



ARIZONA DEPARTMENT
OF HEALTH SERVICES

EXTREME HEAT INCIDENT ANNEX

Arizona Department of Health Services

September 2021

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Record of Changes

Date	Change	Page(s)
March 2016	New Plan	
June 2018	Updated formatting	Throughout
May 2021	Updated formatting Updated <i>Hazard Analysis Summary</i> statistics Added <i>At-Risk Individuals</i> section New <i>Plan Development and Maintenance</i> section Updated <i>Authorities</i> section Added hyperlinks to <i>References</i> section	Throughout P. 5 P. 5 P. 12 P. 12-16 P. 17
September 2021	Updated ADHS PHIMS Template	Appendix A

Purpose

The Extreme Heat Incident Annex defines the actions and roles necessary to provide a coordinated response within the State of Arizona. It will function in support of the Arizona Department of Health Services' (ADHS) Emergency Response Plan (ERP) and any applicable roles of ADHS in support to statewide efforts of the State Emergency Response and Recovery Plan (SERRP).

The annex provides guidance to ADHS and supporting agencies with a general concept of potential emergency assignments before, during, and following extreme heat incidents.

Scope

This annex describes how ADHS will use the Public Health Incident Management System (PHIMS) to coordinate and manage an extreme heat incident affecting or having the potential to affect the public health system of the State of Arizona. It describes the concepts of operations, roles and responsibilities of ADHS and its partners, and outlines methods used to share essential elements of information (EEI) between partners and other stakeholders.

The annex helps ADHS:

- Limit adverse public health effects from excessive heat events.
- Identify conditions and/or events that would trigger activation of part or the entire Extreme Heat Incident Annex.
- Provide a framework for coordinating the efforts of divisions within ADHS, counties, tribes, cities, and other stakeholders and agencies that provide services to support the citizens of Arizona. This includes necessary considerations for vulnerable populations of Arizona, including but not limited to the:
 - Homeless
 - Seniors
 - Medically “at-risk”
 - People with access and functional needs
- Reduce the health risks associated with extreme heat.
- Provide a list of prevention and educational resources that may mitigate heat-health adverse effects and/or deaths.

Public Health Incident Management System

PHIMS uses concepts from the National Incident Management System (NIMS) set forth by Homeland Security Presidential Directive (HSPD)-5. The PHIMS structure has been developed to support scalability in order to adapt to expanding incidents of all sizes. PHIMS has been developed to be compliant with guidelines mandated by NIMS.

Situation Overview

Hazard Analysis Summary

The National Weather Service (NWS) identifies heat as the single deadliest weather event in the United States, responsible for more fatalities per year than floods, lightning, tornadoes, and hurricanes combined. In Arizona, heat was responsible for 2,429 deaths between 2010 and 2020. Of these, 1,748 were heat-related deaths of Arizona residents and 681 were non-residents.¹ By recognizing a heat wave in its early stages, actions can be taken by state, county, tribal, and local public health agencies to mitigate the public health impact.

Data shows that extreme weather events, such as heat waves, will continue to become more frequent as well as more severe. Observed warming trends suggest that Arizona will experience significant warming in the coming years which, in turn, could have a significant impact on air quality, public health, and critical infrastructure. For this reason, long term planning for extreme weather events, such as extreme heat, is critical to ensure the health and safety of all Arizonans.²

At-Risk Individuals

Planning for at-risk individuals occurs on several levels within Arizona. The U.S. Department of Health and Human Services (HHS) and ADHS use the Communication, Maintaining Health, Independence, Support and Safety, and Transportation (CMIST) framework to identify and understand at-risk individuals with access and functional needs (AFN) when planning for, responding to, and recovering from a disaster. The CMIST Framework provides a useful and flexible framework for emergency planning and response that emphasizes a person's needs without having to define a specific diagnosis, status, or label.

