

Arizona Department of Health Services

Extreme Heat Incident Annex

Response to extreme heat events impacting public health and the healthcare system



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Office of Environmental Health in collaboration with the Bureau of Public Health Emergency
Preparedness

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Table of Contents

Table of Contents.....	iii
Purpose, Scope, Situation, and Assumptions	1
Purpose.....	1
Scope	1
PHIMS	1
Situation Overview	2
Characteristics	2
Hazard Profile	2
Assumptions	2
Concept of Operations.....	3
Activation.....	3
Response Activities.....	4
Organization and Assignment of Responsibilities.....	5
General	5
Organization	5
Assignment of Responsibilities	5
Arizona Department of Health Services	5
National Weather Service.....	6
Arizona Health Care Cost Containment System (AHCCCS).....	6
First Responder Agencies	6
County/Tribal/Local Health Departments	6
Hospitals	6
Arizona Department of Education.....	7
Direction, Control, and Coordination	7
Authority to Initiate Actions	7
Incident Command System.....	7
Information Collection and Dissemination	7
Communications	9

Annex Development and Maintenance	9
Development	9
Maintenance.....	9
Requirements	9
Review and Update	9
Authorities and References	11
Legal Authority	11
Federal.....	11
State.....	11
References	15
Federal.....	15
State.....	15
Appendix A: ADHS PHIMS Template	16

Purpose, Scope, Situation, and Assumptions

Purpose

It is the purpose of this annex to define the actions and roles necessary to provide a coordinated response within the State of Arizona. This annex 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).

This annex provides guidance to ADHS and supporting agencies with a general concept of potential emergency assignments before, during, and following emergency situations.

With development of this annex, ADHS will:

- a. Limit the adverse public health effects from excessive heat events
- b. Identify conditions and/or events that would trigger activation of part or the entire Extreme Heat Incident Annex
- c. 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 the special populations of Arizona, including but not limited to the:
 - i. Homeless
 - ii. Seniors
 - iii. Medically “at-risk”
 - iv. Those with access and functional needs; to reduce the health risks associated with extreme heat
- d. Provide a list of prevention and educational resources that may mitigate heat-health adverse effects and/or deaths

Scope

This plan will describe how ADHS will utilize 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. This annex will describe the concepts of operations, roles and responsibilities of ADHS and its partners, and outline methods used to share essential elements of information (EEI) between these partners and other stakeholders.

PHIMS

PHIMS utilizes 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 to those guidelines mandated by NIMS.

Situation Overview

Characteristics

The National Weather Service (NWS) identifies heat as the single deadliest weather even in the United States, responsible for more fatalities per year than floods, lightning, tornadoes, and hurricanes combined. In Arizona, Heat was responsible for 1574 deaths between 2001 and 2013; with a majority of deaths being in the 65 years and older population.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.

Hazard Profile

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 observe significant warming in the coming years which, in turn, could have 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.

Assumptions

1. The state of Arizona experiences several, consecutive days of triple-digit heat throughout the summer months; these are normally coupled with warm over-night low 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 to heat related illnesses is vast and includes many factors including, but not limited to age, pre-existing health conditions, socio-economic factors, religious beliefs, and location.
4. Heat stroke is fast setting and has a high mortality rate. Early identification and prevention is essential in prevention.
5. Warning and messaging systems are already established from the NWS using various media outlets (news, radio, web, etc.).

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

Concept of Operations

Activation

Activation of this plan is done in phases based on categorical indexes of severity relevant to temperatures, duration, complexity and alert data sent by the NWS. The severity index categories and corresponding response activities can be found in the tables below.

Category 1:
Pre/Post-Heat event (Preparedness and Recovery)

