



UNIVERSITY *of*
WASHINGTON

Inclement Weather Plan

Comprehensive Emergency Management Plan (CEMP) –

Annex 6

Updated:

November 2019

Introduction

This document represents a functional annex (Annex 6) to the [University of Washington Comprehensive Emergency Management Plan](#) (CEMP). It provides procedural guidance for any changes in campus operational status due to weather, including suspending operations, closure, delayed opening and/or early release. Most often this procedure is implemented for snow and other winter weather event impacts, but may be used for any hazardous or severe weather that threatens normal operations such as severe thunderstorms with damaging winds, flooding, extreme heat, and other hazardous conditions that could impact University operations.

Purpose

To enable a consistent, transparent and coordinated multi-department and multi-campus efficient response to any inclement weather.

Scope

This is an Annex of the University of Washington [Comprehensive Emergency Management Plan](#) (CEMP) and applies to the entire UW Seattle (main) campus and in coordination with both UW Bothell and UW Tacoma campuses. UW Bothell and UW Tacoma will follow each of their own campus' policies and procedures for inclement weather. The University of Washington Medical Center (UWMC) will be included in the coordination, but will follow their own UWMC policies and plans regarding inclement weather. This plan addresses the roles and responsibilities, provides definitions, campus procedures.

Authority

See the UW CEMP for authority references.

Limitations

The University of Washington will endeavor to make every reasonable effort to respond to severe storms or hazardous weather incidents. However, the University of Washington resources and systems may become overwhelmed by the magnitude of a storm and its impacts. There is no guarantee implied by this document that a perfect response to a severe storm or hazardous weather incident will be practical or possible.

Concept of Operations

Roles and Responsibilities

Title/Department	Responsibilities
President / Provost <i>(or his or her designee)</i>	Authorizes and approves the recommended decision to suspend operations, close, delay, or release campus early. Supports university departments and personnel responsible for the planning and implementation of actions required to implement any and all decision approved by senior leadership.
UW Facilities Vice President <i>(or his/her designee)</i>	Assess the conditions of campus buildings and grounds and infrastructure to assist in reaching a consensus recommendations about operational status. Coordinates snow/debris removal operations and response to reports of any facilities damage. Forwards the Weather Assessment Group's (WSAG) consensus recommendation(s) to either suspend operations, close, delay, or release campus early. The Facilities VP will also relay the final decision back to the WSAG in order to implement the decision(s).
UW Emergency Management	Monitors weather forecasts, obtains relevant information from government agencies and counterparts at nearby institutions and K-12 school districts, local transportation and transit agencies, coordinates reaching a weather-related operational status decision, and ensures that the recommendation is promptly shared with the decision makers usually the President or his or her designee (Provost, Dean of Students, etc...).
Vice President of Student Life <i>(or his/her designee)</i>	Assess campus conditions to assist in reaching an operational status recommendation, including condition and accessibility of student housing and food service operations
UW Police Department <i>(or his/her designee)</i>	Assess current campus conditions to assist in reaching an operational status recommendation.
UW Crisis Communications Team (CCT) Chair <i>(or his/her designee)</i>	UW News Director, as Chair of the CCT, receives campus status decisions and communicates any final decisions via the UW Alert System and UW Alert online Blog (Crisis Communication Team), and notifies external media (UW News).
UW-Bothell & UW-Tacoma Emergency Management	Participate in conference calls and provide status reports on respective campus conditions. Ensure that UW-Seattle discussions and decisions are shared with their respective campus leadership to ensure seamless coordination & information-sharing among the three primary residential campuses.
Health Sciences Administration Executive Director <i>(or his/her designee)</i>	Provides input on the current status of the operations of critical and essential function, including ongoing research functions in the HSA complex. Also, provides guidance on the risk management implications of any proposed recommendation made by the WSAG.
Intercollegiate Athletics Director <i>(or his/her designee)</i>	Reports on current and future athletic events, games, tournaments and/or other special or public events on- or off-campus that may be impacted by a change in the University's operational status.
Human Resources Vice President <i>(or his/her designee)</i>	Provides guidance on concerns associated with Human Resources in the event of inclement weather. This can include time off, work from home, or any other leave use associated with the employment categories of UW staff.
Provost's Office Academic and Instructional Programs Liaison <i>(or his/her designee)</i>	Appointed/selected by the Provost's office, this representative provide input and considerations on any unique concerns related to the impact of any proposed operational status changes to the academic and research activities on campus.

