WATER SYSTEM
EMERGENCY RESPONSE PLAN

Prepared by: **Boyle Engineering Corporation** **(2007)**

Updated by: **MKN & Associates, Inc.** **(2021)**

City of Coalinga
Water System
Emergency Response Plan

City of Coalinga

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ACRONYMS AND ABBREVIATIONS

AA	Administrative Analyst
ADD	Average Day Demand
AP	Action Plan
ASDWA	Association of State Drinking Water Administrators
ATSDR	Agency for Toxic Substances and Disease Registry
AWIA	America's Water Infrastructure Act of 2018
AWWA	American Water Works Association
BSL	Biosafety Lab
BWO	Boil Water Order
CAMAL Net	California Mutual Aid Laboratory Network
CB	Citizens Band
CDC	Centers for Disease Control
CDPH	California Department of Public Health
CM	Conservation Manager
CO	Chief Operator
CST	Civilian Support Team
DDW	Division of Drinking Water
DHS	Department of Homeland Security
DOA	Director of Administration
DWP	Drinking Water Program
DWRL	Drinking Water and Radiation Laboratory
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EPA	Environmental Protection Agency
ERP	Emergency Response Plan
EWQSK	Emergency Water Quality Sampling Kit
FBI	Federal Bureau of Investigation
FEMA	Federal Emergency Management Agency
GM	General Manager
GPCD	Gallons per Capita per Day
GPM	Gallons per Minute
HAZMAT	Hazardous Materials
HP	Horsepower
ICS	Incident Command System
ID	Identification
LEPC	Local Emergency Planning Committees
LRN	Laboratory Response Network
MCL	Maximum Contaminant Levels
MDD	Maximum Day Demand
MDL	Microbial Disease Laboratory
MG	Million Gallons
MGD	Million Gallons per Day

NRWA	National Rural Water Association
OES	Office of Emergency Services
OSHA	Occupational Safety and Health Administration
PWS	Public Water System
RMP	Risk Management Plan
RRA	Risk and Resilience Assessment
RTU	Remote Terminal Unit
SAP	Sampling and Analysis Plan
SB	Senate Bill
SCADA	Supervisory Control and Data Acquisition
SDWA	Safe Drinking Water Act
SEMS	Standardized Emergency Management System
SWRCB	State Water Resources Control Board
USEPA	United States Environmental Protection Agency
UWA	Unsafe Water Alert
VA	Vulnerability Assessment
WMD	Weapons of Mass Destruction

CHANGE HISTORY

DESCRIPTION OF CHANGE	NAME/TITLE	DATE
Update and revision of ERP document for America's Water Infrastructure Act (AWIA) compliance during the 2020 cycle. All ERP text and appendices were reviewed and updated with guidance from City staff to incorporate AWIA requirements.	MKN & Associates	12/20/2021

A. INTRODUCTION, GOALS, AND PURPOSE

The purpose of this Water System Emergency Response Plan (ERP) is to provide guidance to the City of Coalinga (City) with a standardized response and recovery protocol to prevent, minimize, and mitigate injury and damage resulting from emergencies or disasters of man-made or natural origin. The ERP also allows the City to be in compliance with the requirements of the America's Water Infrastructure Act of 2018 (AWIA). The ERP includes specific action plans that can be used to response to events and incidents and provide guidance to the City personnel to:

- Provide local, area, and state assistance where and when required during and after disasters as directed by the Fresno Operational Area EOC.
- Implement training procedures by going through mock exercises to make sure all employees are well versed in their roles.

B. GOALS

The goals of this ERP are to:

- Identify detection strategies of threats to the system.
- Identify equipment and resources that can aid in the event of an emergency.
- Identify equipment and resources that can improve the resilience of the system.
- Rapidly restore water service after an emergency.
- Ensure adequate water supply for fire suppression.
- Minimize water system damage
- Minimize impact and loss to customers.
- Minimize negative impacts on public health and employee safety.
- Provide emergency public information concerning customer service.

C. PURPOSE

This ERP has been designed to comply with Section 1433(b) of the Safe Drinking Water Act (SDWA) as amended by the Public Health Security and Bioterrorism Preparedness and Response Act of 2002 (Public Law 107-188, Title IV – Drinking Water Security and Safety); California Government Code Section 8607.2 – Public Water System Plans; California Health and Safety Code, Sections 116460, 116555 and 116750; and California Waterworks Standards, Section 64560. The City of Coalinga completed a Water System Vulnerability Assessment and submittedto the Environmental Protection Agency on June 30, 2004, in accordance with Public Law 107-188. The City has completed a certified Risk and Resilience Assessment (RRA) and this ERP has been updated to comply with Section 2013 of America's Water Infrastructure Act of 2018 (Public Law 115-270).

In compliance with AWIA, this ERP includes:

- Strategies and resources to improve the resilience of the system, including the physical security and cybersecurity of the system;
- Plans and procedures that can be implemented, and identification of equipment that can be utilized, in the event of a malevolent act or natural hazard that threatens the ability of the community water system to deliver safe drinking water;
- Actions, procedures, and equipment which can obviate or significantly lessen the impact of a malevolent act or natural hazard on the public health and the safety and supply of drinking water provided to communities and individuals, including the development of alternative source water options, relocation of water intakes and construction of flood protection barriers; and
- Strategies that can be used to aid in the detection of malevolent acts or natural hazards that threaten the security or resilience of the system.

This ERP has been prepared specifically for water system emergencies but is intended to complement and supplement the "City of Coalinga Emergency Operations Plan," adopted by the City to address the City's planned response to extraordinary emergency situations associated with natural disasters, technological incidents, and national security emergencies in or affecting the City of Coalinga. The "City of Coalinga Emergency Operations Plan" has been designed to establish the framework for implementation of the California Standardized Emergency Management System (SEMS) for the City of Coalinga. Coalinga is located within the Governor's Office of Emergency Services' Mutual Aid Region V. The City Emergency Operations Plan is intended to facilitate multi-agency and multi-jurisdictional coordination, particularly between the City of Coalinga and the Fresno County Operational Area, including special districts and state agencies in emergency operations.

Whenever the ERP is changed or updated, a revised copy will be sent to the DDW District Office.

D. SYSTEM INFORMATION

1. Public Water System ID

The City's water system is identified by SWRCB as System No. CA1010004. This system is owned and operated by the City.

2. City of Coalinga Contacts

The following City Public Works Division personnel have been designated as primary contacts in the event of a water system emergency. A full contact list can be found in **Appendix C**:

Title	Name
City Manager	Marissa Trejo
Public Works Supervisor	Eric Deleon
Utilities Supervisor	Anthony Uribe
Chief Plant Operator	Jared Salona

3. SWRCB Contacts

The following SWRCB staff has been designated as the primary contact in the event of a water system emergency. A full contact list can be found in **Appendix C**:

Title	Name
Division of Drinking Water District 23	Jose Robledo

If the above personnel cannot be reached, contact the State Office of Emergency Services and ask for the "SWRCB Duty Officer." The SWRCB Duty Officer will in turn contact the City Office of Emergency Services and Fresno County Environmental Health.

E. DESCRIPTION OF SYSTEM

Raw water destined for the City flows from the Sacramento-San Joaquin Delta southerly in either the Delta-Mendota Canal or the Central Valley Project California Aqueduct to the O'Neil Forebay, then on southerly in the California Aqueduct to the point of origination of the Coalinga Canal, approximately 15 miles northeast of the City of Coalinga where Highway 145 crosses over the California Aqueduct. After leaving theCalifornia Aqueduct, the water is carried in the Coalinga Canal approximately 12 miles south to the City of Coalinga water treatment plant intake. The water is then lifted from a raw water pump to the City's water treatment plant. After the water flows through the City's conventional filtration treatment plant, the treated water is pumped from a filtered-water pump station into a 27-inch diameter pipeline in Palmer Avenue.

Approximately two miles west of the water treatment plant, the flow tees at Calaveras Avenue and Palmer Avenue. The water eventually continues west another mile and a half to the 2.8-MG Palmer Avenue Reservoir. Water going to Pleasant Valley State Prison travels south in a 12-inch pipeline along Calaveras Avenueto the 5 million gallons (MG) Calaveras Avenue Reservoir. From the Calaveras Reservoir the water continues south along Calaveras Avenue another 3.5 miles until Jayne Avenue where it turns east for a little over a mile to the prison. The water leaving the Palmer Avenue Reservoir flows through approximately 8 miles of 27-inch and 24-inch transmissionmains to the 7.6 MG Derrick Avenue Reservoir. After leaving the Derrick Avenue Reservoir, the water then flows through a 30-inch transmission main into the City's distribution system.