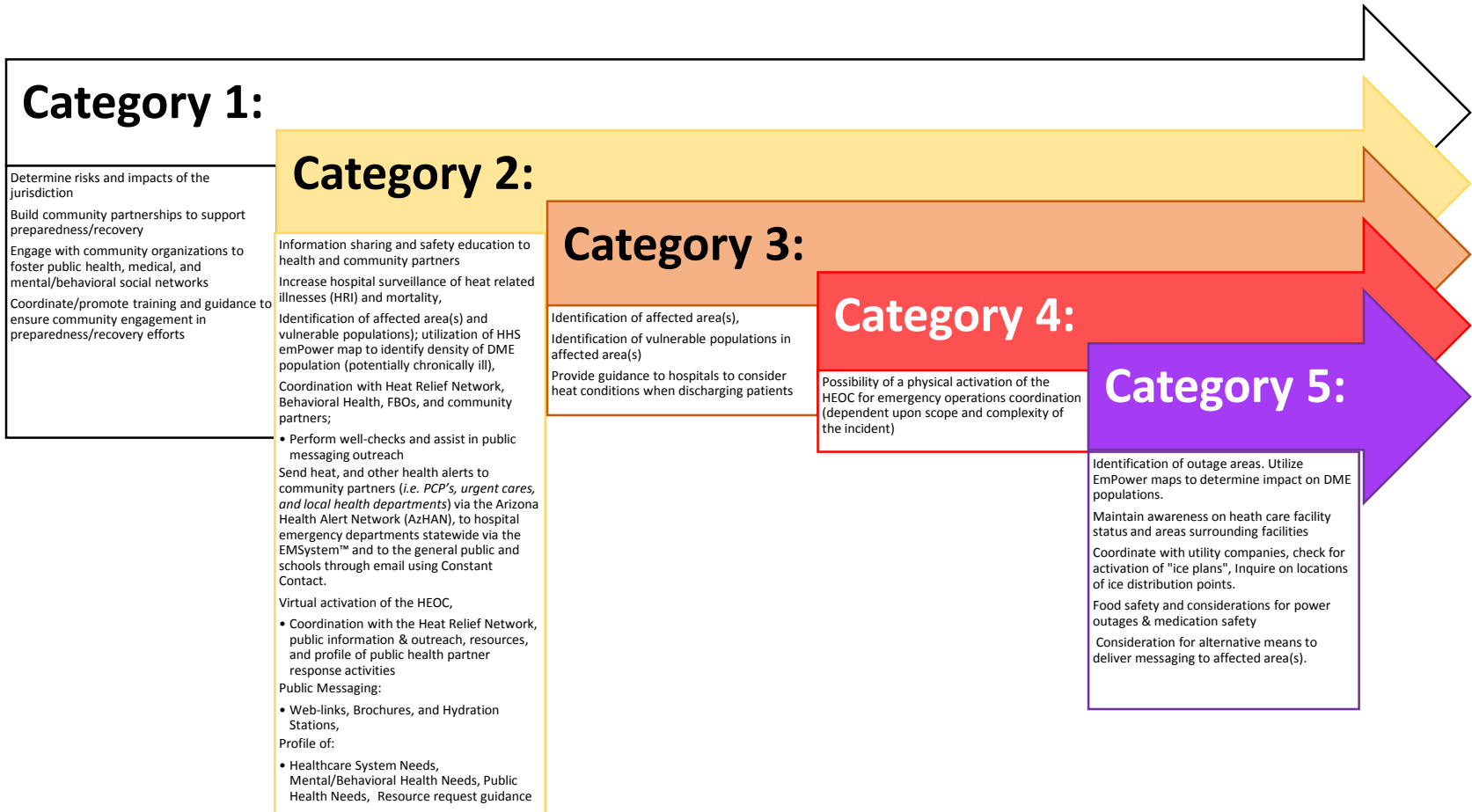
Category 2:
NWS issues a heat watch or warning for any community in Arizona

Category 3:
Daily temperature high $\geq 107^{\circ}\text{F}$ and low $\geq 87^{\circ}\text{F}$ while in a heat watch or warning

Category 4:
3 or more consecutive days with a high $\geq 107^{\circ}\text{F}$ and low $\geq 87^{\circ}\text{F}$ while in a heat watch or warning (heat wave condition)

Category 5:
Power outage during Monsoon Season (June 15th through September 30 th)

Response Activities²



² Response activities for a heat related events have been designed to escalate in phases according to its severity index category, and include all previously listed actions building upon the prior (e.g. Category 3 actions include all Category 2 and Category 1 activities, etc.).

Organization and Assignment of Responsibilities

General

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

Organization

1. Arizona Department of Health Services
2. National Weather Service
3. First response agencies (Law enforcement, Fire, EMS)
4. County/tribal/local health departments
5. Hospitals
6. Arizona Department of Education

Assignment of Responsibilities

Arizona Department of Health Services

- a. EOC staffing and functioning
- b. Communications
- c. Operations of the shelter system in conjunction with the American Red Cross
- d. Emergency public information
- e. Alert and warning systems
- f. Assistance from other jurisdictions
- g. State assistance
- h. Federal assistance
- i. Emergency preparedness training and education
- j. Rumor control
- k. Damage assessment
- l. Hospital surge