During a disaster, it has been observed that certain at-risk individuals, specifically those with AFN, have required additional response assistance before, during and after an incident. These additional considerations for at-risk individuals with AFN are vital towards inclusive planning for the whole community, and have been mandated for inclusion in federal, state, territorial, tribal, and local public health emergency plans by the Public Health Service (PHS) Act. In addition, Arizona Health Care Coalition (HCC) will be called upon during an emergency event to share information throughout their members to ensure that the needs of at-risk individuals are addressed.

¹ Information can be found on the ADHS Office of Environmental Health, Extreme Weather & Public Health Program's Heat Safety page: <https://www.azdhs.gov/preparedness/epidemiology-disease-control/extreme-weather/heat-safety/index.php#heat-home>

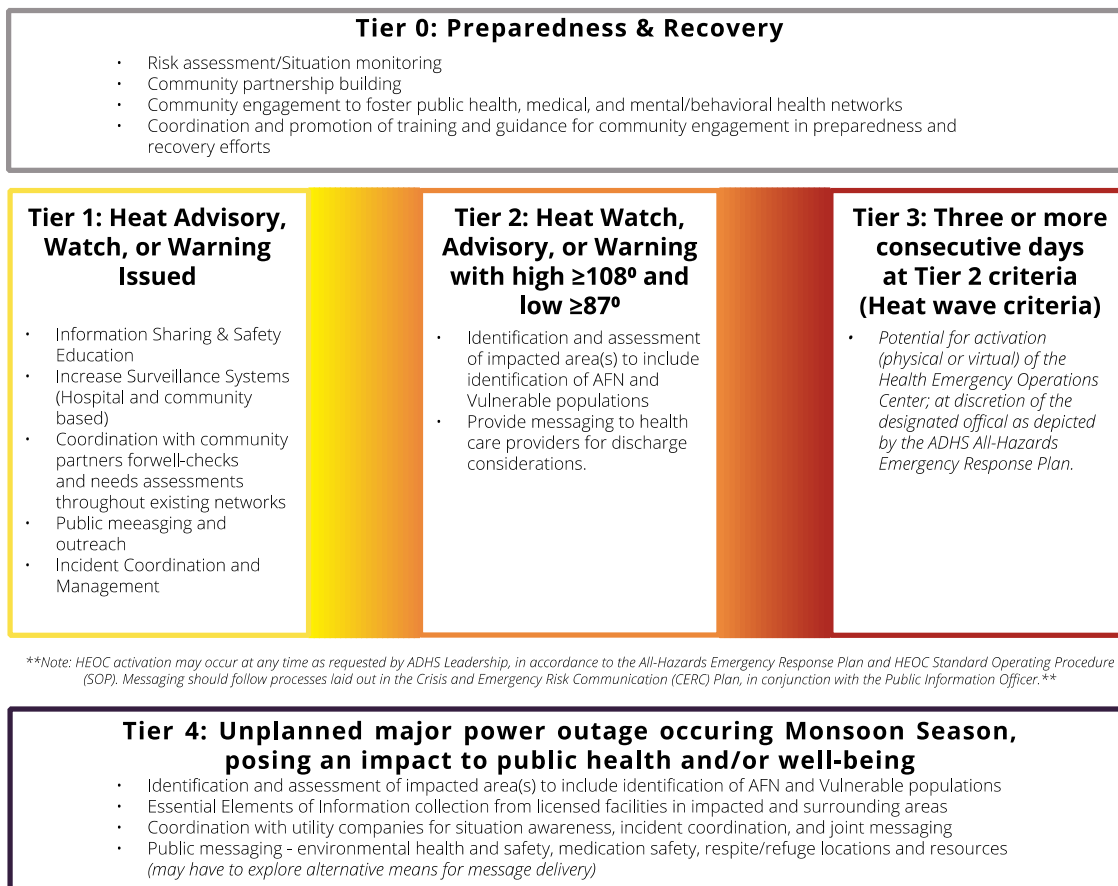
² Historical and projected temperature data and impacts can be found in the Arizona Climate and Health Profile Report located on the ADHS Office of Environmental Health, Extreme Weather & Public Health Program's News and Publications Page: <https://www.azdhs.gov/preparedness/epidemiology-disease-control/extreme-weather/index.php#news-publications>

