Maryland Department of Health

Extreme Heat Emergency Plan

2022 Version 1.0

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Record of Changes

Date	Description	Draft Number
May 2021	Revised Draft Prepared	Version 1.0
May 2021	Finalized Plan Distributed	Version 1.0
March/April 2022	Revised Draft Prepared	Version 1.0
April 2022	Finalized Plan Distributed	Version 1.0

Organizational Acronyms

AAA – Area Agencies on Aging
BHA – Behavioral Health Administration
DDA – Developmental Disabilities Administration
EMA – Emergency Management Agency
EMS – Emergency Medical Services
ESSENCE – Electronic Surveillance System for the Early Notification of Community-based Epidemics
JIC – Joint Information Center
LHD – Local Health Department
MDoA – Maryland Department of Aging
MDH – Maryland Department of Health
MDHS – Maryland Department of Human Services
MDEM – Maryland Department of Emergency Management
MJOC – Maryland Joint Operation Center
MIEMSS – Maryland Institute for Emergency Medical Services Systems
MTA – Maryland Transit Administration
NWS – National Weather Service
OCME – Office of the Chief Medical Examiner

OHCQ – Office of Health Care Quality
PSC – Public Service Commission
SAL – State Activation Level
SCF – State Coordination Function
SHA – Maryland State Highway Administration

Summary

Purpose

The Maryland Extreme Heat Emergency Plan, developed by the Maryland Department of Health (MDH), guides the states actions during an Extreme Heat Event, as well as those of partner agencies and organizations, as defined below. This plan also provides guidance for the local health departments (LHDs) as they fulfill their roles; however, it does not mandate that LHDs perform the actions described.

LHD Actions

All actions listed for the LHDs in this plan are suggestions. Each local jurisdiction handles Extreme Heat Events differently. The recommendations included in this plan may not be applicable or practical for all LHDs or may be fulfilled by a different organization at the local level. Typically, the agency or organization that has a permit to host a public event can shut it down due to a weather emergency, including a Heat Advisory, Excessive Heat Warning/Watch, or Complex Heat Emergency. The health officer rarely shuts down events, but the local health department can provide targeted risk communication messaging to the public during Extreme Heat.

Coronavirus Disease 2019 (COVID-19)

The U.S. Centers for Disease Control and Prevention (CDC) has issued Interim Guidance for General Population Disaster Shelters During the COVID-19 Pandemic to reference when preparing for Extreme Heat Events. This guidance is based on current information about the transmission and severity of COVID-19 and is updated as additional information becomes available.

Please check the CDC Coronavirus website periodically for the latest COVID-19 information, including symptoms and how to prevent the spread of the disease.

Disaster shelter managers should contact their local health officials for information specific to their locations as conditions vary from community to community.

ESSENCE Disclaimer

Due to the MDH network outage incident, ESSENCE is currently offline.

Definitions

Complex Heat Emergency – A Complex Heat Emergency is a condition of an Extreme Heat Event with complications requiring additional response. Examples of such complications are water or power shortages or an extended heat wave.

Cooling Centers – The actual definition of a 'cooling center' may vary among local jurisdictions. For the purposes of this plan, a cooling center refers to a building identified by local authorities with air conditioning and water. A cooling center does not necessarily provide medical services. Cooling center plans may identify general locations, such as public libraries or malls, where the local government recommends going to escape the heat, or designating locations, such as community centers with extended hours and bottled water. In the event of an Extreme Heat Event, public health experts may provide recommendations for COVID-19 prevention at cooling centers, please see the CDC COVID-19 and Cooling Centers Interim Guidance.

Excessive Heat Warning – An Excessive Heat Warning is issued within 12 hours of the onset of extremely dangerous heat conditions. The general rule for this Warning is when the maximum heat index is expected to be 105 degrees Fahrenheit or higher for at least two days and night time air temperatures will not drop below 75 degrees Fahrenheit; regionally, the National Weather Service (NWS) issues an Excessive Heat Warning when the heat index is expected to exceed 110 degrees Fahrenheit or conditions are such to pose a risk to life and property.