The City also provides treated water to two oil company users (Chevron and AERA Energy) and a co-generation facility (Coalinga CoGen). Chevron takes service from several

locations along Gayle and Derrick Avenues and from the Northwest Reservoir. The 0.2 MG Northwest Reservoir is located north of Coalinga on Derrick Avenue and isfed by the Derrick Booster Pump Station consisting of two 75-HP pumps.

AERA Energy takes service from the 0.5 MG Oil King Reservoir, located a little over three miles north of Palmer Avenue on the west side of Highway 33/198. The Oil KingBooster Pump Station, consisting of two 200-HP pumps, takes water from the Palmer Avenue 27-inch pipeline upstream of the Palmer Avenue Reservoir and lifts it to the OilKing Reservoir.

The City also serves several residential customers east of Coalinga and south of Jayne Avenue through the "Rural System" and a few low-demand industrial/commercial customers outside of town along the various transmission lines.

The main reservoirs in the system are controlled by a sophisticated SCADA system that operates the reservoirs in a manner that maximizes efficiency and minimizes energy costs. Appendix B contains a system map of the City water system with the surface water treatment plant.

F. CRITICAL SYSTEM COMPONENTS

The City's water system is comprised of the following major components and the following components were identified as critical asset in the system by the 2020 RRA Report:

Critical Asset
Pipes and Constructed Conveyances, Water Collections and Intake
Raw Water Pumping Station
Coalinga Canal Turnout
Treatment Facilities
Surface Water Treatment Plant – 12 MGD
Storage and Distribution Facilities
Calaveras Reservoir - 5.0 MG
Palmer Reservoir - 2.8 MG
Derrick Reservoir - 7.6 MG
Northwest Reservoir - 0.2 MG
Oil King Reservoir - 0.5 MG
Oil King BPS - (2) 200 HP pumps
Derrick BPS- (2) 75 HP pumps
Electronic and Automated Systems Components
SCADA System
Financial System

Population Served and Service Connections

The City serves water to approximately 17,000 people living within the Coalinga area. The City serves water to all locations within the City Limits and to some customers on the "Rural System" outside of town.

The approximate number of service connections included in the City of Coalinga water system by type is as follows:

Service Type	**Number**
Single Family Residential	3,502
Multi-family Residential	136
Commercial	315
Industrial	4
Landscape Irrigation	70
Total Connections	**4,027**

G. SEMS OVERVIEW

The Standardized Emergency Management System is the system required by Government Code §8607(a) for managing response to multi-agency and multi-jurisdiction emergencies in California. This ERP is intended to comply with City-adopted SEMS plans and procedures as detailed in the "City of Coalinga Emergency Operations Plan."

SEMS is intended to standardize response to emergencies involving multiple jurisdictions or multiple agencies. SEMS is intended to be flexible and adaptable to the needs of all emergency responders in California. SEMS requires emergency response agencies to use basic principles and components of emergency management, including the Incident Command System, multi-agency or inter-agency coordination, the operational area concept, and established mutual aid systems.

There are five designated levels in the SEMS organization, as shown below. When resources become depleted or are not available at the field or local level, requests for resources are moved up through these levels until they are filled. The type and severity of the incident determines the extent of activation for each level.

State: The state level manages and coordinates state resources in response to the emergency needs of the other levels. This level manages and coordinates mutual aid among the mutual aid regions and between the regional and state levels. The state level also serves as the coordination and communication link between the state and federal disaster response system.

Regional: Because of its size and geography, the state of California has been divided into six mutual aid regions by the Governor's Office Of Emergency Services (OES). In SEMS, the regional level manages and coordinates information and resources among operational areas within the mutual aid region and also between the operational areas and the state level.

Operational Area: The Operational Area concept represents the intermediate level of the state's emergency organization, consisting of Fresno county and all political subdivisions, including water districts and other special districts, within the county area.

Local Government: Local Government includes City of Coalinga, Fresno County, etc.

Field Response: The Field Response Level is where the Incident Command System is applied. At this level, emergency response personnel and resources are managed under ICS to carry out tactical decisions and activities in direct response to an incident or threat.

H. INCIDENT COMMAND SYSTEM (ICS)

The Incident Command System (ICS) is a nationally used standardized on-scene emergency management concept specifically designed to allow its user(s) to adopt an integrated organizational structure equal to the complexity and demands of single or multiple incidents without being hindered by jurisdictional boundaries. ICS is the combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure, with responsibility for the management of resources to effectively accomplish stated objectives pertinent to an incident.

The five functions of the ICS and their respective areas of responsibility are listed below:

1. **Command** is responsible for directing, ordering, and/or controlling resources by virtue of explicit legal, agency, or delegated authority.
2. **Operations** is responsible for the coordinated tactical response of all field operationsdirectly applicable to or in support of the mission(s) in accordance with the Incident Action Plan.
3. **Planning/Intelligence** is responsible for the collection, evaluation, documentation, and use of information about the development of the incident.
4. **Logistics** is responsible for providing facilities, services, personnel, equipment, and tracking the status of resources and materials in support of dealing with the incident.
5. **Finance/Administration** is responsible for all financial and cost analysis aspects ofthe incident and/or administrative aspects not handled by the other functions.

In the event of an incident the five functions: Command; Operations; Planning/Intelligence; Logistics; and Finance/Administration will be delegated by the Incident Commander depending on the size and severity of the incident.

Another important aspect of the ICS is Unified Command. Unified Command Structure is aunified team effort which allows all agencies and City departments or sections with responsibility for dealing with the incident, either geographical or functional, to manage an incident by establishing a common set of incident objectives and strategies. This should be accomplished without losing or abdicating their respective authority, autonomy, responsibility, or accountability.

For further definition regarding the ICS and its function during emergencies involving the City of Coalinga refer to the "City of Coalinga Emergency Operations Plan."

I. EMERGENCY OPERATIONS CENTER (EOC)

Within the City, the various departments and sections are dispersed throughout the City. The Emergency Operations Center (EOC) is the designated location where the key personnel will congregate to make the decisions necessary to manage the given emergency or crisis operation. The purpose of the EOC is to facilitate coordinated response by all the departments and agencies that are assigned emergency management responsibilities. The City of Coalinga Emergency Management Structure is established in Section 1.6.2 of the "City of Coalinga Emergency Operations Plan" (EOP). Annex A of the EOP details policies and procedures and assigns responsibilities to ensure the effective management of emergency operations.

In the event of a declared emergency, the City of Coalinga Emergency OperationsCenter would be located at:

- Primary Location: Fire Station at 300 W. Elm Avenue
- Alternate Location: City Hall at 155 W. Durian Avenue in the City Council Chambers.