Response Options – Modification of Campus Operational Status

The University has identified four (4) possible response options to modify operations during or after the impact of significant weather: **suspended operations**, **delayed opening**, **early release** or **closed**. While longer-term options may be modified by decision of the UW’s Emergency Policy Council (EPC), short-term status modifications should always follow one of these four options. Each of these options may be considered by the three main UW campuses: Seattle, Bothell and Tacoma.

Status	Description	Rationale
Suspended Operations	Normal non-essential operations are cancelled for the business day (first shift) for the campus. Unless otherwise stated in the timing of the notification, activities scheduled for the evening (second shift) or night (third shift) are expected to continue.	The campus cannot be safely made ready for the day, and the weather impact is forecast to continue or worsen during the day. However, critical operations of the campus must continue (e.g. housing and food service for residence halls, maintaining core building utility and communications systems, safety/security activities, maintaining care of research animals and/or specimens, medical center operations)
Closed	Normal operations are cancelled for the business day (first shift) for the campus. Unless otherwise stated in the timing of the notification, activities scheduled for the evening (second shift) or night (third shift) are expected to continue.	The campus cannot be safely made ready for the day, and the weather impact is forecast to continue or worsen during the day. NOTE: This option is very rarely used as certain core services must be provided 24/7. Only in the most extreme situations such as a terrorist attack or catastrophic earthquake, would this option be considered.
Delayed Opening	Activities occurring before the selected opening time are cancelled, and activities beginning after the opening time continue as scheduled.	The campus cannot be safely made ready for normal opening time, but is confidently expected to be safe at the selected time. Weather impact has ended or is confidently forecast to end before the delayed opening time.
Early Release	Authorizes supervisors to dismiss employees early at their discretion, but not before the official early release time announced by the UW. Some classes, clinics, scheduled events, and supporting activities impacted by an early release may opt to modify their schedules to accommodate this option.	Weather impact creates hazardous traveling conditions or release other problems.

Procedures

Advances in meteorology have made forecasts more accurate. Whenever possible, a suspension of operations or closing decision, should be encouraged to be made the evening before an anticipated weather impact based on the anticipated impact, confidence of the forecast, and the known or anticipated actions of public authorities. When a decision cannot be made in advance, the status decision should be made and notification sent out by UW Alert at the earliest without delay to the appropriate campuses that would be impacted on the affected day.

A more-detailed decision matrix, checklist, standard operating procedures (SOPs), and updated WSAG membership contact list and wallet card is maintained, updated and distributed separately in conjunction with the key elements contained in this plan. UWEM is responsible for regular updates and annual WSAG member refresher training as part of this plan. This training generally occurs each year during the Fall academic quarter and may be conducted in-person or virtually.

Conference Call or Meeting of the UW's Weather Status Assessment Group (WSAG)

UW Seattle Campus

UW Emergency Management (Director or Duty Officer) will coordinate and facilitate an information-gathering discussion prior to an operational status change decision usually conducted by telephone conference (bridge) call or via other virtual collaboration tools. Depending on the severity and certainty of the assessment, the call may occur the night-before, but no later than 11:00 pm. For morning-of decisions, the call will occur no later than 4:00 am at a time arranged and announced by the UW Director of Emergency Management.