Excessive Heat Watch – An Excessive Heat Watch is issued when conditions are favorable for an excessive heat event in the next 12 to 48 hours. A Watch is used when the risk of a heat wave has increased, but its occurrence and timing are still uncertain. A Watch provides enough lead time so those who need to prepare can do so, such as cities that have excessive heat event mitigation plans.

Heat Advisory – A Heat Advisory is issued within 12 hours of the onset of extremely dangerous heat conditions. The general rule for this Advisory is when the maximum heat index is expected to be 100 degrees Fahrenheit or higher for at least two days, and night time air temperatures will not drop below 75 degrees Fahrenheit; regionally, NWS issues a Heat Advisory when the ambient temperature is expected to rise above 100 degrees Fahrenheit, or the heat index is expected to reach 105 to 110 degrees Fahrenheit. When determining the first Heat Advisory for the summer these thresholds may be lower.

Extreme Heat Event – An Extreme Heat Event is a weather condition with excessive heat and/or humidity that has the potential to cause heat-related illnesses. An Extreme Heat Event is defined as a day or series of days when:

- NWS has issued a Heat Advisory or Excessive Heat Warning
- Weather or environmental conditions are such that a high incidence of heat-related illnesses can reasonably be expected

Heat Index – The heat index is a measure of what the temperature actually feels like. The heat index is a combination of both the actual temperature and relative humidity. It is the best indicator for a pending Extreme Heat Event. The heat index is the key indicator of an Extreme Heat Event by the NWS.[1]

Heat-Related Illness – Heat-Related Illness is a condition caused by Extreme Heat, usually dehydration, heat exhaustion, heat stroke, or a medical condition exacerbated by heat events.

- *Heat Cramps* – Painful muscle spasms in the abdomen, arms, or legs following strenuous activity and typically caused by a loss of fluids and electrolytes in the body; the skin is usually moist and cool, and the pulse is normal or slightly raised; body temperature is mostly normal
- *Heat Exhaustion* – A condition characterized by fainting, rapid pulse, nausea, profuse sweating, cool skin, and collapse, caused by prolonged exposure to heat accompanied by the loss of adequate fluid and electrolytes from the body as a result of sweating
- *Heat Stroke* – A severe condition caused by impairment of the body's temperature-regulating abilities, resulting from prolonged exposure to excessive heat and characterized by cessation of sweating, severe headache, high fever, hot dry skin, and in serious cases, collapse or coma that can cause death or permanent disability if emergency treatment is not provided

High-Risk Groups – High-risk groups are populations disproportionately affected by Extreme Heat Events. These groups include children and youth athletes, individuals who may be socially isolated (such as the elderly or those with psychiatric illness), and individuals with medical risk factors, such as alcoholism, cardiovascular or pulmonary disease, hypertension, diabetes, or tobacco use.

Phase 1: Pre-Summer

Triggers

- Pre-summer activities begin in April/May

Surveillance

- The NWS determines the potential heat impact in the forecast and the Maryland Department of Emergency Management (MDEM) monitors data from the Sterling, Pittsburgh, Mt. Holly, and Wakefield NWS stations
- MDH conducts daily analysis of syndromic surveillance data from emergency departments for indications of an increase in heat-related illness.
    - Due to the MDH network outage, ED data will not be included in the weekly heat reports until ESSENCE is back online.

