

A Response Procedures – **Extreme Heat**

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1. Purpose

The purpose of this procedure is to outline how Washington County will respond to extreme heat emergencies. This plan does not address response procedures for smoke events. That can be found in response procedure B - Wildfire Smoke and Hazardous Air Quality. (will link once created)

This procedure defines how County's staff will work to ensure that appropriate and coordinated response measures are implemented in a timely and effective manner. This procedure covers pre-season activities, monitoring, and response operations.

2. Concept of Operations

2.1 Terminology

- **Cooling Locations:** Any location available or activated throughout extreme heat incidents to provide respite from extreme heat. These locations are broken into four categories:
 - **Cooling Space:** Air-conditioned facility where the public can go to cool off throughout the summer. Locations generally:
 - Are operating and open to the public from June through September, for business as usual
 - Have public sources of drinking water
 - Have working HVAC capable of maintaining comfortable indoor temperatures throughout the season
 - Have sufficient staff and space to provide guests with a safe and comfortable environment to rest, relax, and/or participate in activities
 - **Water feature:** Outdoor recreational area (e.g., splashpad, pool, lake) where the public can go to cool off throughout the summer.
 - **Daytime Cooling Center:** Air-conditioned facility offering additional cooling services or extended hours through 8pm or 9pm (ideally) in response to extreme heat activation. These facilities are open to the public but are not open overnight.
 - i. This term, when used publicly, covers cooling spaces and cooling centers.
 - **Overnight Cooling Shelter:** Air-conditioned facility offering overnight cooling services and sleeping accommodations in response to extreme heat activation.
- **ESSENCE:** Short for Electronic Surveillance System for the Early Notification of Community-Based Epidemics. A statewide software utilized by Washington County's epidemiologists which provides detailed data on emergency department visits. Daily data is available after 24 hours and contains demographic information, signs and symptoms presented, and assumed cause.

- **Excessive Heat Event:** An incident where high temperatures threaten public health and safety, and response actions may be required to protect the public.
- **Excessive Heat Warning:** A National Weather Service (NWS) alert issued up to 36 hours ahead of an event when there is a greater than 80% chance that the warning criteria will be met. This warning aligns with a HeatRisk threshold of Magenta and Red.
- **Excessive Heat Watch:** An NWS alert issued 12-48 hours before an event when there's a 50% chance that the warning criteria will be met. This watch aligns with a HeatRisk threshold of Magenta and Red.
- **Heat Advisory:** An NWS alert issued up to 36 hours ahead of an event when there's an 80% chance that the advisory criteria will be met. This advisory aligns with a HeatRisk threshold of Orange.
- **Experimental HeatRisk Forecast:** An experimental NWS forecast product which categorizes heat risk into a color and numeric value to help emergency managers, public health decision makers, first responders, and the public quickly identify the potential for impactful heat. The seven-day forecast for the region's HeatRisk and in-depth explanations of each level can be found at: <https://www.wrh.noaa.gov/wrh/heatrisk/>.
- **Response team:** Group of individuals tasked with coordinating and responding to heat emergencies. This group is made up of Washington County division representatives, city and special district partners, and others who may be identified and invited to regularly scheduled coordination meetings.

2.2 Pre-Summer Activities

- Following the end of heat season, Emergency Management (WCEM) will meet with internal and external stakeholders to conduct an after-action workshop or debrief which will identify work plan items to be done before the following season.
- In the spring, Emergency Management (WCEM), Environmental Health (WCEH), Housing Services (WCHS), and Public Health (WCPH) may coordinate to prepare for the upcoming heat season. Preparation activities may include:
 - Reviewing current website, social media, and community education resources regarding heat hazards and developing pre-season messaging and education campaigns.
 - Coordinating with cities to gather and update the status of cooling locations including: availability, contact information, operating hours, and services provided; and ensuring information is updated in WebEOC.
 - Utilizing this information to update and maintain a cooling location provider distribution list.