Planning Assumptions

1. The State of Arizona experiences several, consecutive days of triple-digit heat throughout the summer; these are normally coupled with warm, over-night temperatures as well.
2. By the time an extreme heat incident starts (extreme heat watch/warning) the window for preventative action is very short.
3. The populations at risk from heat-related illnesses are vast with varied ages, pre-existing health conditions, socio-economic factors, religious beliefs, and locations.
4. Heat stroke is fast setting and has a high mortality rate. Early identification and prevention are essential in prevention.
5. Warning and messaging systems are already established by the NWS using various media outlets (news, radio, web, etc.).

Concept of Operations

Response Activation Levels, Thresholds, and Activities



3.

rev. 06/2018

Heat Illness thresholds were based on Arizona morbidity and mortality data associated with heat. Petitti, D. B., Hondula, D. M., Yang, S., Harlan, S. L., & Chowell, G. (2015). Multiple Trigger Points for Quantifying Heat-Health Impacts: New Evidence from a Hot Climate. *Environmental Health Perspectives*, 124(2). doi:10.1289/ehp.1409119

⁴. Activation triggers can include, but are not limited to: activation of the State Emergency Operations Center, request from partners for assistance, higher than normal need for messaging. For more details on activation processes please refer to the All Hazards Emergency Response Plan and the HEOC SOP.

Mission and Responsibilities

Most government agencies have emergency functions in addition to their normal, day-to-day duties. These emergency functions usually parallel or complement normal functions. Each agency is responsible for developing and maintaining its own emergency management procedures.

Arizona Department of Health Services

1. EOC staffing and functioning
2. Communications
3. Supports shelter system operations in conjunction with the American Red Cross
4. Emergency public information (e.g. cooling center availability)
5. Alert and warning systems (e.g. public health syndromic surveillance)
6. Assistance from other jurisdictions
7. State assistance
8. Federal assistance
9. Emergency preparedness training and education on heat safety
10. Rumor control
11. Damage assessment
12. Hospital surge

National Weather Service

1. Communications
2. Emergency public information
3. Alert and warning systems
4. Emergency preparedness training and education
5. Rumor control
6. Damage assessment

Arizona Health Care Cost Containment System

1. Collaborates with Regional Behavioral Health Authorities (RHBAs) and Tribal Regional Behavioral Health Authorities (TRBHAs) to provide outreach to clients and perform well checks
2. Collaborates with homeless outreach programs to perform wellness checks of homeless people
3. Assists in public messaging

First Responder Agencies

1. Emergency medical transportation
2. Emergency medical treatment
3. Assists with special needs evacuation

County/Tribal Health Departments

1. Emergency medical care information and coordination
2. Emergency hospital treatment information and coordination
3. Medical support to shelters
4. Health advisories
5. Identifies local health facilities, including hospitals, clinics, dialysis centers, and nursing or rehabilitation centers, supplying and using medical and health items

6. Identifies special needs populations, including the elderly and very young, and populations requiring specific life-saving services (e.g., dialysis or ventilator dependent people)

Hospitals

1. Emergency medical care
2. Hospital evacuation
3. Traditional hospital medical services

Arizona Department of Education

1. Arranges facilities for emergency public education
2. Arranges facilities for emergency housing of evacuees and responders
3. Arranges facilities for emergency first aid stations, emergency hospitals, or emergency morgues
4. Arranges personnel for shelter managers and staff
5. Provides recreation plans for shelter occupants' use during shelter-stay period
6. Coordinates school bus and van transportation

Direction, Control, and Coordination

Authority to Initiate Actions

1. The ADHS Director, or designated appointee, holds primary responsibility for activation of the Health Emergency Operations Center (HEOC) and PHIMS. This power is also vetted to the Assistant Director of Public Health Preparedness Services and the Bureau Chief of the Bureau of Public Health Emergency Preparedness (PHEP).
2. Implementation of the *Extreme Heat Incident Annex* will come from the HEOC Manager or appointed official.