The UW's **Weather Status Assessment Group** include the following core members:

- The Vice President of UW Facilities or his/her designee,
 - The Vice President of Student Life or his/her designee,
 - Vice President of Human Resources or his/her designee
 - The UWEM Director and/or Duty Officer,
 - The UW Chief of Police or his/her designee,
 - The Director of UW Intercollegiate Athletics or his/her designee,
 - The Health Sciences Administration Executive Director or his/her designee,
 - Provost's Office representative or his/her designee
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- The Emergency Preparedness Manager (Bothell campus) and the Emergency Director of Campus Safety & Security (Tacoma campus) will also be invited to provide input – *see below*.
 - The National Weather Service-Seattle (when available) may provide detailed spot-forecasts ,
 - The Chair of the UW's Crisis Communication Team (CCT) (UW News Director) will also participate in the call in order to receive and ensure public notification of the status decision once it has been confirmed by the President or Provost,
 - *(Other key stakeholders may be invited to participate depending upon the situation.)*

The purpose of the conference call is to reach a consensus recommendation for the campus operational status, prior to the UW Facilities VP sharing the recommendation(s) with the University President.

1. Prior to the call, all members should gather assessments of conditions specific to each of their areas of responsibility and provide a brief updates status report on:
 - a. Condition of roadways on and near campus;
 - b. Condition of parking lots, and the ability to safely receive/park vehicles;
 - c. Condition of walkways and outdoor stairs;
 - d. Accessibility of buildings, including all emergency exits;
 - e. Status of utility systems (gas, water, electricity, communications,...)
 - f. Any additional hazards or conditions of concern, including reliability of critical utilities, such as electricity and telecommunications;
 - g. WINTER ONLY: Projection of snow/debris removal by 8:00 am, including ability to maintain or improve roadway and walkway conditions based on the anticipated continuing weather.
2. Conference Call: UW Emergency Management (Seattle campus), Emergency Preparedness Manager (Bothell campus), and Emergency Director of Campus Safety & Security (Tacoma) will begin each conference call with campus-specific updates/report on:
 - a. Latest National Weather Service forecast for the area, including any posted advisories, watches, or warnings;
 - b. Emergency/closing status of the City, County, and local K-12 school districts in the surrounding communities;
 - c. Status of local road conditions, transit operations and restrictions,
 - d. Status of other area colleges and universities, if known; and
 - e. Any additional hazards or conditions of concern.
3. Members of the Weather Status Assessment Group will assess each of the reports given by individual members and weigh the various factors as they related to any campus operational changes. The guiding principles should focus on public safety and health, with other factors secondary in the final recommendation.
4. *(For the Seattle Campus only)*: The Vice President for UW Facilities will listen to the information provided and the recommendations from each member on changing the status of campus operations.
 - a. After listening to each of the member's reports and recommendations, the UW Facilities Vice President will notify the UW President or his/her designee of the official recommendation(s) and ask for the final official decision on changing the status of campus operations (if any).
 - i. **Suspended Operations, Closing or Delayed Opening** decisions should be made before 5:00 am, or at least 3 hours prior to the resumption of activity, if an existing suspending operations or closure will be extended.
 - ii. **Delayed Opening** must indicate a specific time at which the campus is expected to be open for normal operations.
 - iii. **Early Release** decisions should be made at least 90 minutes before the effective time of the release, when possible.
 - b. Once the Vice President of UW Facilities has received the final decision from the UW President, the VP will immediately contact the Weather Status Assessment Group via conference call (*preferred*) or other rapid notification methods (i.e., email, group text) and provide the official decision of changing the status of the campus from the UW President.

Notification

Immediately following the official decision of any official change of status for the campus received by the UW President, UW News and the UW's Crisis Communication Team representative will activate the Crisis Communication Team through processes defined in the UW's Crisis Communication Plan. The Crisis Communication Team will use the UW Alert system to provide notification of the official change in campus operations to the impacted campus as well as notify traditional print and broadcast media (television and radio) of the UW's change in operational status.

Continued Monitoring

UW Emergency Management and/or specific emergency management roles at the Bothell and Tacoma campuses are responsible for continuing to internally monitor the weather situation. When a suspended of operations or closing has been enacted, each campus Emergency Management official will coordinate a reassessment of campus conditions at least three hours before the anticipated end of the closure, following the same procedures outlined for the initial changes in campus operations, to determine if it is safe to resume normal operations. If available, NWS SKYWARN Storm Spotters can be utilized to report information regarding severe weather, such as nomenclature of the storm or measurements, to the Emergency Operations Center, as well as report storm developments to the local National Weather Service office. This partnership is an essential information sharing tool to gather information for situational awareness regarding weather hazards and to identify and describe severe local storms.