During any emergency the following operations are likely to occur in the Emergency Operations Center:

- Continued assessment of the emergency
- Collecting, evaluating, documenting, and disseminating information
- Prioritizing and managing field response
- Coordinating any multi-organizational response
- Coordinating the allocation of available resources
- Coordinating with other municipal agencies as available and as needed

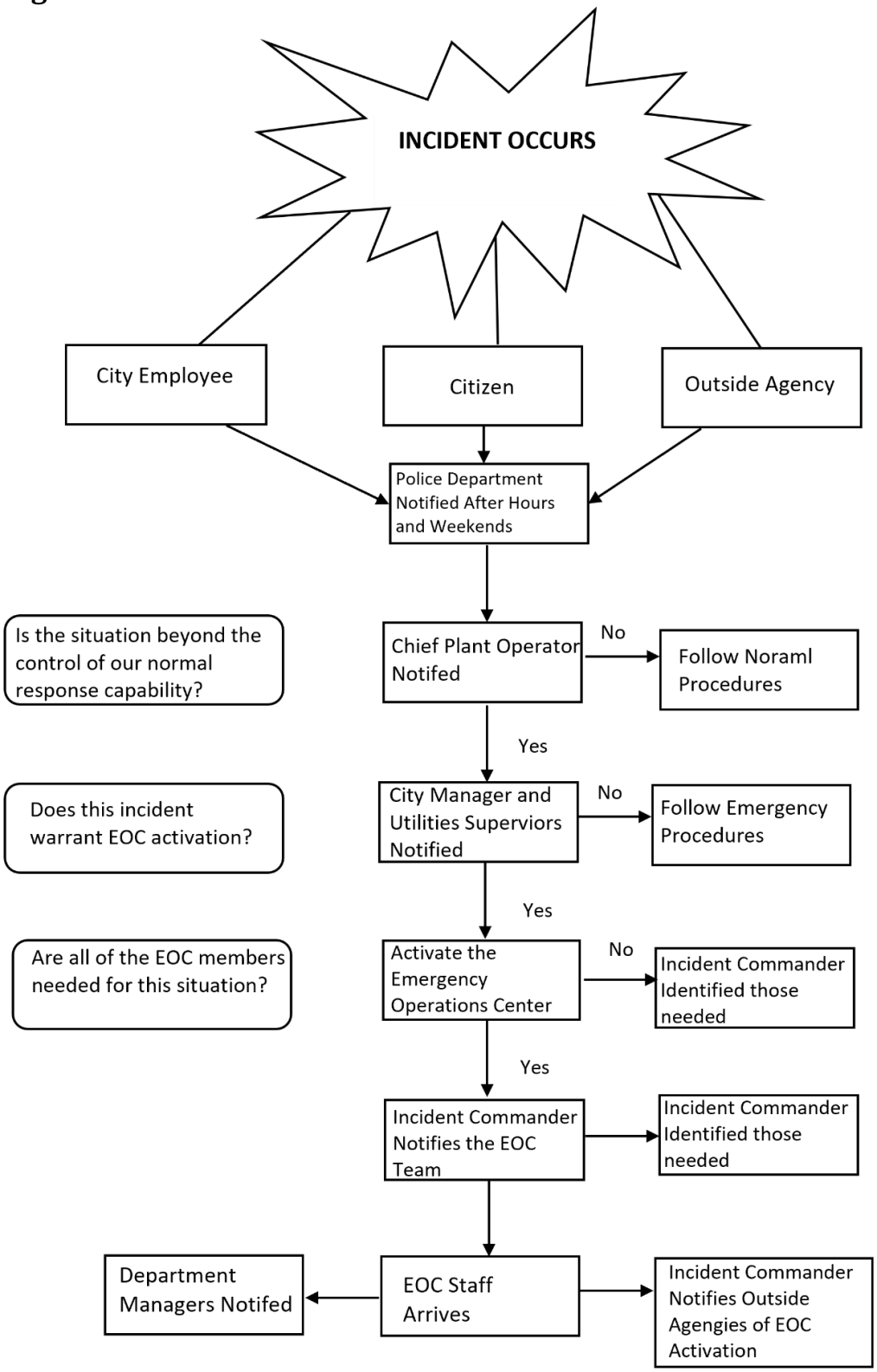
The organization of the actual EOC will vary depending upon the type of emergency to be handled, as well as upon what resources are available. The Incident Commander shall be the lead decision maker in the EOC. To help ensure that the best decisions are reached based upon the information available, the Incident Commander will need to engage in frequent consultation with the other members of the team. It is vital that the Incident Commander ensures that there is representation in the EOC by all departments that might be helpful in the given emergency. It is also equally importantthat the Incident Commander

work to keep the number of people in the EOC as small as possible to help ensure adequate control is maintained.

The process of activating the EOC can be started from a variety of sources. The most usual source of initial information will likely come from a utility employee, a citizen, or another City, County, State or possibly federal employee. Once this initial information is received and ultimately passed to the on-duty Police or Fire Department, the Chief Plant Operator, the Utilities Supervisor, or the City Manager the chain of decision-making has begun.

Figure 1 depicts a flow-chart delineating the decision process from the initialreport up to the activation of the EOC. This is a rather simplistic view of the process but isintended to provide an easily understood overview of the mechanics behind activating the EOC.

Figure 1: EOC Activation Flowchart



It should be noted that the Incident Commander is not necessarily initially located in the EOC. The Incident Commander may be the first responding Police or Fire Department senior staff person arriving at the incident sight where operations are guided from the site until appropriate to move the Incident Command to the EOC at which time the Incident Commander role may be assumed by another person.

J. WATER SYSTEM EMERGENCY MANAGEMENT TEAM

All emergency incidents and/or attacks on the water system will customarily involve all or portions of the Water System Emergency Management Team. It is important to remember that the Water System Emergency Management Team in not intended to conflict with the City of Coalinga Emergency Operations Plan but rather to complement it. The Water System Emergency Management Team will, during more serious or widespread incidents, be working as a part of the ICS working directly with the EOC and Incident Commander. However, all or portions of the Water System Emergency Management Team will likely be involved with all water system emergencies regardless of if the EOC is activated or not.

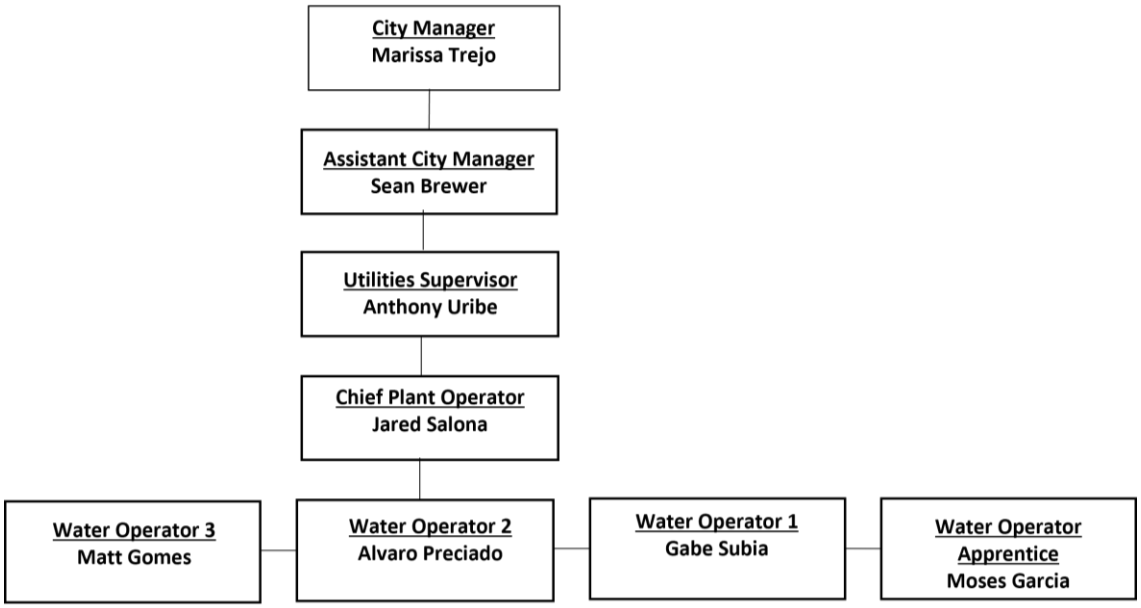
The makeup of the Water System Emergency Management Team should never be considered "complete." Rather, it should be a fluid organization, designed so that the composition can be modified, expanded, or minimized as necessary.

The Water System Emergency Management Team will normally be comprised of the following members:

- City Manager
- Asst. City Manager
- Utilities Supervisor
- Chief Plant Operator
- Water Operators

Figure 2 shows a summary of the City's organization structure. Contact information for the City staff is included in **Appendix C**.

Figure 2: City of Coalinga Organizational Chart



The following are examples of the minimum responsibilities that each of these individuals would be expected to assume.

City Manager:

- The City Manager acts as the default Incident Commander.
- Identify job and position responsibilities, current priorities, and action plan.
- Provides the overall management direction for emergency operations and can active the EOC.
- Responsible for ensuring that all members of City Government are kept informed of the situation.
- Responsible for ensuring that the City of Coalinga Emergency Operations Plan is administered in accordance with SEMS protocol.
- Responsible for communicating with the Fresno County and State of California Office of Emergency Services as appropriate.
- Works closely with Utilities Supervisor regarding content and timing of news releases.