2.3 Monitoring and Initial Actions

WCEM staff will monitor NWS forecasts for indicators of extreme heat events. If a watch, warning, advisory, weather briefing, or HeatRisk forecast predicts high temperatures that may threaten public health, then WCEM will consult with WCPH and WCHS to assess risks and determine if any response actions are needed.

They will assess the weather forecast, NWS products, and public health risks. The factors being assessed include, but are not limited to:

- level of forecast certainty
- length of extreme heat period
- proximity to other heat events
- period of afternoon hazardous temperatures
- period of overnight temperatures (length of recovery period)
- proximity to cooler temperatures (before or after the extreme heat event)
- daily ratio of hot to cool temperatures
- presence of other hazards such as power outages or poor air quality
- reports of heat injury, illness, or fatalities (e.g., from ESSENCE, emergency departments, EMS, or 911)
- potential impacts to vulnerable populations, including children, older adults, people with disabilities, people who may be homebound or experiencing houselessness, outdoor workers, and people who may have underlying medical conditions or limited access to air conditioning
- activation levels and response actions of neighboring counties

If response is needed, or if the forecast is likely to worsen, WCEM will schedule a countywide coordination call as soon as possible, but at least two (2) business days before the forecasted heat event. The coordination call can be cancelled any time if the weather forecast improves or the response team decides it is no longer necessary.

WCEM will be responsible for communicating with and providing updates to internal and external partners throughout the monitoring and response phases. See below (section 2.4) for more details.

2.4 Notification

WCEM will send extreme heat forecast, activation, and response notifications via email to County leadership, County staff with a response role, city and special district partners, cooling center operators, and countywide emergency management partners.

- Internal programs, cities, and special districts may further distribute the notifications to their leadership, community-based organization (CBOs)

partners, service providers, and agency partners through their distribution channels.

2.5 Coordination

2.5.1 Lead Agencies

- The County’s response to extreme heat events is led by WCEM, WCPH, and WCHS.
- The WCEM manager or delegate plays a lead coordination role and is responsible for coordinating with WCPH and WCHS leads to make decisions regarding the County’s response.
- In the event of EOC activation for an extreme heat event, WCEM, WCPH, and WCHS leads should be included in unified command.

2.5.2 Technology

- Internal and external responders will utilize collaborative software like Microsoft Teams, email, and WebEOC to maintain situational awareness.
- WebEOC will be used to maintain active cooling location information. WCEM will create an incident in WebEOC.
- External partners may also utilize other methods like texts or email to request support or provide updates.

2.5.3 Calls and Meetings

- WCEM will use regularly scheduled countywide coordination calls to share operational updates and response needs.
- WCEM or PIO staff may schedule additional coordination calls (ie: JIS, city specific, etc) based on response needs.

2.5.4 Information

- Responders are responsible for providing on-call points of contact, especially for weekend and overnight needs, and should communicate this information to the response team.
- Information that responders should share includes, but is not limited to:
 - General status
 - Human public health/safety impacts: heat stress/injury trends and outbreaks, impacts to vulnerable populations and workers, etc.
 - Cooling center status including utilization, population, and issues/concerns.

- Secondary impacts such as request for assistance, power outages, media/public concerns, fires, etc.
- Service and facility closures, curtailments, and disruptions: e.g., event cancellations, water restrictions/conservation, prioritization of public safety and other services, etc.

2.6 Response Activities

Washington County uses the following threshold guidelines for response actions:

Level	Washington County Actions
Moderate Risk	<ul style="list-style-type: none"> • Send weather forecasts and NWS products to partners • Conduct awareness and risk reduction messaging (through social media and Hot Weather Help website) • Publish public facing map and pdf of cooling spaces • Consider conducting a countywide monitoring and coordination call in advance of heat event • Consider working with cooling space providers to extend hours
High Risk	<p><i>Above. plus:</i></p> <ul style="list-style-type: none"> • Hold regularly scheduled countywide coordination calls • Conduct public education and outreach to at-risk populations (HHS and HS programs, city programs, partner agencies) • Engage news media by issuing press releases and offering interviews and sound bites • Identify cooling spaces willing/able to extend hours through hottest part of the day (8/9pm) • Consider opening cooling shelters
Very High Risk	<p><i>Above. plus:</i></p> <ul style="list-style-type: none"> • Issue WEA/EAS in coordination with regional partners • Activate cooling shelters • Participate in regional coordination calls • Conduct welfare checks