Incident Command System

As a department that receives federal funding, ADHS incorporates elements of NIMS into emergency operations. The Department's incident command structure, PHIMS, is NIMS compliant. PHIMS integrates multiple department-wide program activities into a cohesive, modular emergency response structure capable of expanding or contracting to fit the size of the emergency or disaster. ADHS uses after action reports (AARs) and lessons learned from real-world emergencies, drills, and exercises to continually improve response direction and operations coordination. PHIMS follows the basic ICS with five distinct operational sections: Administrative, Operations, Logistics, Planning, and Finance.

Information Collection and Dissemination

ADHS uses guidance and alerts provided by the National Weather Service (NWS) to determine trigger points for heat-related public messaging and warning.

The State of Arizona is serviced by four different Weather Forecasting Offices from the NWS:

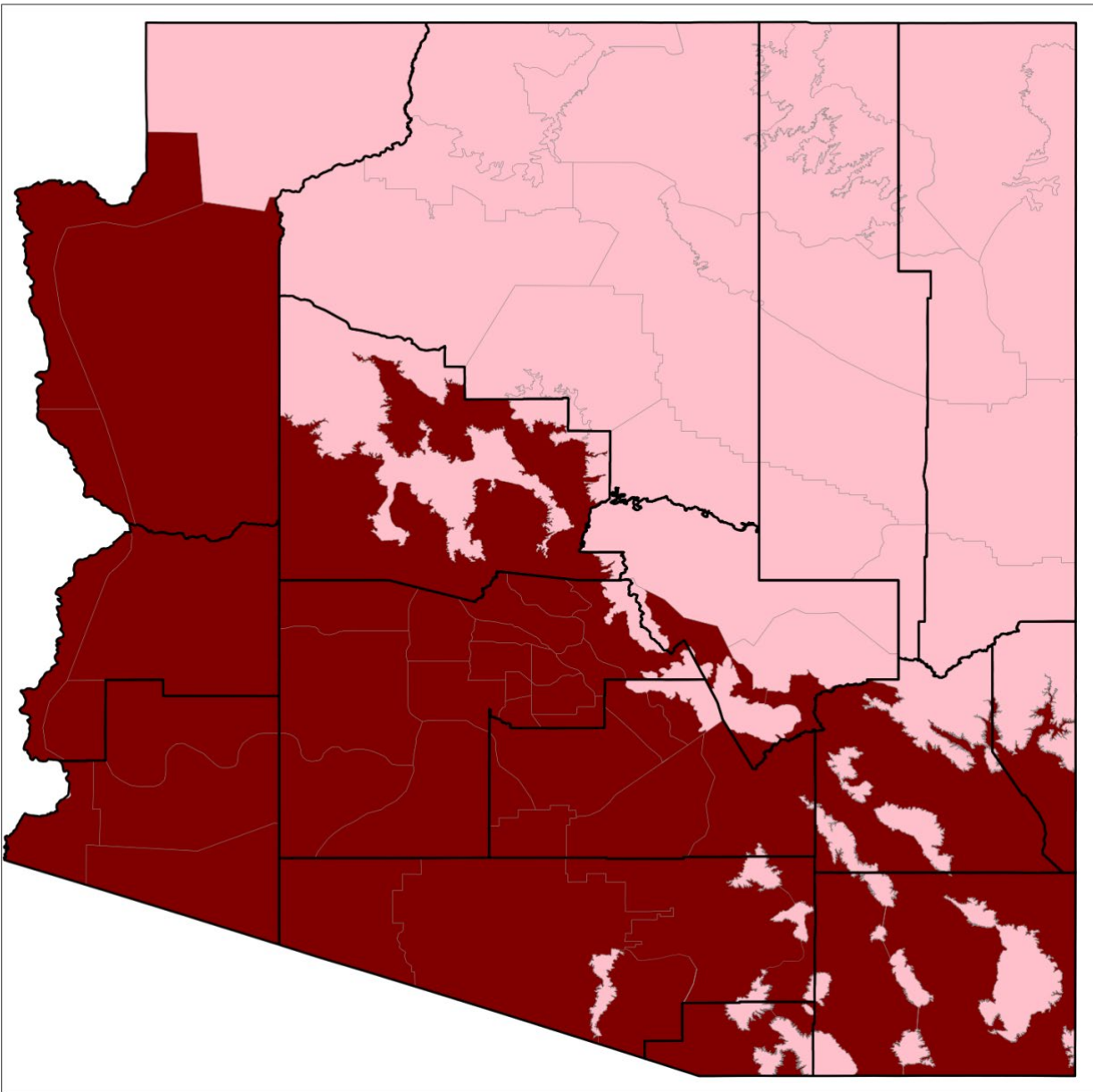
1. The Phoenix Office has responsibility for southwest and south-central Arizona.
2. The Tucson office has responsibility for southeastern Arizona.
3. The Flagstaff office has responsibility for north-central and northeast Arizona.
4. The office in Las Vegas has responsibility for northwest Arizona.