Assistant City Manager:

- Maintains Sign-in Sheets and Position Log (**Appendix F**)
- Monitors local media reporting
- Provides general support to the City Manager
- Follows-up with communications of partner agencies

Utilities Supervisor:

- The Utilities Supervisor will function in this role, unless he is unavailable. Inthe absence of the Utilities Supervisor, the Chief Plant Operator will assume these duties.
- Functions as the primary interface between public works division field personnel and the City Manager.
- Responsible for ensuring that adequate public works staff is available to carry out actions and activities necessary to adequately deal with the emergency.
- Responsible for ensuring that the City Manager is kept informed of the situation status throughout the emergency.
- Oversee the normal essential activities related to water system distribution.
- Be prepared to assign distribution staff to assist water treatment plant staff as required if the emergency is related to water quality.
- Ensure that distribution and production staff is appropriately informed of activities relating to the emergency including required working hours.

Chief Plant Operator:

- The Chief Plant Operator will function in this role unless he is unavailable. In the absence of the Chief Plant Operator, the most senior water system operator will assume these duties.
- Functions as the primary coordinator of water treatment plant and water distribution system personnel and coordinates with the Utilities Supervisor during emergency activities.
- Responsible for ensuring that the Utilities Supervisor is kept informed of the situation status throughout the emergency.
- Oversee the normal essential activities related to system water quality.
- Functions as primary contact with the California State Water Resources Control Board (SWRCB) Division of Drinking Water (DDW) and is responsible for keeping DDW informed of the situation status throughout the emergency.
- Ensure that the water treatment plant and distribution system staff shall verify the chlorine residual (when possible/available) throughout the system in the event of bacteriological contamination as soon as possible.
- Ensure that the water treatment plant and distribution staff take all necessary additional samples, both chlorine and bacteriological, and arrange for any necessary testing.
- Be ready to assign water treatment plant and distribution staff to assist on-duty water treatment plant staff as required if the emergency is not related to water quality.
- Ensure that water treatment plant and distribution staff is appropriately informed of activities relating to the emergency including required working hours.

Water Operators:

- Start any necessary generators
- Carry out plant operations

- Check all Critical Care Facilities listed in Appendix B and as necessary:
- Ensure water deliveries
- Monitor water consumption
- Forecast water usage
- Provide support for external government agencies or contractors as listed in **Appendix C**.

This Emergency Response Plan for the City of Coalinga water system should be considered a "living" document that will require periodic update as conditions and technology change. Thereare a number of items that will be addressed by the City as a result of information obtained during the preparation of this ERP. Specific steps that will now be taken are listed below:

1. All individuals considered part of the Water System Emergency Management Team should become thoroughly familiar with the City of Coalinga Emergency Operations Plan, SEMS guidelines, the ICS system, and this ERP. This includes the Mayor, City Manager, Assistant City Manager, the Utilities Supervisor, the Chief Plant Operator, and all other personnel mentioned in **Appendix C**.
2. The City should set up training for City employees in emergency response procedures, particularly police and fire department employees that would likely be "first responder"in a water system emergency.
3. Key information such as contact lists, maps of the water system, and equipment listsshould be placed on thumb-drive for easy access by the Water System Emergency Management Team.

K. EMERGENCY RESPONSE PLAN

City's emergencies can be defined as the actual or threatened existence of conditions of disaster or of extreme peril to the safety of persons and property within the City caused by such conditions such as fire, flood, storm, epidemic, riot, earthquake, or other conditions resulting from war, terrorist acts, or other malevolent attacks. Specific APs have been identified to address each of the high-risk threat scenarios identified in the City's RRA. APs are tailored ERP actions that address specific major events. For security reasons, the procedures outlined in these documents are intentionally general in nature, omitting confidential details and affected assets. The City has not yet developed a comprehensive scope of APs, therefore some APs are general guidelines and should be adapted to meet the City's needs. The specific APs are attached in **Appendix A** and listed below.

Malevolent Acts (Man-made threats):

Event / Threat	AP No.
Contamination to Water System	1
Structural Damage from Explosive Device (Assault on Utility)	2
Employee Assaulted with Weapon (Assault on Utility)	3
Bomb Threat (Assault on Utility)	4
Chemical Release	5
Power Outage	6
Water Supply Interruption (Sabotage)	7
Cybersecurity	8
Pandemic	9

Natural Hazards:

Natural Hazard	AP No.
Wildfire	10
Earthquake	11

Three sample emergency responses, based on scenarios developed during the Water System Vulnerability Assessment, are located in **Appendix A**. Regardless of the situation that occurs, these responses could be modified to address the given incident.

L. MITIGATION MEASURES

Mitigation measures have been established by the City to be readily available resources in the event of a natural disaster or malevolent act against the water system occurs.

1. Alternative Water Sources

The only potential alternative potable water source would be to truck in water. There are no nearby municipalities or private water companies that could be connected to as temporary sources of potable water. Potential sources of non-potable water would include water from the Coalinga canal (if thewater is not contaminated). All non-potable water would need to be trucked to distributionpoints and instructions provided in the safe use of these waters.

2. Amounts of Water Needed for Various Durations

In the event of a catastrophic loss of all City water, each resident within the City would require a minimum of 2 to 3 gallons of water per day to sustain minimal drinking and sanitary conditions. For the City, this would amount to around 40,000 gallons per day.

3. Regional Aid Agreements (interconnections)

The City presently has no interconnections with adjacent water systems. There are no existing regional aid agreements that provide for alternative emergency water sources.

4. Emergency Water Supply Sources

If a supply of emergency potable water is necessary, it could come from the Cities of Avenal, Huron, Lemoore, or Hanford. Tanker trucks, properly disinfected, could be used to carry potable water to distribution points. Local water companies that could provide potable water are listed in **Appendix C**.

5. Contact Lists

A contact list can be found in **Appendix C** that contains names, organizational and emergency titles, and contact numbers.

6. Equipment List

An equipment list can be found in **Appendix B** that list equipment that would be available to the City during a water system emergency. A list of vendors for supplemental equipment can be found in **Appendix C**.

7. Critical Care Facilities List

A contact list can be found in **Appendix C** that contain a list of critical care facilities that should be notified in the event of an emergency.

8. Media Communication

The City Manager and the Mayor are the only authorized representatives empowered to provide and release information to the media regarding the Coalinga water system. When present, the City Manager shall be the primary source of detailed information thatthe other authorized representatives receive their information and updates from.

M. HAZARD RESPONSE GUIDELINES

Two categories of emergencies were evaluated in the 2020 Risk and Resilience Assessment (RRA Report): Natural Hazards and Malevolent Acts

Natural Hazard Responses

There are several naturally occurring disasters that may result in an emergency. The following list includes the natural hazards that were identified by the RRA Report as the most likely to occur that could cause damage to the water system.

- Earthquake
- Wildfire
- Flood

In the event of a natural hazard the following response actions should be evaluated and implemented as determined necessary. The person who first notices the situation should determine whether an immediate response by police, fire, or emergency medical services. If so immediately call 911 to report the incident.

1. Detection Strategies

If a natural hazard occurs, the following detection strategies may be implemented to promote early identification of a threat:

- Loss of pressure
- Unknown compound found near water source: At the first indication of the presence of an unknown compound at a water system facility, Public Works and/or Police Department personnel shall IMMEDIATELY TERMINATE any investigation, evacuate the site, and notify the Chief Plant Operator of the possible contamination who will assume responsibility for the identification and handling of the unknown compound.
- Unusual drops in residual disinfectant
- Public health and environmental concerns.

2. Countermeasures

Some basic forms of protective measures to implement in the event of a natural disaster are:

- Education of staff and the public.
- Maintenance and monitoring of disinfection residual throughout the distribution system.
- Testing of source water tested and maintenance of emergency response plans on hand that include appropriate responses by the local, state and federal government.
- Tested and maintained protocols for the issuance of Boil Water, Do Not Drink, and Do Not Use orders to the public.
- Isolating affected parts of the system, if it can be done without spillage and without disruption to customers.

- Estimate the repairs required for restoring the system or facility; the estimate should consider supplies, equipment, rental of specialized equipment (e.g., cranes), and additional staffing needs.
- Consider looking into bottled water suppliers.