[1] https://www.weather.gov/safety/heat

MDH Actions

- MDH will conduct an annual review of the MDH Heat Emergency Plan and Extreme Heat Checklists and revise/update as necessary
- MDH will provide guidance and recommend best practices to aid jurisdictions in revising local Heat Emergency Plans as requested
- MDH will update the MDH website with links to LHD information
- MDH will send the plan to state and local partners for review
- MDH will distribute the revised Heat Emergency Plan to LHDs and other partners
- MDH will update the Fact Sheets and Resources listed on the MDH website

LHD Actions

- LHDs may consider conducting an annual review of the jurisdiction's plan
- LHDs may coordinate with local Emergency Management Agencies (EMAs) to identify and renew expectations of local partners regarding operations, activities, and actions during an Extreme Heat Event
- LHDs may engage school systems to review and set guidelines for conducting and cancelling outdoor activities, including field trips
- LHDs may coordinate with EMAs to begin actively tracking large public events that could have severe public health consequences in an Extreme Heat Event
- LHDs may work with local agencies to ensure heat safety warnings are included with all summer event permits
- LHDs may coordinate with other local agencies, such as the local Area Agencies on Aging (AAA) and Departments of Social Services (DSS), to compile lists of individuals and facilities vulnerable to heat-related health issues

Public Information

- MDH and LHDs will review/revise written and electronic public information materials and distribute as appropriate

Phase 2: Pre-Event

Triggers

- MDH and jurisdictions should consider issuing a press release on or just prior to the day of the first Extreme Heat Event
- MDH and jurisdictions should launch heat planning activities by the third week in June if no Extreme Heat Events have occurred

Surveillance

- MDH and LHDs will monitor weather forecasts for the possibility of predicted weather conditions consistent with Extreme Heat
- MDH will distribute weekly reports with an analysis of the public health impact of heat-related illnesses occurring in Maryland. The weekly reports will be made available to the

public on a predetermined day every week. These reports will include, but may not be limited to:
    - Temperature and humidity data via the NWS
    - Emergency Department visits for heat-related illness through MDH's syndromic surveillance system
    - Heat-related death data reported by the Office of the Chief Medical Examiner (OCME)
    - Emergency Medical Services (EMS) data reported by the Maryland Institute for Emergency Medical Services Systems (MIEMSS)
- MDEM will coordinate with local EMAs to monitor large public events to help prevent or mitigate potential mass casualty incidents
- MDEM will maintain situational awareness on power outages in the state
- MIEMSS will monitor EMS systems statewide

MDH Actions

- MDH will issue a press announcement just prior to the day of the first Extreme Heat Event or by the third week in June if no Extreme Heat Events have occurred
- MDH will review and revise this plan following any Extreme Heat Events as necessary
- MDH will review and revise public education materials on the MDH website
- MDH will contact nursing homes to promote summer preparedness, reminding them to check their generators and air conditioning systems and to report real or potential concerns and issues
- MDH will update the MDH website with current LHD information

LHD Actions

- LHDs will identify local cooling centers and post the location on their county's website[2]
- LHDs may monitor the NWS for local temperature and relative humidity data
- LHDs may review planning activities and maintain situational awareness

Demobilization

- MDH will proceed to Phase 6 of this plan in mid-September, unless public health experts recommend a different demobilization date based on extenuating circumstances.

Phase 3: Extreme Heat Event – Heat Advisory

Triggers

- NWS has issued a Heat Advisory
- Heat indexes meeting the criteria for a Heat Advisory are likely within the next 12 to 48 hours

Surveillance

- MDH will maintain situational awareness on vulnerable public health and medical facilities

[2] https://preparedness.health.maryland.gov/Documents/CoolingCenter.pdf

- MDH will continue to monitor syndromic surveillance systems and issue the weekly report outlined in Phase 2
- MDH and MDEM will continue to monitor NWS forecasts for any indication of Extreme Heat
- MDEM will continue to monitor power outages and inform/notify MDH of issues

MDH Actions

- MDH will notify the jurisdictions expected to be impacted by the Extreme Heat Event
    - The MDH advisory will also be sent to other state agencies
    - MDH may alert the public via media outlets, websites, and social media
- MDH will review Extreme Heat checklists and begin taking appropriate actions
- MDH will coordinate with MIEMSS and the Maryland Joint Operation Center (MJOC) to issue alerts when appropriate
- MDH will coordinate with MDEM to maintain situational awareness and gauge the potential impact of the anticipated event