Each forecasting office is responsible for their messaging and developing the criteria to issue their alerts. Some areas of the state receive Heat Warnings, Heat Watches, and Heat Advisories from the NWS and some only receive Heat Warnings and Heat Watches.

NWS Alert Type	Alert Timing and Basis
Heat Advisory	There is high confidence that unusually hot conditions will develop or are imminent and persist for several days (exact area and timing vary from event to event & included in text of alert). Some heat-related impacts expected.
Excessive Heat Watch	There is medium confidence that excessively hot weather conditions may develop in the next two to seven days (exact area and timing vary from event to event & included in text of alert).
Excessive Heat Warning	There is high confidence that excessively hot weather will develop or is imminent and persist for several days. Exact area and timing vary from event to event & included in text of alert. Many heat-related impacts expected.

National Weather Service Heat Advisory Map

The maroon color in the map below indicates where NWS offices issue Heat Warnings and Heat Watches.



Communications

ADHS will use multiple communication methods for coordination throughout a response. Communication methods may include, but are not limited to the following:

- Arizona Health Alert Network (AZHAN)

- WebEOC™
- EMResource™
- 800 MHz Secured Radio
- Press Releases
- Social media
- Internal Email
- Phone
- ADHS Website

Plan Development and Maintenance

ADHS plan review and revision involves three types of edits—1) Minor Technical Revisions, 2) Major Technical Revisions, and 3) Complete Plan Overhaul. In collaboration with stakeholders, PHEP takes the lead in reviewing and revising the plan to ensure:

1. Plan revision will occur through review by ADHS and stakeholders every year. Revision of the plan can be accomplished by communicating through email, telephone, or in-person meetings. Plan revision will include a new plan date.
2. The plan will be evaluated through exercises or real-world events. ADHS and stakeholder participation will vary and is dependent on the scope of the exercise or event. The associated corrective actions, lessons-learned, and best practices will be integrated as appropriate.
3. All plans will be shared with the leadership for review and approval.
 - Plans not classified as “Confidential” will be posted on the ADHS website to allow for public feedback prior to the finalization of the plan.
 - Plans that are classified as “Confidential” will be shared with the planning team to allow for feedback prior to finalization of the plan.
4. The revised plan will be posted to the ADHS public-facing website.
5. PHEP will notify ADHS, stakeholders, and other partners through email when significant changes are made to the plan. The plan will be shared with stakeholders to promote alignment between local and state-level emergency response planning.

Authorities

Federal

42 U.S.C. § 5148 – Nonliability of Federal Government The Federal government shall not be liable for any claim based upon the exercise or performance of, or failure to exercise or perform a discretionary function or duty on the part of a Federal agency or an employee of the Federal government in carrying out the provisions of an emergency response.

28 U.S.C. § 2671 – Tort Claims Procedure No other state or its officers or employees rendering aid in this state pursuant to any interstate mutual aid arrangement, agreement or compact shall be liable on account of any act or omission in good faith on the part of such state or its officers or employees while so engaged, or on account of the maintenance or use of any equipment or supplies in connection with an emergency.