3. Assessment of Threat

If a natural disaster has occurred, an assessment must be performed quickly and should be based on any information that is readily available or can be quickly collected. If contamination to the water system is suspected a rapid water quality test should be performed.

4. Credibility of Threat

- Determine if the natural disaster poses a threat to the water system's supply source, distribution abilities, or storage facilities.
- Predict the extent of damage to the system or facility that could occur.

5. Categorize the Threat

- Determine if local, county, or State assistance will be required to restore normal water system operations.

6. Response Procedures

a. Initial Notifications

If a natural disaster event has occurred or is underway as determined from the preliminary assessment, the following notifications will likely be made by the Water System Emergency Management Team.

- The Chief Plant Operator shall notify the City Manager, SWRCB, Public Works, Public Works Supervisor, and the Utilities Supervisor.
- The City Manager shall notify the Mayor and City Council members.
- If appropriate, the City Manager should notify State and Fresno County Office of Emergency Services representatives, and Fresno CountyEnvironmental Health.
- The City Manager should also familiarize himself of the situation in case he receives calls from the media during the initial phase of the incident.
- The City Fire Department Hazardous Materials Squad will need to be deployed if initial site inspection indicates the possible presence of hazardous material.

b. Determination Decision

- Utilities Supervisor to determine whether import canals, treatment systems, or distribution facilities need emergency water quality testing.
- Incident Commander to determine which agency (i.e., Public Works, Police Department, Fire Department, etc.) will take the lead and how to establish an appropriate Unified Command.

- Chief Plant Operator to determine system isolation parameters with input from the utilities personnel.
- Incident Commander to determine service area impact, size, location, and duration.
- Chief Plant Operator to determine general recovery strategy: detoxification, dilution, or other solution.
- In cooperation with the City Manager, Chief Plant Operator, Public Works Supervisor,and Utilities Supervisor, estimate the ongoing involvement of additional agencies.

Malevolent Act Responses

The following Malevolent Acts were identified by the City's RRA Report as the most likely threats to the City's water system.

- Assault on Utility
- Theft or Diversion
- Sabotage
- Contamination of Source Water – Accidental
- Contamination of Source Water – Intentional
- Contamination or Finished Water-Accidental
- Contamination of Finished Water- Intentional.
- Cyber Attack on Process Control Systems
- Cyber Attack on Business Enterprise System

1. Detection Strategies

If a malevolent act occurs, the following detection strategies may be implemented to promote early identification of a threat:

- Customer complaints
- Reports of suspicious activity
- Notification of criminal activity by police or other agency
- Written or verbal threats to the water system
- Reports of water contamination
- Unknown compound found near water source: At the first indication of the presence of an unknown compound at a water system facility, Public Works and/or Police Department personnel shall IMMEDIATELY TERMINATE any investigation, evacuate the site, and notify the Chief Plant Operator of the possible contamination who will assume responsibility for the identification and handling of the unknown compound.
- Public health and environmental concerns.

2. Countermeasures

The term "countermeasures" covers the spectrum from prevention, detection, and recovery from incidents. The list of applicable protective measures is never ending and may take

many different shapes in many different forms.Some of the most basic forms of protective measures are:

- Education of staff and the public
- Maintenance and monitoring of disinfection residual throughout the distribution system
- Rapid communication of suspicious activity, including automated alarms to local lawenforcement authorities
- Testing of source water tested and maintenance of emergency response plans on hand that include appropriate responses by the local, state and federal government
- Tested and maintained protocols for the issuance of Boil Water, Do Not Drink, and Do Not Use orders to the public
- Testing of source water and maintenance of recovery plans that may be implemented promptly that include responses by alternative water supply sources, local, state, and federal agencies, as well as the private sector
- Regular review of security procedures with the utilities and Public Works staff
- Requirement for employees to change their passwords periodically on critical automated management systems and assurance that system administrators implementthe best security practices known for information technology systems and networks
- Issue "Boil Water" and "Do Not Drink" orders as necessary.

3. Assessment of Threat

If a malevolent act is suspected, an assessment must be performed quickly and should be based on any information that is readily available or can be quickly collected. If contamination to the water system is suspected a rapid water quality test should be performed. Local law agencies should be utilized for assistance in the assessment if it is believed that potential criminal or terrorist activity has occurred.

4. Credibility of Threat

- In cases where the attack is not obvious, or has not already occurred, the following questions should be evaluated:
- Was there a specific threat made? *"I put something in your water system!"*
- Does the threat, if true, affect a critical component of the system? *Well, pipeline, treatment plant, or reservoir.*
- What was the tone of the threat? *Was the caller serious? Did he have an accent? Did he seem to be intelligent?*
- Is there any supporting evidence regarding the threat? *Witnesses: evidence left behind, etc.*

5. Categorize the Threat

Before any action can be taken on a real emergency or a threat it must be categorized. Some of the issues that need to be addressed are:

- Assess if this is a probable threat:
  - Is it most likely a hoax, based upon available information?
  - Is it most likely just a prank from a juvenile caller?
  - Is the caller making a ridiculous assertion? Did they claim to have already blown up a building that is clearly still standing?
- Assess if a physical attack has occurred or is underway:
  - Has there been real damage of treatment and/or delivery facilities?
  - Has this sabotage or destruction already been verified?
- Assess if a cyber-attack is probable:
  - Has there been malicious electronic access and manipulation of a critical system or network?
  - Has actual control of the system been taken away?
  - Has the system been compromised or defeated?
- Assess if a chemical of nuclear attack is probable:
  - Is there enough corroborating evidence to suggest that a facility has been attacked with a nuclear, biological or chemical agent?
  - Is there obvious evidence such as "white powder" near water system facilities or damaged access doors or hatches indicating that someone has tampered with the system?

6. Response Procedures - Preliminary Notifications

If an actual event, and not a threat, is underway based upon the information from the preliminary assessment the notifications will likely be some of the first that are made by the Water System Emergency Management Team.

- The Chief Plant Operator shall notify the City Manager, SWRCB, Public Works, Public Works Supervisor, and the Utilities Supervisor.
- The City Manager shall notify the City Council.
- If appropriate, the City Manager should notify State and Fresno County Office of Emergency Services representatives, the Fresno office of the FBI, and Fresno County Environmental Health.
- The City Manager should also familiarize himself of the situation in case he receives calls from the media during the initial phase of the incident.
- The City Fire Department Hazardous Materials Squad will need to be deployed if initial site inspection indicates the possible presence of hazardous material.

7. Investigation

Based on the determination from the preliminary assessment carry-out the following procedures in response to the malevolent act.

- If a threat is determined probable:
    - The Chief Plant Operator and the Director of Public Works will have the joint lead for ensuring water service to the community.
    - The Chief of Police will have the lead on security.
    - Utilities Supervisor personnel will have the lead in on-site testing and obtaining water samples to confirm water quality.
- If a physical or electronic attack was determined probable:
    - Depending on the severity of the attack, the EOC may be activated. If activated, all actions will be coordinated through the EOC Incident Command System in accordance with SEMS guidelines. If the EOC is not activated, the Water System Emergency Management Team will act as the coordinating entity.
    - The City Police Department will typically have the lead on the criminal investigation with support from the FBI depending on the severity of the attack.
    - SWRCB will have the lead on public health concerns.
    - The Chief Plant Operator and Utilities Supervisor will retain the lead on keeping water service to the community.
    - Chief Plant Operator will have the lead in on-site testing and obtaining water samples to confirm water quality.

- If a possible nuclear, biological or chemical attack is determined probable:
    - Verification of this level of threat will trigger activation of the EOC. All actions will then be coordinated through the EOC ICS in accordance with SEMS guidelines.
    - The City Police Department will typically have the lead on the criminal investigation with support from the FBI depending on the severity of the attack.
    - SWRCB will have the lead on public health concerns.
    - The Department of Homeland Security will likely assume jurisdiction on any terrorist related activities.
    - The Public Works will likely retain the lead on keeping water service to the community.
    - The City of Coalinga shall assume the lead for locating alternative potable and non-potable water sources.
    - The City Fire Department Hazardous Materials Squad will have the lead in acquiring samples of possibly contaminated water with the support of the City Public Works Division.

