be swept while walking, calling out, knocking on doors, and reach an exit within three minutes. In some buildings this will require multiple wardens per floor or area. Alternate wardens are encouraged for each area. See instructions for examples; provide additional sheets as needed.

Appendix A – MyChem Location Contacts Report

The Location Contact Report from MyChem is appended to this plan to provide a list of responsible parties and contact information for laboratories, shops, and other areas that store and use chemicals and compressed gases.

Person Name	Department	Work Phone	Box Number	Email	Title	UW NetID
<u>PHILLIP ALEXANDER COX</u>	CLEAN ENERGY INSTITUTE	206/616-7008	351750	coxp51@uw.edu	RESEARCH SCIENTIST/ENGINEER 2 (E S 7)	coxp51
<u>FELIPPE JOSE PAVINATTO</u>	MATERIALS SCIENCE AND ENGINEERING	206/685-8798	351653	felippe@uw.edu	ACTING INSTRUCTOR	felippe
<u>MICHAEL POMFRET</u>	CHEMICAL ENGINEERING	206/685-6833	351653	mpomfret@uw.edu	ASSISTANT DIRECTOR OF OPERATIONS	mpomfret

Appendix B – Critical Equipment Shutdown

Critical equipment which could pose a serious hazard to first responders, or present significant property loss risk if left in operation without an attendee. List equipment, contact information, and shutdown procedures.

Equipment	Location	Contact Name and Phone	Shutdown Procedure
Rapid Thermal Processor	Room 112	Felippe Pavinatto 206-685-8798	TBD
Powin Battery Stack	Room 103	Michael Pomfret 206-685-6833	Set battery operation to idle, throw main power switch to off.
Opal RT Digital Simulator	Room 107	Michael Pomfret 206-685-6833	Turn off Ametek power amplifier.

Appendix C – Additional Considerations

This section includes any additional documentation such as evacuation exemptions and any other information that could be considered critical information during a building emergency.