LHD Actions

- LHDs will report information regarding local facilities in crisis to MDH
- LHDs may notify local Extreme Heat planning partners, including DSS, AAA, EMA, and local jurisdiction fire and EMS agencies.
- LHDs may consider activating any local cooling center plans and notifying MDH with a press release or URL to the facility locations; EMAs should notify MDEM of these locations
- LHDs may consider activating any applicable transportation assistance programs for vulnerable populations to be transported to cooling centers
- LHDs may coordinate with EMAs to recommend heightening mitigation protections or to discourage outdoor public events
- LHDs may review plans for extra staffing and emergency support services and consider staging potential resources
- LHDs may coordinate with relevant organizations to provide outreach to vulnerable populations
- LHDs may consider coordinating with existing volunteers and partners to respond to Extreme Heat
- LHDs may coordinate public messaging with public access numbers such as non-emergency dispatch, 211, 311, or reverse 911 systems

Public Information

- MDH will coordinate with each jurisdiction on Extreme Heat Event communications
- LHDs may consider providing all locally used call centers (911, 211, hospital, and private ‘Ask a Nurse’ lines) information for cooling centers and transportation options
- MDH and LHDs will employ consistent messaging that urges individuals to check on elderly neighbors and family members

- MDH and LHDs will include pet emergency preparedness for heat-related illness prevention in messaging, including resources found at Ready.gov[3], and Animals[4]
- Jurisdictions may utilize existing signage (such as outside firehouses, public buildings, or public buses) to display concise heat safety tips

Demobilization

- MDH will revert to Phase 2 when the heat advisory has expired

Phase 4: Extreme Heat Event – Excessive Heat Warning

Triggers

- The NWS has issued an Excessive Heat Warning
- Heat indexes meeting the criteria for an Excessive Heat Warning are likely within the next 12 to 48 hours
- Heat indexes meeting the criteria for a Heat Advisory are expected to continue for three or more days

MDH Actions

MDH will take all the actions outlined in Phase 3: Extreme Heat Event–Heat Advisory and those noted below.

- MDH will engage 211MD as a public access number for heat-related questions and provide 211MD with up-to-date public messaging materials
- MDH will conduct conference calls to discuss the potential impact of the event with stakeholders, including, but not limited to:
    - Internal MDH staff
    - LHD staff
    - The Joint Operations Group
- MDH will coordinate with MDEM in preparation for a potential Complex Heat Emergency
- MDH will supply LHDs with updated lists of licensed healthcare facilities for tracking
- MDH will recommend that the Maryland Department of Human Services (MDHS) and the Maryland Department of Aging (MDoA) update and monitor any lists of vulnerable nonmedical facilities, such as assisted living facilities

LHD Actions

- LHDs may provide MDH with updated information for local cooling centers

Demobilization

- MDH will revert to Phase 2 when all heat-related advisories have expired

[3]https://www.ready.gov/heat

[4]https://www.ready.gov/animals

Phase 5: Complex Heat Emergency

Triggers

- MDH and MDEM will decide what conditions constitute a Complex Heat Emergency, which may include, but are not limited to:
    - Significant power or water outages
    - Extended heat waves lasting more than three days
    - Any other factors that would exacerbate a Heat Emergency
    - MDEM will escalate the State Activation Level (SAL) as appropriate to facilitate interagency coordination

Surveillance

- MDH will begin issuing the Daily Heat-Related Illness Surveillance Report through the duration of the emergency at the discretion of the Deputy Secretary for Public Health Services
    - The final Daily Report will be issued the day following the final Heat Advisory day, with surveillance data from the final Extreme Heat day
    - The disbursement of death data will follow the prescribed flow of information due to the overwhelming number of requests for information during these events:
        - OCME death data will be routed internally to the MDH Office of Preparedness and Response
        - Local health officers or their designee(s) will be notified of the details of deaths occurring in their jurisdiction by MDH
        - The Daily Report, which will include the jurisdiction where the death occurred, age group and gender of the decedent, will be sent to planning partners and posted to the MDH website. Details of death will not be included in the public report

MDH Actions

MDH will take all the actions outlined in Phase 4: Extreme Heat Event–Excessive Heat Warning as applicable, and those noted below.