2.6.1 Cooling Locations

- Washington County has four types of cooling locations. Two operate on their normal hours (“Cooling Spaces”, “Water Features”) and two can be activated during a heat response (“Daytime Cooling Centers”, “Overnight Cooling Shelters.”)

- Cooling spaces within the county are open and available throughout the summer.
 - WCEM will be the lead for coordinating with cooling spaces with the support of city emergency managers.
- WCEM, WCHS, city emergency managers, and other response partners will monitor community needs to determine if daytime cooling centers and overnight shelters should be activated.
- Factors that may inform the activation of cooling centers and shelters include:
 - The extent of the heat risks
 - Availability of capacity at open cooling centers and shelters
 - Geographic distribution of cooling centers and spaces to support access, particularly by vulnerable populations; consider transportation access (e.g., proximity to mass transit)
 - Availability of animal-friendly spaces
 - Availability of low barrier spaces that can support both housed and unhoused populations.
- If daytime cooling centers are needed, the WCEM and cities will reach out to respective cooling spaces to inquire about additional hours and services.
 - WCHS may work with their providers to activate daytime cooling centers.
 - Throughout a heat event, facility managers will inform WCEM (and city emergency manager as appropriate) of any updates to availability and/or services.
 - All updates will be reflected on the public map and list.
 - Cities will be the lead coordination entity for daytime cooling centers in their jurisdictions. WCEM will be the lead coordination entity for daytime cooling centers in unincorporated areas.
- If additional daytime cooling centers are needed, beyond what is available through providers, WCEM may activate and operate additional centers at County facilities or leased facilities.
- If the weather forecast reaches WCHS thresholds is needed, WCHS will work through their service partners to identify and activate a location.
 - For any overnight cooling shelter activated by WCHS, they will be the lead coordinating entity and will act at point of contact for the facility.

- WCEM, city partners, and other responders may provide support to WCHS, which includes, but is not limited to, transportation, resources, volunteers, and staffing.
 - If a shelter is activated, the WCHS PIO will be added to the response team and involved in message creation and dissemination.
 - Information about the overnight cooling shelter will be added to the public facing map and list, posted on social media and the county website, and issued through a press release by County PIOs.
- Per standard shelter practice, if an overnight cooling shelter is activated outside of WCHS, the agency which decided to activate the location will be the coordinating entity (e.g., if the city of Tigard decides to activate an overnight cooling shelter at St. Anthony’s, they are responsible for coordinating with the facility, identifying volunteers, and gathering supplies).
 - If a cooling location is animal friendly, WCEM will connect the facility lead with WC Animal Services for resources and support.

2.6.1.1 Reporting Procedures and Requirements

- Cooling spaces will report daily gate counts annually, as available, to help assess cooling utilization and pre-season kiosk distribution.
- Cooling center providers will report daily usage numbers, at minimum, while activated.
- Cooling shelter providers will report nightly bed counts, at minimum, while activated.
- Providers will report gate counts and bed counts to WCEM either directly or through their city emergency manager.
- Facility providers will be informed of the methods and timeframe for reporting upon activation/notification by either WCEM or a city emergency manager (depending on who they are reporting to).

2.6.1.2 Demobilization

- Based on the NWS forecast, WCEM will recommend an end date and time for cooling centers and shelters during a countywide coordination call. Once agreed upon by responding partners, facilities will be asked to remain open until that time.
 - This date may be changed based on the forecast.
 - i. If the weather changes over the course of the heat event, extending the period of high temperatures, cooling centers and shelters may be asked to remain operational longer.