National Weather Service

- a. Communications
- b. Emergency public information
- c. Alert and warning systems
- d. Emergency preparedness training and education
- e. Rumor control
- f. Damage assessment

Arizona Health Care Cost Containment System (AHCCCS)

- a. Collaboration with Regional Behavioral Health Authorities (RHBAs) and Tribal Regional Behavioral Health Authorities (TRBHAs) to provide outreach to clients and perform well checks
- b. Collaboration with homeless outreach programs to perform well checks on the homeless population
- c. Assist in public messaging

First Responder Agencies

- a. Emergency medical transportation
- b. Emergency medical treatment
- c. Assisting with special needs evacuation

County/Tribal/Local Health Departments

- a. Emergency medical care information and coordination
- b. Emergency hospital treatment information and coordination
- c. Medical support to shelters
- d. Health advisories
- e. Identification of local health facilities, including hospitals, clinics, dialysis centers, and nursing or rehabilitation centers, supplying and using medical and health items
- f. Identification of special needs populations, including the elderly and very young, and populations requiring specific life-saving services (e.g., dialysis or assistance with breathing)

Hospitals

- a. Emergency medical care
- b. Hospital evacuation
- c. Traditional hospital medical services

Arizona Department of Education

- a. Providing the use of facilities for emergency public education
- b. Providing facilities for emergency housing of evacuees and relief forces
- c. Providing facilities for emergency first aid stations, emergency hospitals, or emergency morgues
- d. Providing personnel for shelter managers and staff
- e. Providing recreation plans for shelter occupants' use during shelter-stay period
- f. Coordinating transportation

Direction, Control, and Coordination

Authority to Initiate Actions

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

Incident Command System

As an agency that receives federal funding, ADHS incorporates elements of the National Incident Management System (NIMS) into emergency operations. The Department's incident command structure, the Public Health Incident Management System (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 utilizes after action items and lessons learned from real-world emergencies, drills and exercises to continually improve response direction and operations coordination.

Information Collection and Dissemination

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

B. The state of Arizona is serviced by four different Weather Forecasting Offices from the NWS: the Phoenix office has responsibility for southwest/ south-central Arizona; the Tucson office forecasts for southeastern Arizona; the Flagstaff office covers the north-central and northeast portion of the state,

and the office in Las Vegas has responsibility for northwest Arizona. Each forecast office is responsible for their messaging and the development of the criteria to issue their alerts. *See the table on the next page for alerting criteria respective to each forecasting office.*

<p>Excessive Heat Watch- Used when the risk of a heat wave has increased, but its occurrence and timing is still uncertain. A watch provides enough lead time so those who need to prepare can do so, such as cities which have excessive heat event mitigation plans.</p>	Flagstaff Office	Issued for elevations below 4000 feet when conditions are favorable for an excessive heat event in the next 12 to 48 hours.
	Las Vegas Office	Issued for elevations below 4000 feet when conditions are favorable for an excessive heat event in the next 12 to 48 hours.
	Phoenix Office	Issued when conditions are favorable for an excessive heat event in the next 12 to 48 hours.
	Tucson Office	Issued when conditions are favorable for an excessive heat event in the next 24 to 72 hours.
<p>Excessive Heat Warning – Used for conditions posing a threat to life or property. These bulletins are based on four factors – forecast maximum temperature, humidity (apparent temperature), time of year, and the expected duration of these conditions. These warnings may be issued for a single county or a larger portion of the state.</p>	Flagstaff Office	Issued for elevations below 4000 feet when an excessive heat event is expected within the next 36 hours.
	Las Vegas Office	Issued for elevations below 4000 feet when an excessive heat events is expected within the next 36 hours and is imminent, or has a very high probability of occurring.
	Phoenix Office	Issued when an excessive heat event is expected in the next 36 hours and is imminent, or has a very high probability of occurring.
	Tucson Office	Issued when an excessive heat event is expected in the next 48 hours and is imminent, or has a very high probability of occurring.

Communications

ADHS will utilize multiple means of communication for coordination throughout a response.

Communication methods may include, but are not limited to the following:

- Arizona Health Alert Network (AZHAN)
- Intermedix® WebEOC™
- Intermedix® EMResource™/EMTrack™
- Arizona Health Services Portal (HSP)
- 800 MHz Secured Radio
- ADHS 24-hour Information Line
 - (602) 364-4500 or (800) 314-9243
- Press Releases
- Social media
- Internal Email
 - *Constant Contact* Email Campaign
- Phone

Annex Development and Maintenance

Development

1. The Emergency Planning Coordinator of the Arizona Department of Health Services, Bureau of Public Health Emergency Preparedness is responsible for coordinating emergency planning.