Excessive Heat & Air Quality Hazards

Hazardous Air Quality Background

Hazardous air quality has become a hazard that has increased in reoccurrences annually during the past 5 years in the Pacific Northwest. The hazard can occur in the Pacific Northwest, regardless of the geographical location of the source. In 2017, wildfires in the Siberian region of Russia which increased the hazardous air quality the greater Seattle area. During the summer of 2018, hazardous air quality was increased due to wildfires in British Columbia, Canada, as well as throughout Washington.

Air quality hazards can occur from multiple sources, from chemical fires to wildfire smoke. Hazardous air has been known to cause severe health problems with individuals and poses an increased threat to youth, elderly, and populations with pre-existing respiratory illnesses and heart problems. Air quality hazards are not only applicable to humans, but:

- man-made materials (buildings and cars)
- crops and vegetation
- soil and water
- animals and wildlife
- and visibility

Air Quality Internal Watch and Alerting

Upon the issuance of an air quality advisory, UW Emergency Management will inform the Weather Status Monitoring Group of the hazard by utilizing AIRNow as the official source for AQI monitoring. Increased monitoring will occur when air quality is forecasted to attain the levels that are sustained or exceeding levels that become a threat to the general public, or when deteriorating air quality events are declared by the City of Seattle or the University Weather Status Assessment Group. De-escalation of watch will occur when the hazard is no longer a threat to the general public.

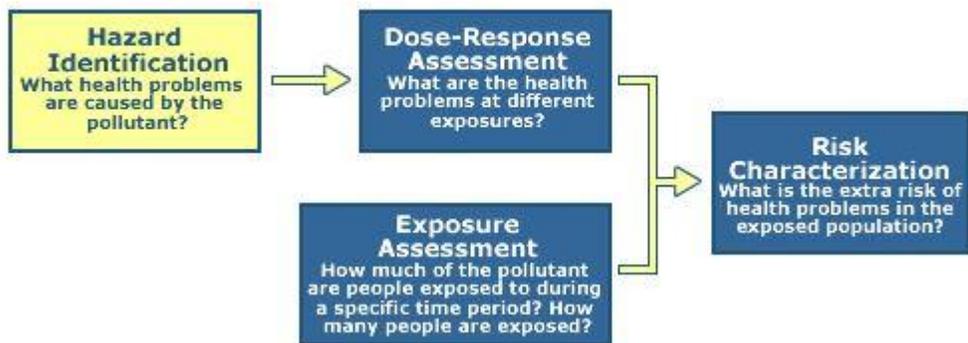
AIRNow

The AQI focuses on health effects that maybe experienced within a few hours or days after breathing polluted air. EPA calculates the AQI for five major air pollutants regulated by the Clean Air Act: ground-level ozone, particle pollution (also known as particulate matter), carbon monoxide, sulfur dioxide, and nitrogen dioxide. For each of these pollutants, EPA has established national air quality standards to protect public health. Ground-level ozone and airborne particles are the two pollutants that pose the greatest threat to human health in this country.

AIRNow provides the daily Air Quality Index (AQI) for how clean or polluted the outdoor air is, along with the health effects that may be of a concern. The AQI is separated into colored categories to depict severity and numerical ratings to allow people to better understand risk. AIRNow provides a category referred to as "Action Days" which indicated the air quality has moved into unhealthy ranges.

For these Action Days, individuals that possess a higher sensitivity to particle pollution (children, lung sensitive, elderly, heart disease, etc) should mitigate exposure and heavy outdoor exertion. AIRNow provides the primary AQI used by the Greater Seattle Area clean air partners. In the event that AIRNow monitoring becomes unavailable, the secondary monitoring point will be the Washington Air Quality Assessment.