- ii. If the weather is improving, facilities are experiencing low usage rates, and/or a facility is interested in closing, the coordinating entity may recommend closing the location at the end of that day’s posted hours (for cooling centers only) or after 24 hours to provide enough notice to current guests (for overnight shelters).
- Any resources loaned to a cooling center or shelter will be collected following the closure date by whichever County program initially coordinated the loan.
- WCEM will document the cooling center map and list to be saved with the incident records.

2.6.2 Public Messaging and Alerts/Warnings

2.6.2.1 Public Messaging

- The Washington County Extreme Heat Information page will be utilized to share heat-related illness and injury prevention information.
 - The page will be active from May through September and will link to a map and list of community cooling locations.
- An interactive, publicly accessible map, hosted through the County’s AGOL portal, and a printable pdf list of cooling locations will be available on the Extreme Heat Information page and regularly updated by WCEM.
- Washington County will use their social media platforms to share information about risk reduction and cooling locations with the public. County PIOs may utilize information from ESSENCE reports to determine applicable messages.
- County programs and other response partners may utilize other means of outreach to share public information about heat with the communities they serve. In the past, WCPH and WCCLS have done outreach to migrant seasonal farmer worker camps, and WCHS has done outreach to houseless encampments.
- Regionally developed and translated critical heat messages can be found at: bit.ly/heatmessages
- The HHS and PH PIOs will be responsible for updating the content of the Extreme Heat Information page.
- The HHS and PH PIO, or designee, will write press releases regarding response activities and disseminate them to area news media outlets.

2.6.2.2 Alerts and Warnings

- If news media, social media, weather watches and warnings, and other public information pathways are not sufficient to adequately notify the public, WCEM, WCPH, and WCHS may direct the use of alert and warning systems.
 - Those systems allow for the emergency notification of the public via email, text message, voice message, and other channels.
 - In addition to considering the adequacy of public information methods, WCEM, WCPH, and WCHS should consider how effectively critical information is being received by at-risk populations.
- If conditions meet the regionally agreed upon guideline for sending a regional emergency alert, WCEM will participate in a regional call to determine if one should be sent.
 - The message content of the alert is created and approved at the regional level. Several regionally approved templates are available. If the existing templates do not accurately address the reason for the risk or extenuating circumstances prompting the alert, the Regional Disaster Messaging Work Group and county PIOs will be asked to review and update a template for review by the region before the message is sent.
 - Regional emergency alerts will direct the community to www.publicalerts.org. In the event of a heat-related emergency alert, the Public Alerts page will activate its dark page with information about heat risk and local cooling centers.

2.6.3 ESSENCE Monitoring

- During extreme heat events, WCPH’s RAID (Research, Analytics, Informatic and Data) team monitors ESSENCE for demographic and emergency department (ED) visit data.
 - Short for Electronic Surveillance System for the Early Notification of Community-Based Epidemics, ESSENCE is a statewide software utilized by Washington County’s epidemiologists which provides detailed data on emergency department (ED) visits.
- RAID uses the information gathered from ESSENCE to develop trend reports. These reports often include the number of ED visits, compared to previous extreme heat events, and age and demographic information of individuals visiting the ED for heat-related illnesses.
- WCPH is responsible for reporting out this data during coordination calls or through coordination platforms. ESSENCE reports give data on the previous day’s ED information.

- The County PIOs can use this information to focus communications.

2.6.4 Welfare Checks

2.6.4.1 Welfare Checks to HHS clientele

- Within Washington County Health and Human Services (HHS), the following divisions and programs complete welfare checks as part of their normal operations. The frequency, method, and depth of wellness checks differs based on program.
 - Disability, Aging, and Veteran Services (DAVS)
 - Behavioral Health
 - Developmental Disabilities
 - Women, Infant and Children (WIC)
 - Maternal, Child, and Family (MCF)

2.6.4.2 Welfare Checks to the greater community

- Several community health organizations conduct welfare checks of their clientele.
- Washington County PH will coordinate with these organizations as needed throughout heat events to gather information and support resource needs.