Maintenance

Requirements

- a. The emergency planning coordinator will maintain, distribute, and update the annex. Responsible officials in State or local agencies should recommend changes and provide updated information periodically (e.g., changes of personnel and available resources). Revisions will be forwarded to people on the distribution list.

Review and Update

Review

The annex and its appendices should be reviewed annually. The emergency planning coordinator should establish a process for the annual review of planning documents by those tasked in those documents, and for preparation and distribution of revisions or changes.

Update

Changes

Changes should be made to this annex when the document is no longer current. Changes may be needed:

1. When hazard consequences or risk areas change
2. When the concept of operations for emergencies changes
3. When departments, agencies, or groups that perform emergency functions are reorganized and can no longer perform the emergency tasks laid out in planning documents
4. When warning and communications systems change
5. When additional emergency resources are obtained through acquisition or agreement, the disposition of existing resources changes, or anticipated emergency resources are no longer available
6. When a training exercise or an actual emergency reveals significant deficiencies in existing planning documents
7. When State/territorial or Federal planning standards for the documents are revised

Methods of Updating Planning Documents

1. Annex Revision
 - a. A revision is a complete rewrite of an existing annex or appendix that essentially results in a new document. Revision is advisable when numerous pages of the document have to be updated, when major portions of the existing document must be deleted or substantial text added, or when the existing document was prepared using a word processing program that is obsolete or no longer available. Revised documents should be given a new date and require new signatures by officials.
2. Formal Annex Change
 - a. A formal change to a planning document involves updating portions of the document by making specific changes to a limited number of pages. Changes are typically numbered to identify them, and are issued to holders of the document with a cover memorandum that has replacement pages attached. The cover memorandum indicates which pages are to be removed and which replacement pages are to be inserted in the document to update it. The person receiving the change is expected to make the required page changes to the document and then annotate the record of changes at the front of the document to indicate that the change has been incorporated into the document. A change to a document does not alter the original document date; new signatures on the document need not be obtained.

Authorities and References

Legal Authority

Federal

- a. **42 U.S.C. 5148** *Stafford Act Immunity from liability provision* - 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.
- b. **28 U.S.C. 2671** *Federal Tort Claims Act*, 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.
- c. **CFR Title 42, Chapter 139, Section 14503** *Public Law limiting liability of volunteers*
 - i. 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:
 - ii. the volunteer was acting within the scope of the volunteers responsibilities in the nonprofit organization or government entity at the time of the act or omission;
 - iii. 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;
 - iv. 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
 - v. 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 possess an operator's license or maintain insurance.

State

*Note: Applicable Authorities and References include, but are not limited to those listed below. For a comprehensive guide to Arizona Revised Statutes please visit

<http://www.azleg.gov/ArizonaRevisedStatutes.asp>

Enhanced Surveillance Advisory

- a. **ARS § 36-782**, 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.

Good Samaritan Law - Health Care Provider and any other Person; Emergency Aid; Non-liability

- a. **ARS § 32-1471** 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.

Limited Liability for Emergency Health Care at Amateur Athletic Events

- a. **ARS § 32-1472** 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.
- b. **ARS § 32-1473** Limited Liability for Treatment Related to Delivery of Infants; Physicians; Hospitals; Exception; Definition
 - i. 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.

- ii. 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.
- iii. 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.
- iv. For the purpose of this section, "emergency" means when labor has begun or a condition exists requiring the delivery of the child or children.

Non-liability

- a. **ARS § 26-314**, 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.
- b. 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.

Volunteer Non-liability

- a. **ARS § 23-901.06**, 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.

- b. **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.

Non-Emergency - Immunity Insurance Coverage

- a. **ARS §12-982. Qualified immunity; insurance coverage**
 - i. 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.
 - ii. 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.
 - iii. 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

- a. Comprehensive Preparedness Guide (CPG) 101: Developing and Maintaining State, Territorial, Tribal, and Local Government Emergency Plans, Federal Emergency Management Agency, March 2009.
- b. Homeland Security Exercise and Evaluation Program (HSEEP), February 2007.
- c. National Incident Management System (NIMS), Department of Homeland Security, December 2008.
- d. National Response Framework, Federal Emergency Management Agency, January 2008.