42 U.S.C § 14503 – Limitation on liability for volunteers No volunteer of a nonprofit organization or governmental entity shall be liable for harm caused by an act or omission of the volunteer on behalf of the organization or entity if—

1. the volunteer was acting within the scope of the volunteer’s responsibilities in the nonprofit organization or government entity at the time of the act or omission;
2. if appropriate or required, the volunteer was properly licensed, certified or authorized by the authorities for the activities or practice in the State in which the harm occurred, where the activities were or practice was undertaken within the scope of the volunteer’s responsibilities in the organization or entity;
3. the harm was not caused by willful or criminal misconduct, gross negligence, reckless misconduct, or a conscious, flagrant indifference to the rights or safety of the individual harmed by the volunteer; and
4. the harm was not caused by the volunteer operating a motor vehicle, vessel, aircraft, or other vehicle for which the State requires the operator or the owner of the vehicle, craft, or vessel to—
 - a. possess an operator’s license; or
 - b. maintain insurance.

State

Applicable authorities include, but are not limited to those listed below. For a comprehensive guide to Arizona Revised Statutes, visit <https://www.azleg.gov/arstitle/>.

ARS § 36-782 – Enhanced Surveillance Advisory The Governor, in consultation with the Director of ADHS, may issue an enhanced surveillance advisory if the Governor has reasonable cause to believe that an illness, health condition or clinical syndrome caused by bioterrorism, epidemic or pandemic disease or a highly fatal and highly infectious agent or biological toxin has or may occur or that there is a public event that could reasonably be the object of a bioterrorism event. The illness or health condition may not include acquired immune deficiency syndrome or any other infection caused by the human immunodeficiency virus.

ARS § 32-1471 – Health care provider and any other person; emergency aid; nonliability Any health care provider licensed or certified to practice as such in this state or elsewhere, or a licensed ambulance attendant, driver or pilot as defined in section 41-1831, or any other person who renders emergency care at a public gathering or at the scene of an emergency occurrence gratuitously and in good faith shall not be liable for any civil or other damages as the result of any act or omission by such person rendering the emergency care, or as the result of any act or failure to act to provide or arrange for further medical treatment or care for the injured persons, unless such person, while rendering such emergency care, is guilty of gross negligence.

ARS § 32-1472 - Limited liability for emergency health care at amateur athletic events A health care provider licensed or certified pursuant to title 32 who agrees with any person or school to voluntarily attend an amateur athletic practice, contest or other event to be

available to render emergency health care within the provider's authorized scope of practice and without compensation to an athlete injured during such event is not liable for any civil or other damages as the result of any act or omission by the provider rendering the emergency care, or as the result of any act or failure to act to provide or arrange for further medical treatment or care for the injured athlete, if the provider acts in good faith without gross negligence.

ARS § 32-1473 – Limited liability for treatment related to delivery of infants; physicians; hospitals; exception; definition

- A. Unless the elements of proof contained in section 12-563 are established by clear and convincing evidence, a physician licensed to practice pursuant to this chapter or chapter 17 of this title is not liable to the pregnant female patient, the child or children delivered, or their families for medical malpractice related to labor or delivery rendered on an emergency basis if the patient was not previously treated for the pregnancy by the physician, by a physician in a group practice with the physician or by a physician, physician assistant or nurse midwife with whom the physician has an agreement to attend the labor and delivery of the patient.
- B. Unless the elements of proof contained in section 12-563 are established regarding the acts or omissions of a licensed health care facility or its employees in cases covered by the provisions of subsection A of this section by clear and convincing evidence, the health care facility is not liable to the female patient, the child or children delivered or their families for medical malpractice related to labor or delivery.
- C. This section does not apply to treatment rendered in connection with labor and delivery if the patient has been seen regularly by or under the direction of a licensed health care provider or a licensed physician from whom the patient's medical information is reasonably available to the physicians attending the patient during labor and delivery.
- D. For the purpose of this section, "emergency" means when labor has begun or a condition exists requiring the delivery of the child or children.