8. Precautionary Actions

While the initial notifications are taking place and the investigation into what has occurred isbeginning, the Water System Emergency Management Team can consider implementing precautionary mitigation measures such as:

- Isolating affected parts of the system, if it can be done without spillage and without disruption to customers.
- Issue “Boil Water” and “Do Not Drink” orders as necessary.
- Consider looking into bottled water suppliers.
- Protect and preserve any evidence at what may be considered a “crime scene”.
- Keep in close contact with the City Manager to determine if the EOC will be activated based upon the size and scope of the emergency.
- Increase security measures across the board to help protect against copycat crimes ora planned “second hit”. The Water System Emergency Management Team should also consider if the first event is the real thing or merely a diversionary or masking attack.
- Do what can be done to assist the decision makers as necessary.

9. Determination Decisions

- Determine whether the attack was on the import canals, treatment systems, or distribution facilities.
- In cooperation with the City Manager, determine which agency (i.e., Public Works, Police Department, Fire Department, etc.) will take the lead and how to establish an appropriate Unified Command.
- Determine system isolation parameters with input from the Chief Plant Operator andutilities personnel.
- Determine service area impact, size, location, and duration.
- Determine general recovery strategy: detoxification, dilution, or other solution.
- In cooperation with the City Manager, Chief Plant Operator, Public Works Supervisor,and Utilities Supervisor, estimate the ongoing involvement of additional agencies.

N. RESTART/DEMOBILIZATION PLAN

Similar to the issues addressed during the incident, a plan for demobilization should also ensure proper management of resources, restarting of the water system, and keeping key agencies and individuals informed.

Here are some pertinent issues to be addressed by the Water System Emergency Management Team:

- The Incident Commander will continue to follow the established action plans and implement the command structure until water system operations are returned to normal operating conditions.
- The Chief Plant Operator will work with Water Operators to decontamination and disinfection of the affected facility or facilities.
- The Incident Commander will coordinate with the Utility Supervisors and Chief Plant Operator to determine which operational restart plan is required for the affected facility or facilities.
- The Utility Supervisor shall Ensure that distribution and production staff is appropriately informed of activities relating to the emergency including required working hours, responsibilities, and documentation required for operation.
- The City Manager and Assistant City Manager will continue to update emergency response personnel, media, and other City staff.

O. EMERGENCY NOTIFICATION PROCEDURES

This section describes the various notices and the procedures that will be used to notify the public in the event of a water system emergency that requires notification. Emergency Notifications are listed in **Appendix F**. The procedure by which to issue and cancel notifications is included as AP-12 in **Appendix A**.

The SWRCB has regulatory authority and is the governmental agencythat makes the final determination when a public water supplier must issue a Boil Water Order, an Unsafe Water - Do Not Drink Notice, or issue a Public Notice of Regulation Violation.

1. Boil Water Notice

Boil Water Notices are commonly issued when coliform bacteria confirmation is obtained. The following are examples of what could cause the issuance of such anorder:

- Anytime system pressure drops below 5 psi.
- Conditions are such that non-potable water has the potential to enter the system.
- Anytime natural disasters, such as earthquakes, prevents operations from maintaining adequate system pressure (due to a broken water main for example).
- Anytime a physical cross connection between non-potable and the potable water system exists (such as failure of a backflow prevention device at a manufacturing plant that uses City water to fill chemical tanks containing a product not meant for human consumption).
- Anytime the disinfection process fails; and/or when a storage reservoir goes empty.

2. Unsafe Water – Do not Drink Notice

A Do Not Drink Order will be typically issued when chemical, radiological, or other type of contamination occurs that would make the water unsafe to drink and may includethe following:

- The maximum contaminant level is exceeded for a particular contaminant.
- Water supply is contaminated by a chemical spill.
- Water supply is contaminated by any other means, such as a terrorist attack or other malevolent action.

With Unsafe Water – Do Not Drink Notice the water supply cannot be made safe by boiling.

3. Public Notice of Regulation Violation

A Public Notification is different from a Boil Water Order. With Boil Water Orders citizens are instructed to take specific action by telling them to boil water for 5-minutesprior to use due to an IMMEDIATE bacteriological health concern. Conversely, a Public Notification serves to inform the public of a procedural violation that has occurred that MAY have affected their health. A Public Notification requires no directaction from the citizens.

A Public Notification may be issued when any of the following occurs:

- 5% of the monthly total bacteriological samples taken were positive (the total coliform rule).
- Anytime the MCL of any primary standard has been exceeded.
- Anytime the turbidity MCL is exceeded for more than 4-hours (applies to the surface water treatment plant).

Appendix A
Action Plans

The action plans listed below are general guidelines and may be further developed by Coalinga City staff.

- Scenario 1 – Water Treatment Plant Attack from an Intentional Act
- Scenario 2 – Threat of Palmer Reservoir Damage from an Intentional Act
- Scenario 3 - Threat of Derrick Reservoir Damage from an Intentional Act
- AP 1 – Water Contamination
    - AP 1A – Threat of or Actual Contamination to Water System
    - AP 1B – Threat or Actual Contamination to Water System Credible Stage
    - AP 1C – Contamination to Water System Confirmed Stage
- AP 2 – Structural Damage from Explosive Device
- AP 3 – Employee Assaulted with Weapon
- AP 4 – Bomb Threat
- AP 5 – Chemical Release
- AP 6 – Power Outage
- AP 7 – Water Supply Interruption
- AP 8 – Cybersecurity
- AP 9 – Pandemic
- AP 10 – Wildfire
- AP 11 – Earthquake
- AP 12- Issue Public Notifications

Scenario No. 1
Water Treatment Plant Attack from an Intentional Act

A terrorist driving a stolen gasoline tanker truck filled with 20,000 gallons of diesel fuel, with a 200-pound improvised explosive device attached, crashes the vehicle into the westgate of the water treatment plant and into the power substation at the plant. He then detonates the device destroying himself, the power substation and main plant transformer, the treated water pumping station and clear well, and any City personnel in the vicinity.

Response

This incident will result in immediate fire department and police response. Due to the severity of the attack, the first responding Police or Fire personnel will assume the role of Incident Commander and will activate SEMS in accordance with the City of Coalinga Emergency Operations Plan.

Police will close off the area and contact, the Chief Plant Operator, the Fresno County Sheriff, and the FBI. The Police will notify the City Manager who will take over publicinformation. The Chief Plant Operator will normally contact the Public Works Director.

The Utilities Supervisor will work with the Chief Plant Operator to isolate the water treatment plant by shutting off all connections to the water system. Water will have to be trucked in using either tankers or trucks. A list of water companies is available on Appendix C of this plan that may be helpful.

Using available City Public Works and other miscellaneous staff, a flier will be distributed door-to-door explaining the situation and instructing citizens to use as little water as possibleto conserve the water still left in the system. The Pleasant Valley Prison will be contacted and requested to reduce their water consumption to a minimum. The local paper (Coalinga Record) and the Cable TV will be contacted to inform the public on what to do in this water emergency.

All City personnel are advised not to make comments to media. The City Manager will actas spokesperson for the City during the preliminary stages of the incident if necessary.

The Chief Plant Operator will contact SWRCB after the degree of contamination has beendetermined. A "Do Not Use" order may be required by SWRCB.

Water samples are drawn and sent to the testing laboratory for verification of contamination.

Scenario No. 2
Threat of Palmer Reservoir Damage from an Intentional Act

Two "Earth First" terrorists enter the Palmer Avenue reservoir site by climbing over the fence at night. One terrorist places an improvised explosive device on the exposed outflowpiping while the second places a similar device at the base of the water storage tank. Both devices have time-delay firing systems allowing the terrorists to escape prior to detonation.

Response

This incident will result in immediate fire department and police response. Due to the severity of the attack, the first responding Police or Fire personnel will assume the role of Incident Commander and will activate SEMS in accordance with the City of Coalinga Emergency Operations Plan.

Police will close off the area and contact the Chief Plant Operator, the Fresno County Sheriff, and the FBI. The Police will notify the City Manager who will take over publicinformation. The Chief Plant Operator will normally contact the Public Works Director.

The Utilities Supervisor and the Chief Plant Operator will isolate the reservoir by shutting off all connections to the water system. A reduced amount of flow will be divertedcompletely to Calaveras Reservoirs and supplied to the City at a significantly reduced rate.