The 4 Step Risk Assessment Process



Alerting

UW Emergency Management will initiate the Weather Status Assessment Group when the AQI has achieved the levels of Unhealthy 151 to 200. Courses of action will be determined by the WSAG based upon a multitude of factors and subject matter input.

Air Quality Index Levels of Health Concern	Numerical Value	Meaning
Good	0 to 50	Air quality is considered satisfactory, and air pollution poses little or no risk.
Moderate	51 to 100	Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people who are unusually sensitive to air pollution.
Unhealthy for Sensitive Groups	101 to 150	Members of sensitive groups may experience health effects. The general public is not likely to be affected.
Unhealthy	151 to 200	Everyone may begin to experience health effects; members of sensitive groups may experience more serious health effects.
Very Unhealthy	201 to 300	Health alert: everyone may experience more serious health effects.
Hazardous	301 to 500	Health warnings of emergency conditions. The entire population is more likely to be affected.

Note: Values above 500 are considered Beyond the AQI. Follow recommendations for the "Hazardous category." Additional information on reducing exposure to extremely high levels of particle pollution is available [here](#).

Mitigation and Preparedness

UWEM encourages departments to distribute hazard related information prior to the hazard season or the onset of the hazard (if forecasted). It is recommended that departments include information on

the hazard, its effects, and information on personal protective equipment associated with mitigation. Departments should be aware of individuals, equipment, and infrastructure that may be susceptible to the effects hazardous air quality. Mitigation efforts are recommended at the department level. These efforts could range from the examples of reduced emissions plans, refueling vehicles at night, alternate work locations, and more. UWEM encourages departments to include localized mitigation efforts and align with strategies in the UW Climate Action Plan and outlined by the UW Sustainability Office.

Heat

Excessive heat is becoming an increasingly more dangerous hazard in the Pacific Northwest. Many homes and businesses in the region lack cooling systems and can become vulnerable during extended duration events. With the regions mild summers, populations in the region are less acclimated to extreme heat events that occur in different areas of the United States. Due to this, heat related injuries may present themselves at lower temperatures than other regions. The urban location of UW facilities are further at risk of higher temperatures due to the effect of the urban heat absorption and retaining of heat during perceived cool down periods, such as the evening.

Extreme heat is defined by the CDC as weather that is much hotter than average for a particular time and place—and sometimes more humid, too. Extreme heat is particularly dangerous when occurring for a prolonged period (known as a “heat wave”).

Heat related injuries can become deadly and slowly affect an individual without the individual knowing that they are becoming ill. Heat related illness is progressive which a culmination of lesser symptoms can result in larger related issues if gone unaddressed. These symptoms can include fatigue, nausea, headache, muscle aches and cramps, weakness, confusion, drenching sweats accompanied by cold or clammy skin, weakened heartbeat, and more. Recognizing the symptoms is crucial in preventing further injury and receiving medical assistance. Mitigation efforts training workers to look for the signs of injury, working in pairs, utilizing alternative work locations, implementing extended rest breaks, and more are encouraged to be in department emergency plans.

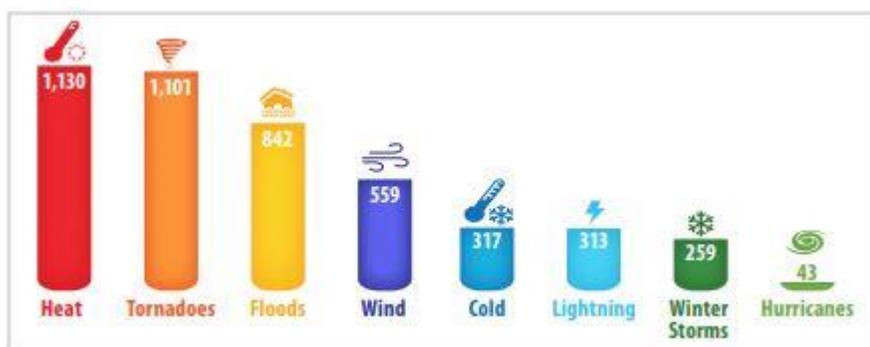
Vulnerable populations to this hazard include, but are not limited to:

- The elderly and the very young;
- Those on certain medications and/or those with preexisting conditions which make them more sensitive to heat (your doctor can let you know if this is you);
- Those working outdoors -- especially new workers, temporary workers, or those returning to work after a week or more off;
- Those exercising or doing strenuous activities outdoors during the heat of the day - especially those not used to the level of heat expected, those who are not drinking enough fluids, or those new to that type of activity;
- Those without a reliable source of cooling and/or hydration;
- Those not acclimated to the level of heat expected - especially those who are new to a much warmer climate
- Some economic sectors are also affected by increasing levels of heat, such as energy and transportation.