ARS § 26-314 – Immunity of state, political subdivisions and officers, agents, employees and emergency workers; limitation; rules; definitions

- A. The Department, or any other state agency, will not be liable for any claim based upon the exercise or performance, or the failure to exercise or perform, a discretionary function or duty by an emergency worker, engaging in emergency management activities or performing emergency functions. This state and its departments, agencies, boards and commissions and all other political subdivisions that supervise or control emergency workers engaging in emergency activities or emergency functions are responsible for providing for liability coverage, including legal defense, of an emergency worker if necessary. Coverage provided if the emergency worker is acting within the course and scope of assigned duties and is

engaged in an authorized activity, except for actions of willful misconduct, gross negligence or bad faith.

During a state of emergency or state of war emergency as defined by **ARS § 36-787**, under **ARS § 36-790** a person or health care provider undertaking activities required by this article, including reporting, participating in isolation or quarantine procedures as ordered by local or state public health offices, is immune from civil or criminal liability if the person or health care provider acted in good faith.

ARS § 23-901.06 – Volunteer workers In addition to persons defined as employed under section 23-901, volunteer workers of a county, city, town, or other political subdivision of the State may be deemed to be employees and entitled to the benefits provided by this chapter upon the passage of a resolution or ordinance by the political subdivision defining the nature and type of volunteer work and workers to be entitled to such benefits. The basis for computing compensation benefits and premium payments shall be four hundred dollars per month.

ARS § 26-301, 26-303, and 26-314 Volunteers duly enrolled or registered with the Division of Emergency Management or any political subdivision, in a local emergency, a state of emergency, or a war emergency, or unregistered persons placed into service during a state of war emergency, in carrying out, complying with, or attempting to comply with any order or rule issued pursuant to the provisions of this chapter or any local ordinance, or performing any of their authorized functions or duties or training for the performance of their authorized functions or duties, shall have the same degree of responsibility for their actions, and enjoy the same immunities and disability workers' compensation benefits as officers and employees of the State and its political subdivisions performing similar work.

ARS §12-982 – Qualified immunity; insurance coverage

- A. A volunteer is immune from civil liability in any action based on an act or omission of a volunteer resulting in damage or injury if:
 - 1. the volunteer acted in good faith and within the scope of the volunteer's official functions and duties for a nonprofit corporation or nonprofit organization, hospital or governmental entity.
 - 2. The damage or injury was not caused by willful, wanton or grossly negligent misconduct by the volunteer.
- B. Notwithstanding subsection A of this section, in any suit against a nonprofit corporation or nonprofit organization, hospital or governmental entity for civil damages based on the negligent act or omission of a volunteer, proof that the act or omission was within the scope of the volunteer's official functions and duties is sufficient to establish the vicarious liability, if any, of the organization.
- C. A motor vehicle liability policy, as defined in section 28-4001, which provides coverage to the operator of a motor vehicle is subject to the following provisions which need not be contained in the policy. The liability of the insurance carrier with respect to the insured and any other person using the vehicle with the express or

implied permission of the insured shall extend to provide excess coverage for a nonprofit corporation or nonprofit organization for the acts of the operator in operating a motor vehicle at all times when the operator is acting as a volunteer for that nonprofit corporation or nonprofit organization.

References

Federal

1. [Comprehensive Preparedness Guide \(CPG\) 101: Developing and Maintaining Emergency Operations Plans](#), U.S. Department of Homeland Security, Federal Emergency Management Agency, November 2010.
2. [Homeland Security Exercise and Evaluation Program \(HSEEP\)](#), U.S. Department of Homeland Security, January 2020.
3. [National Incident Management System](#), U.S. Department of Homeland Security, Federal Emergency Management Agency, October 2017.
4. [National Response Framework](#), U.S. Department of Homeland Security, October 2019.