Using available City Public Works and other miscellaneous staff, a flier will be distributed door-to-door explaining the situation and instructing citizens to use as little water as possibleto conserve the water still left in the system. The Pleasant Valley Prison will be contacted and requested to reduce their water consumption to a minimum. The local paper (Coalinga Record) and the Cable TV will be contacted to inform the public on what to do in this water emergency.

All City personnel are advised not to make comments to media. The City Manager will actas spokesperson for the City during the preliminary stages of the incident if necessary.

The Chief Plant Operator will contact SWRCB after the degree of contamination has been determined a "Do Not Use" order may be required by SWRCB.

Water samples are drawn and sent to the testing laboratory for verification of contamination.

Scenario No. 3
Threat of Derrick Reservoir Damage from an Intentional Act

A lone wolf terrorist enters the Derrick Avenue reservoir site at night by cutting off the chain holding the padlocks on the north gate. He then places a small, 5- to 10-pound improvised explosive device (IED) at the base of the tank near the reservoir outlet pipe. Theuse of a time delay firing system on the IED would allow the terrorist to escape prior to detonation.

Response

This incident will result in immediate fire department and police response. Due to the severity of the attack, the first responding Police or Fire personnel will assume the role of Incident Commander and will activate SEMS in accordance with the City of Coalinga Emergency Operations Plan.

Police will close off the area and contact, the Chief Plant Operator, the Fresno County Sheriff, and the FBI. The Police will notify the City Manager who will take over publicinformation. The Chief Plant Operator will normally contact the Public Works Director.

The Utilities Supervisor and the Chief Plant Operator will isolate the reservoir by shutting off all connections to the water system. A reduced amount of flow will be diverted completely to Calaveras Reservoirs and through the line in Highway 33/198 from Gale Avenue to Phelps Avenue and supplied to the City at a significantly reduced rate.

Using available City Public Works and other miscellaneous staff, a flier will be distributed door-to-door explaining the situation and instructing citizens to use as little water as possibleto conserve the water still left in the system. The Pleasant Valley Prison will be contacted and requested to reduce their water consumption to a minimum. The local paper (Coalinga Record) and the Cable TV will be contacted to inform the public on what to do in this water emergency.

All City personnel are advised not to make comments to media. The City Manager will actas spokesperson for the City during the preliminary stages of the incident if necessary.

The Chief Plant Operator will contact SWRCB after the degree of contamination has been determined. A "Do Not Use" order may be required by SWRCB.

Water samples are drawn and sent to the testing laboratory for verification of contamination.

AP 1A - Threat of or Actual Contamination to Water System

POSSIBLE STAGE

AP Summary:	This Action Plan applies to the intentional introduction of a contaminant into the water system. The contaminant could be introduced at any point within the system, including raw water, treatment facilities, distribution system including distribution pipes, finished water storage, or pump stations. The adversary may or may not give notice of the contaminant or provide the location. Contamination may have actually occurred or it may be a hoax.	
Initiation and Notification:	1. Initiate this AP if any of the following has occurred: Security Breach (including, for example): • Unsecured Doors • Open Hatches • Unlocked/Forced Gates • Alarm Triggered Witness Account (including, for example): • Suspicious Activity • Trespassing • Breaking and Entering • Tampering with Equipment or Property Direct Notification by Perpetrator (including, for example): • Verbal Threat • Threat in Writing Notification by Law Enforcement (including, for example): • Suspicious Activity • Threat made to Water System Notification by News Media (including, for example): • Threat Delivered to News Media • Media Discovers Threat Unusual Water Quality Parameters (including, for example): • Changes in pH, chlorine residual or turbidity • Unexpected monitoring or sampling results	*Use this AP if you receive any incident warning (see types of warnings to left) indicating possible contamination of your water system* *If you have evidence that corroborates the warning, or if collective information indicates that contamination is likely,* ***GO TO AP 1B – CREDIBLE STAGE****.* *If there is confirmed evidence and/or definitive information that the water system has been contaminated.* ***GO TO AP 1C – CONFIRMED STAGE.***

AP 1A - Threat of or Actual Contamination to Water System POSSIBLE STAGE		
	• Strange odor, color or appearance Customer Complaints (including, for example unexplained or unusually high complaints of): • Odor • Color or Appearance • Taste Public Health Notification (including, for example): • Victims in Emergency Rooms and/or Clinics • High Incidence of Similar Health Complaints in one Local Area	
Initiation and Notification:	2. Notify Incident Commander or Alternate Incident Commander immediately upon discovery of any of the above Threat Warnings.	*The individual who first notices or receives the threat warning should contact the Incident Commander immediately by whatever means of communication may be available.*
Equipment Identified:	**Equipment** **Location**	*This equipment is available to assist in the execution of this AP.*
Specific Activities:		
I. Assess the Problem	A. Complete the following **Threat Warning Report Forms** according to the type of Threat Warning received. (Appendix F of ERP). • **Security Incident Report Form** • **Witness Account Report Form** • **Phone Threat Report Form** *(to be filled out during actual phone call)* • **Written Threat Report Form** • **Water Quality / Consumer Complaint Report Form** • **Public Health Information Report Form** B. Complete **Threat Evaluation Worksheet** (Appendix F of ERP).	*Threat Warning Report Forms help document, organize and summarize information about a security incident. The individual who discovers the incident warning, the Incident Commander or another designated individual may complete the form. Only the form that corresponds to the type of threat warning needs to be completed. Completion of the form should not distract emergency responders from more urgent matters.* *Threat Evaluation Worksheets help organize information about a threat warning that will*

AP 1A - Threat of or Actual Contamination to Water System POSSIBLE STAGE		
	C. Evaluate **Threat Evaluation Worksheet**, and determine if threat is Possible. If YES, perform Response Steps 1 – 8 below. If NO, i. Return to normal operations. ii. Document and record the threat for future reference.	*be used during the Threat Evaluation Process. The individual responsible for conducting the Threat Evaluation (e.g., the Incident Commander) should complete this worksheet.*
II. Isolate and Fix the Problem	1. Notify local law enforcement. 2. Notify State Drinking Water Agency. 3. Do not disturb site if location could be possible crime scene. Consult **Maintaining Crime Scene Integrity** Form in Section Appendix F. 4. Alert staff and emergency response personnel about threat. 5. Consider containment / isolation, elevating chlorination, and/or discharge of suspect water. 6. Evaluate spread of suspect water and potential impact on public health.	*Notification phone numbers can be obtained from the Organization Contact List in Appendix C of the ERP.* *The immediate operational response actions are primarily intended to limit exposure of customers to potentially contaminated water.* *See EPA Toolbox Module 2, Section 3.3.2 for guidance on containing contaminants and evaluating movement of potentially contaminated water through distribution systems.*
III. Monitoring	7. Initiate Site Characterization Activities: • Define the investigation site. • Designate site characterization team members. • Conduct preliminary assessment of potential site hazards. • Approach site and conduct field safety screening to detect any hazards to the characterization team. • Search for physical evidence (discarded containers, etc.). • Investigate records from CCTV cameras. • Look for environmental indicators (dead animals or fish, dead vegetation, unusual odors or residues). • Perform rapid field testing of the water.	*Site Characterization is intended to gather critical information to support the 'credible' stage of threat evaluation.* *If signs of a hazard are evident during the site approach, the team should halt their approach and immediately inform the Incident Commander of their findings. The site may then be turned over to the HAZMAT Team.* *The Incident Commander may determine the threat is credible based preliminary information before the site characterization has been completed.*

AP 1A - Threat of or Actual Contamination to Water System POSSIBLE STAGE		
	• Collect water samples according to sampling plan.	
IV. Recovery and Return to Safety	8. Determine if threat is credible. If YES, initiate AP 1B. If NO, • Return to normal operations. • Store water samples for ***(enter predetermined time period here).***	*You should determine whether or not the threat is 'credible' **within 2 to 8 hours (preferably within 2 hours)** from the time the threat is deemed 'possible', depending on the effectiveness of the containment strategy.* *If the threat is not deemed 'credible', the samples obtained during site characterization should be stored in case the situation changes and analysis is determined to be necessary.*
V. Report of Findings	9. File incident reports.	*The City Staff should file an internal report for the City's files, and also provide information as requested to Local Law Enforcement.*
VI. AP-1A Revision Dates		