Additionally, individuals may be more sensitive to extreme heat. The factors that place these individuals at higher risk are:

- **Exposure:** People spending long hours working or exercising outside, homeless, or those without air conditioning.
- **Sensitivity:** Less tolerant individuals such as infants, young children, pregnant women, older adults, and those on certain medications can increase sensitivity. Drug and alcohol use can affect hydration levels, causing an increase sensitivity to the hazard.
- **Ability to respond and prepare:** Individuals with lack of air conditioning, mobility issues, or individuals less likely to leave their homes place them at higher risk.

Fatalities by Hazard, 2006-2015 per NOAA



Heat Internal Watch

Increased monitoring will occur when air quality is forecasted to attain the levels that are sustained or exceeding levels that become a threat to the general public, or when deteriorating air quality events are declared by the City of Seattle or the University Weather Status Assessment Group. De-escalation of watch will occur when the hazard is no longer a threat to the general public. During the time of escalation, UWEM encourages departments to implement plans for the hazard. Department plans may be activated at a lower threshold due to population, work, or other specialized criteria. In the event the EOC is activated, EOC staff will begin to identify resource shortages and prepare resources for deployment, as well as implement applicable plans relating to the needs of the community. Department level planning should include required resource levels in plans for specialized equipment.

Alerting

The National Weather Service has developed a Heat Risk forecast. This forecast provides a seven day outlook of potential heat risk over a geographic area. The scale utilizes a numerical and color coded scale to communicate the risk, similar to the AQI or UV index. This provides the approximate level of heat risk concern and identifies those who would be at the most risk of the hazard. The product is supplementary to the NWS heat watch/warning/advisory program and provides continuously available guidance for decision makers.

Local NWS offices will partner with local stakeholders to determine when an alert is issued for a local area. This would be due to secondary factors such as acclimation, infrastructure, and prior weather and length of heat.

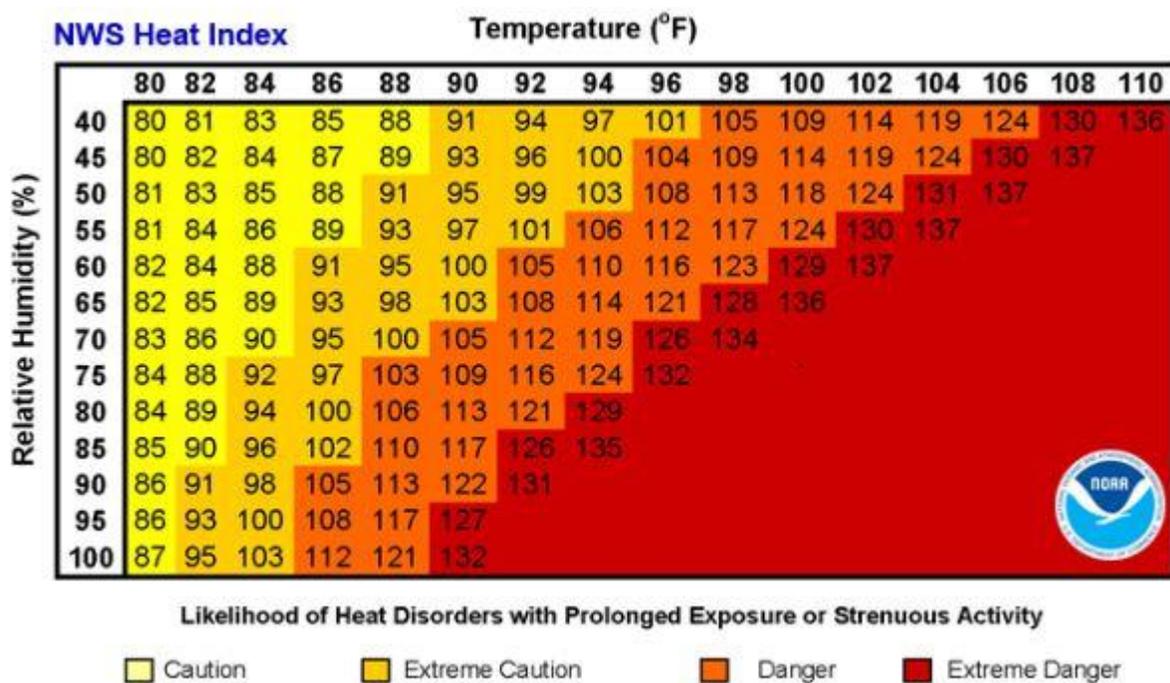
General alerts and warnings issued from the National Weather Service regarding heat are:

Excessive Heat Warning—Take Action! An Excessive Heat Warning is issued within 12 hours of the onset of extremely dangerous heat conditions. The general rule of thumb for this Warning is when the maximum heat index temperature is expected to be 105° or higher for at least 2 days and night time air temperatures will not drop below 75°; however, these criteria vary across the country, especially for areas not used to extreme heat conditions. If you don't take precautions immediately when conditions are extreme, you may become seriously ill or even die.

Excessive Heat Watches—Be Prepared! Heat watches are issued when conditions are favorable for an excessive heat event in the next 24 to 72 hours. A Watch is used when the risk of a heat wave has increased but its occurrence and timing is still uncertain.

Heat Advisory—Take Action! A Heat Advisory is issued within 12 hours of the onset of extremely dangerous heat conditions. The general rule of thumb for this Advisory is when the maximum heat index temperature is expected to be 100° or higher for at least 2 days, and night time air temperatures will not drop below 75°; however, these criteria vary across the country, especially for areas that are not used to dangerous heat conditions. Take precautions to avoid heat illness. If you don't take precautions, you may become seriously ill or even die.

Excessive Heat Outlooks are issued when the potential exists for an excessive heat event in the next 3-7 days. An Outlook provides information to those who need considerable lead-time to prepare for the event.



Mitigation and Preparedness

UWEM encourages departments to distribute hazard related information prior to the hazard season or the onset of the hazard (if forecasted). It is recommended that departments include information on the hazard, its effects, and information on personal protective equipment associated with mitigation. Departments should be aware of individuals, equipment, and infrastructure that may be susceptible to the effects extreme heat. Mitigation efforts are recommended at the department level. These efforts could range from having pre-identified cooling centers, increased rest cycles and more. Other large scale mitigation strategies include, expanding tree canopy cover, man-made outdoor shade structures, and increased public water fountains, for example. UWEM encourages departments in include localized mitigation efforts and align with strategies in the UW Climate Action Plan and outlined by the UW Sustainability Office.

Related Documents

[AIRNow](#)

[Comprehensive Emergency Management Plan \(CEMP\)](#)

[Crisis Communication Plan](#)

[HR Policy on Suspended Operations](#)

[HR Policy on Inclement Weather](#)

[NWS HeatRisk Map](#)

[UW Libraries Suspended Operations Policy](#)

[Facilities Services Policy on Inclement Weather](#)

[Executive Order No. 27 Suspended Operations Policy](#)

Washington Air Quality Advisory

UW Bothell Campus Weather Policies and Procedures

[*UW Bothell Inclement Weather Policy*](#)

[*UW Bothell Inclement Weather Procedures*](#)

UW Tacoma Campus Weather Policies and Procedures

[*UW Tacoma Inclement Weather Information*](#)

[*UW Tacoma Inclement Weather Decision Process*](#)

[*UW Tacoma Inclement Weather/ Suspension Procedure*](#)

After Action Review