- MDH will conduct regular conference calls to discuss the potential impact of the event with stakeholders, including, but are not limited to:
    - Internal MDH staff
    - LHD staff
    - Joint Operations Group
- MDH will coordinate with MDEM, MDHS, MDoA, the Developmental Disabilities Administration (DDA), the Behavioral Health Administration (BHA), LHDs, Office of Health Care Quality (OHCQ), and other organizations as necessary to determine if facilities with vulnerable populations need additional assistance
- MDH will recommend that MDEM request information from local EMAs on public events that may be affected by the Complex Heat Emergency
- MDH will coordinate with MDEM to activate widespread power outage plans as necessary

- MDH will recommend that MDEM coordinate State Coordination Functions (SCFs) to support the response according to their established protocols
- MDH will recommend that MDEM and local EMAs coordinate with local emergency services to report any healthcare facilities encountered with excessively hot interiors that may pose a danger to residents

LHD Actions

- LHDs may notify EMAs of any large-scale public events known to the LHD that have the potential to result in a mass casualty incident
- LHDs may consider applicability of requiring greater mitigation measures for outdoor public events
- Jurisdictions may expand cooling center capacity as necessary

Water Shortages

- In the event of a widespread and/or prolonged water shortage, local jurisdictions should consider providing alternative potable water to affected residents or request resources through local EMAs or through the Maryland Emergency Management Assistance Compact (MDEMC) if there is a local declaration
- Local jurisdictions may consider requesting assistance from the private sector in providing and distributing water

Power Outages

- In the event of a widespread and/or prolonged power outage, MDH will coordinate with MDEM, the Public Service Commission, and appropriate power companies to monitor power loss in vulnerable public health and medical facilities
- The Maryland Insurance Administration may consider waivers to pharmacy restrictions regarding prescription refills

Public Information

- MDEM may activate a Joint Information Center (JIC) to address public messaging
- MDEM and MDH, through the JIC (if activated), will use 211 or public access numbers to distribute Heat Emergency information
- Local jurisdictions, the Maryland Transit Administration (MTA), and the State Highway Administration (SHA) will utilize existing digital signage (such as outside firehouses, public buildings, or public buses) to display concise heat safety tips

Demobilization

- MDH will revert to a previous phase once the complicating factors have been resolved as described below:
    - MDH will revert to Phase 5 if an Excessive Heat Warning is in effect
    - MDH will revert to Phase 4 if a Heat Advisory is in effect
    - MDH will revert to Phase 2 if all advisories have expired
    - MDEM will lower the SAL as appropriate

Phase 6: Post-Summer

The post-summer activities typically begin in mid-September and include After Action Reporting and planning for the next operational period.

Triggers

- Post-summer activities begin in September, unless public health experts recommend a different demobilization date based on extenuating circumstances.

MDH Actions

- MDH will cease circulation of weekly heat reports in September, unless public health experts recommend a different demobilization date based on extenuating circumstances.
- MDH will collect After Action Reports from affected local jurisdictions and determine best practices to be included in the following year's planning efforts
- MDH will collect, analyze, and release statewide surveillance data from the summer for use in future heat planning
- MDH will review and update the Extreme Heat Plan, including a comprehensive review of local plans and resources, to be completed and posted by May 1, unless there are extenuating circumstances, such as a public health emergency.

LHD Actions

- LHDs may cease heat-event monitoring and return cooling centers to normal hours as appropriate
- LHDs may coordinate with MDH on an annual heat plan review
- LHDs may identify organizations serving high-risk populations to be partnered within the following season
- LHDs may develop or revise information for high-risk individuals
- LHDs may coordinate with local partners to identify lists of individuals and facilities considered vulnerable during a Heat Emergency
- LHDs may conduct an evaluation of interventions and review evaluation tools to monitor effectiveness:
    - Cooling center usage.
    - Transportation program usage, if available