State

- a. Arizona Department of Emergency and Military Affairs – State Emergency Response and Recovery Plan
- b. Arizona Department of Health Services – Emergency Response Plan
- c. Arizona Department of Health Services – Crisis & Emergency Risk Communication Plan
- d. Arizona Department of Health Services – Heat Resource Guide

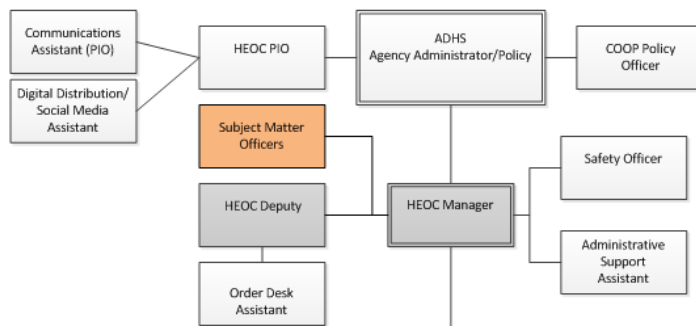
Appendix A: ADHS PHIMS Template

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Event Name:

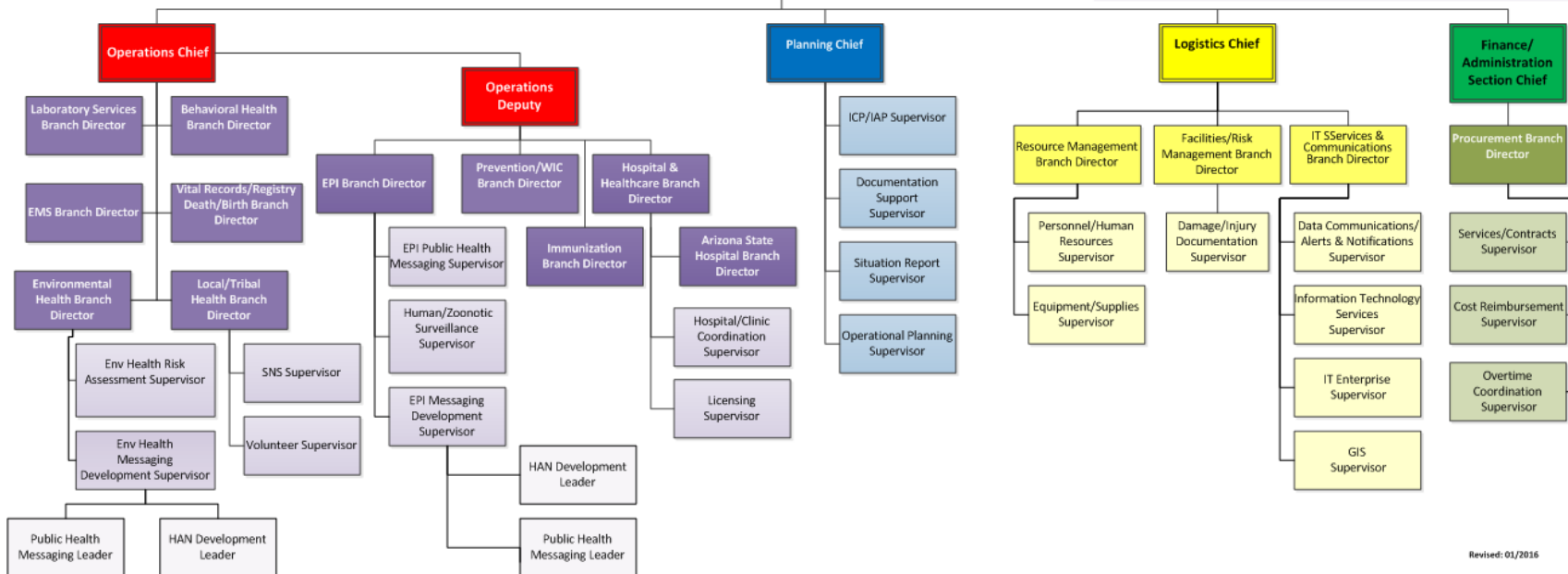
HEOC PHIMS



Subject Matter Officers

Medical Director –
 SEOC Health & Medical Branch Director–
 SEOC Liaison Officer –
 Subject Matter Officer (per event) –
 Native American Liaison Officer –
 State Epidemiology Officer –

Tier	Level	Title	Support
I	Incident Command	Manager	Deputy
II	Command Staff	Officer	Assistant
III	General Staff	Chief	Deputy
IV	Branch	Director	Deputy
V	Group	Supervisor	
VI	Unit	Leader	Coordinator
VII	Strike Team/Task Force	Leader	Single Resource Boss



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