2.6.5 Community Resource Provisions

2.6.5.1 Resource Requests

- WCEM can provide resources and support for community cooling locations including signage and posters, public education materials, and connection with subject matter experts like Animal Services and Environmental Health.
- WCEM will determine if a resource request should be elevated to the state and be responsible for adding the request to OpsCenter and alerting the OEM Regional Coordinator of the request.
- WCEM and WCHS will coordinate regarding bottled water or other resource delivery to houseless encampments. WCEM will be responsible for locating the supplies and WCHS will be responsible for delivering them to the encampments.
- Fans may be available for older adults from DAVS through the Aging and Disabilities Resource Connection (ADRC) call line. DAVS staff will handle the request and dissemination of this resource.

- Resource requests will follow the traditional EM request process. If a location is in a city, the request goes to the city EM. If a location is in an unincorporated area, the request should be sent to County Emergency Management. For any requests that the cities cannot fill, they will forward it to the County.
- City and special district emergency managers should email their requests to the EMC emergency management coordinator.

2.6.5.2 Transportation Support

- Transportation support information will be posted on the HHS Extreme Heat Information site.
- As of May 2022, the current information about transportation can be found [here](#). A flow chart is also available [here](#).

3. Organization and Assignment of Responsibilities

3.1 Washington County Emergency Management

- Coordinate with cooling space and cooling center providers and maintain updated information on days/hours of operations and rules. If escalation is needed, support WCHS activation and operation of cooling shelters.
- In consultation with WCPH and WCHS, assess weather forecasts and public health risks to determine response actions.
- Notify and coordinate internally with the HHS PIO, public health, DAVS, housing services, animal services, facilities (for County facility needs), leadership, and other programs involved in response.
- Coordinate with the HHS PIO to post information about resources and response activities on Horizons to inform departments that may receive calls/requests for information or want to proactively push information to the communities they serve.
- WCEM manager or designee will serve as lead unified commander and schedule/lead coordination calls.
- Coordinate externally with cities, special districts, private, and regional response partners.
- Develop, issue, and manage a list and map of participating cooling spaces.
- Support the development of news releases.
- Provide situation updates and reports to partners.
- Following a severe heat event, lead an evaluation of the response.

3.2 Housing Services

- Coordinate activation and operation of cooling shelters as needed.
- Partner with organizations to conduct welfare checks to houseless encampments.
- Manage emergency activation of WCHS service providers as needed (shelter staffing and transportation)
- Share heat illness and cooling center related information at houseless encampments.
- Coordinate encampment outreach before and during heat events.
- Request and coordinate distribution of bottled water as needed.

3.3 Health and Human Services

3.3.1 HHS and PH PIOs

- Write and send news releases that include appropriate health messaging.
- Include link to the Extreme Heat Information webpage on the HHS website in news releases and social media.
- Update and maintain information on the HHS website and social media.
- Coordinate with EM to post information on Horizons (i.e., County intranet).
- Participate in regional coordination efforts and align messages with neighboring counties.
- Ensure information issued is available in as many languages as possible to support people with limited English proficiency. At minimum, information should be provided in English and Spanish. Responders should utilize the [regionally translated heat messages](#) to provide information for other Safe Harbor languages.

3.3.2 PHEP

- Partner with WCEM to determine when a heat activation should occur.
- Represent PH during internal heat coordination calls.
- Participate in external coordination calls as necessary.
- Coordinate MRC volunteer requests.

3.3.3 EH

- Monitor air quality and report potential health hazards during heat and smoke events.
- Represent EH during internal heat coordination calls.
- Participate in external coordination calls as necessary.

3.3.4 RAID

- Monitor ESSENCE data for heat-related illnesses and inform Public Health Emergency Preparedness.

3.3.5 DAVS

- Provide heat related resource and response information to partner agencies/organizations.
- Coordinate and, if available, supply fans to clients through Community Action's program.
- Conduct welfare checks on clients as necessary.