State

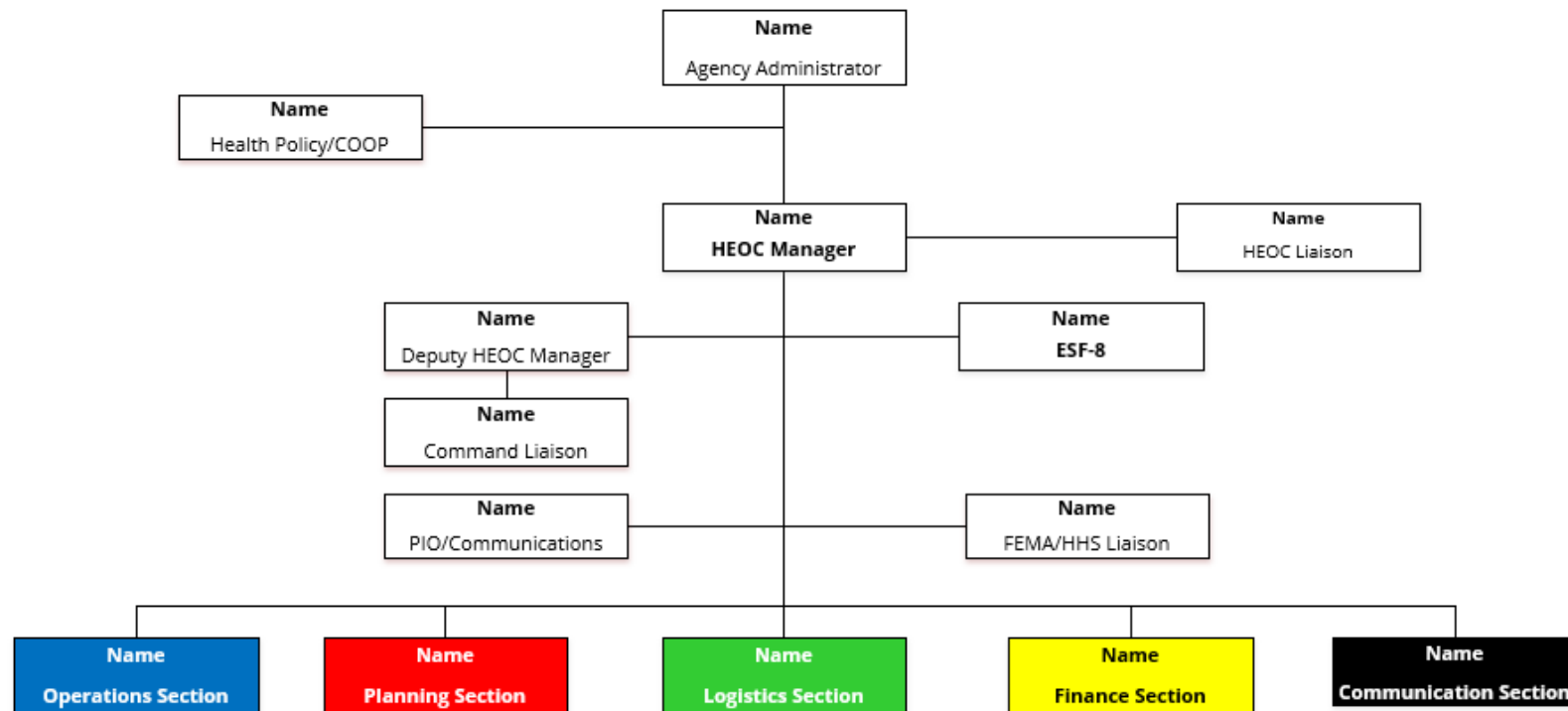
1. [Crisis & Emergency Risk Communication Plan](#), Arizona Department of Health Services, May 2016.
2. [Emergency Response Plan](#), Arizona Department of Health Services, December 2016.
3. [Heat Safety Website](#), Arizona Department of Health Services.
4. [State Emergency Response and Recovery Plan](#), Arizona Department of Emergency and Military Affairs, November 2019.

Appendix A: ADHS PHIMS Template



HEOC PHIMS Chart

Event Name:
Operational Period:



*See ICS 203 Contact Roster for additional personnel information

Revised HEOC PHIMS ICS 207 Template: 08/2020