3.3.6 Animal Services

- Provide HHS PIO with information regarding heat-related illnesses in animals and tips for caring for animals in extreme heat.
- Provide guidance to cooling locations to help them accommodate pets and pet owners and provide them with necessary resources. (i.e., pet supplies
- Conduct welfare checks for animals and provide education to pet owners for animals left in hot vehicles and left outdoors in extreme weather without minimum care standards.

4. Plan Testing and Maintenance

If there is bandwidth, WCEM or WCPH will conduct a pre-season tabletop (TTX) focused on heat. These TTXs may focus on internal or external County coordination and response.

For the first three years of this procedure (2023-2025), this plan will be reviewed and updated annually. After the initial three years, this procedure will be reviewed and updated every three (3) years.

- WCEM is responsible for conducting the review/update with the support of WCPH and WCEH.

Appendix 1 - Extreme Heat Response Quick Guide

Action	Completed By	Notes
Monitoring and Initial Actions		
Monitor National Weather Service (NWS) forecasts for indicators of extreme heat events.	WCEM	
After receiving a watch, warning, advisory, weather briefing, HeatRisk forecast, or other product which predicts high temperatures that may threaten public health:		
Assess the weather forecast, NWS products, and public health risks to determine if response is required.	WCEM, WCPH, WCHS	<p>The factors being assessed include, but are not limited to:</p> <ul style="list-style-type: none"> • level of forecast certainty • length of extreme heat period • proximity to other heat events • period of afternoon hazardous temperatures • period of overnight temperatures (length of recovery period) • proximity to cooler temperatures (before or after the extreme heat event) • daily ratio of hot to cool temperatures. • presence of other hazards such as power outages or poor air quality • reports of heat injury, illness, or fatalities (e.g., from ESSENCE, emergency departments, EMS, or 911) • potential impacts to vulnerable populations, including children, older adults, people with disabilities, people who may be homebound or experiencing houselessness, outdoor workers, and

		<p>people who may have underlying medical conditions or limited access to air conditioning</p> <ul style="list-style-type: none"> • activation levels and response actions of neighboring counties
Schedule and conduct a 30-minute coordination call with internal and external partners	All	<p>Should be scheduled for at least 2 business days in advance of forecasted temperatures.</p> <p>Agenda to include:</p> <ul style="list-style-type: none"> • Situation Status/Risk Assessment (weather update, HeatRisk, Essence, ED, EMS, animal rescue status) • Public Protection Strategies (Cooling locations, transportation, support to unhoused population, welfare checks, additional considerations for vulnerable populations, resource needs/offers) • Public Messaging (news releases, web, social media, translation, JIS status) • Monitoring and EOC activation status
Communicate with partners about forecast and response activities.	WCEM, City EMs	Initial email will likely come from WCEM, but city EMs and other partners can/will share the information with their leadership, partners, and service providers.
<p>If weather forecast improves/does not worsen as expected, coordination calls will be cancelled, and any staged resources released. If response continues:</p>		

Response		
Conduct daily coordination calls to identify resource and response gaps until extreme heat ends.	All	
Activate cooling locations to necessary level.	WCEM, City EMs, WCHS, THPRD, WCCLS	All partners should monitor the needs of the community to determine if additional cooling locations should be activated
Conduct response activities/public protection strategies and monitor the community needs and propose/complete other necessary activities.	All	<p>Response activities/public protection strategies include:</p> <ul style="list-style-type: none"> • Social media, website content, news releases • Cooling location map and list maintenance • ESSENCE monitoring • Transportation support • Regional coordination • Welfare checks • Outreach to vulnerable populations • Alert and warnings
Demobilization		
Give notice, the conduct cooling location closure. Release volunteers, return supplies.	WCEM, City EMs, WCHS, THPRD, WCCLS	

Archive a copy of the cooling location map and pdf, teams chat history, and other response documents.	WCEM	
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