AP 1B - Threat of or Actual Contamination to Water System

CREDIBLE STAGE

AP Summary:	This Action Plan applies to the intentional introduction of a contaminant into the water system. The contaminant could be introduced at any point within the system, including raw water, treatment facilities, distribution system including distribution pipes, finished water storage, or pump stations. The adversary may or may not give notice, identify the contaminant, or provide the location. Contamination may have actually occurred or it may be a hoax.	
Initiation and Notification:	A. Initiate this AP if there is credible evidence that the water system has been contaminated: • Additional information collected during the investigation corroborates the threat warning. • Collective information indicates that contamination is likely. • Signs of contamination are observed during site characterization. • Additional water quality data shows unusual trends that are consistent with the initial data and corroborate the threat. • A pattern of customer complaints emerges. • Previous threats and incidents corroborate the current threat. B. Notify Incident Commander or Alternate Incident Commander immediately upon discovery of credible evidence of threat (if not already notified). C. Initiate ERP. D. Initiate partial or full activation of the Emergency Operations Center (EOC). Perform internal and external notifications according to ERP.	*If there is confirmed evidence and/or definitive information that the water system has been contaminated,* ***GO TO AP 1C – CONFIRMED STAGE.*** *The individual who first notices or receives the credible evidence should contact the Incident Commander immediately by whatever means of communication may be available.* *The Incident Commander will decide whether to initiate the ERP on a partial or full basis. The Incident Commander will also decide when and to what extent to activate the EOC.* *Notification phone numbers can be obtained from the Organization Contact List in Appendix C of the ERP.* *The Incident Commander, is the only one authorized to make notifications to outside agencies.*
Equipment Identified:	**Equipment** **Location**	*This equipment is available to assist in the execution of this AP.*

AP 1B - Threat of or Actual Contamination to Water System

CREDIBLE STAGE

Specific Activities:		
I. Assess the Problem	1. Assess results of previous sample analysis. 2. Perform additional site characterization at primary sites as needed. 3. Perform site characterization at any new investigation sites.	
II. Isolate and Fix the Problem	4. Perform actions to estimate the contaminated area and predict movement of contamination. 5. Take actions to isolate portions of system containing suspect water. See ERP Section N for **System Shut Down Plan**. 6. Issue "Boil Water", "Do not Drink", or "Do not Use" Notices and Press Releases as appropriate. See Appendix D of ERP for **Press Release Forms**. 7. Initiate **Alternate Water Supply Plan** (Appendix C) to provide alternate water supply for customers and fire protection as necessary.	*The contaminated area can be estimated using hydraulic models, consumer complaints, public health agency reports, water quality data, or other available information. The estimate may define additional locations where site characterization should be performed*
III. Monitoring	8. Continue to monitor water quality in suspect parts of system by manual sampling, rapid field testing, or automated means.	
IV. Recovery and Return to Safety	9. Determine if threat is Confirmed. If YES, Initiate AP 1C. If NO, • Verify that water is safe. • Notify public that water is safe. • Notify outside agencies that water is safe. • Return to normal operations. • Store water samples for ***(enter predetermined time period here).***	*It may take several days to collect sufficient evidence to confirm a contamination incident, depending on the type of information used for confirmation. (Some microbiological analytical procedures may take several days.)* *If the threat is not deemed 'confirmed', the samples obtained during site characterization should be stored in case the situation changes and an analysis is determined to be necessary.*

AP 1B - Threat of or Actual Contamination to Water System CREDIBLE STAGE		
V. Report of Findings	E. File incident reports.	*The Utility [Security Director] should file an internal report for the Utility's files, and also provide information as requested to Local Law Enforcement and other outside agencies.*
VI. AP-1B Revision Dates		

AP 1C - Contamination to Water System

CONFIRMED STAGE

AP Summary:	This Action Plan applies to the intentional introduction of a contaminant into the water system. The contaminant could be introduced at any point within the system, including raw water, treatment facilities, distribution system including distribution pipes, finished water storage, or pump stations. The adversary may or may not give notice, identify the contaminant, or provide the location. Contamination may have actually occurred or it may be a hoax.	
Initiation and Notification:	A. Initiate this AP if there is confirmed evidence that the water system has been contaminated: 1. There is **analytical confirmation** of the presence of one or more contaminants in the water system. 2. The **preponderance of the evidence** confirms that a contamination incident has occurred. • There is a security breach with obvious signs of contamination along with unusual water quality and consumer complaints in the vicinity of the security breach. • Additional findings (laboratory analysis, field observations) of continued site characterization activities add to other credible evidence of contamination. • There is information from public health officials, area hospitals, or 911 call centers indicating a problem with the water supply. • Law enforcement agencies have discovered crucial evidence or apprehended a suspect that helps confirm that the water has been contaminated. • Specific information on a number of potential contaminants can be used in conjunction with other available information to narrow down the	*If there is **no** confirmed evidence and no definitive information that the water system has been threatened or contaminated, **GO TO AP 1B – CREDIBLE STAGE.*** *It may take several days to collect sufficient evidence to confirm a contamination incident, and the required time will depend on the type of information used for confirmation (some microbial analytical procedures may take several days).*

AP 1C - Contamination to Water System CONFIRMED STAGE		
	number of contaminant candidates.	
Initiation and Notification:	B. Notify Incident Commander or Alternate Incident Commander immediately upon discovery of confirmed evidence of contamination (if not already notified). C. Initiate full ERP activation. D. Initiate full activation of Emergency Operations Center (EOC). E. Engage other organization as needed (drinking water primacy agency, public health agency, response agencies, law enforcement). F. Perform internal and external notifications according to ERP.	*The individual who first becomes aware of the confirmed evidence should contact the Incident Commander immediately by whatever means of communication may be available.* *The Incident Commander will decide whether to initiate the ERP on a partial or full basis. The Incident Commander will also decide when and to what extent to activate the EOC.* *Notification phone numbers can be obtained from the Organization Contact List in the Appendices as well as from Section XX of the ERP.* *The Incident Commander, should make the notifications to the outside agencies.*
Equipment Identified:	**Equipment** **Location**	*This equipment is available to assist in the execution of this AP.*
Specific Activities:		
I. Assess the Problem	1. Assess results of previous sample analysis and attempt to identify the contaminant. 2. Confirm the identity of the contaminant.	*Effective implementation of response actions depends on positive identification of the contaminant and knowledge of contaminant properties, including public health protection strategies and selection of treatment technologies.*
I. Assess the Problem	3. Perform a full characterization of the contaminated area, including contaminant properties, contaminant concentration profiles, and characteristics of the impacted area. 4. Evaluate the likely direction and extent of future movement of the contaminant	*If information from site characterization activities indicates that the contaminant impacts water quality in a certain manner (i.e., consumes free chlorine or imparts a certain odor to the water), the contaminant specific information may facilitate tentative identification of a contaminant and determine the analytical approach that should be used to positively identify the specific contaminant.*

AP 1C - Contamination to Water System CONFIRMED STAGE		
	within the distribution system. 5. Evaluate all available information about the contamination incident	*Sources of contaminant information include:* *http://www.bt.cdc.gov/agent/agentlistchem.asp* *http://www.atsdr.cdc.gov/substances/index.asp* *http://www.waterisac.org/* *EPA Water Contaminant Information Tool (WCIT) – http://water.epa.gov/scitech/datait/databases/wcit/index.cfm*
II. Isolate and Fix the Problem	6. Take actions to isolate portions of system containing suspect water. See ERP Section N for **System Shut Down Plan**. *7.* Shut down system if obvious or confirmed contamination warrants. *8.* Issue "Boil Water", "Do not Drink", or "Do not Use" Notices and Press Releases as appropriate. See Section of ERP for **Press Release Forms**. 9. Initiate **Alternate Water Supply Plan** (Appendix C) to provide alternate water supply for customers and fire protection as necessary. 10. Revise public health response measures and public notifications as necessary.	*The contaminated area can be estimated using hydraulic modes, consumer complaints, public health agency reports, water quality data, or other available information. The estimate may define additional locations where site characterization should be performed.*
III. Monitoring	11. Continue sampling and analysis to monitor the status and extent of the contamination, and to verify that containment strategies are working.	

AP 1C - Contamination to Water System

CONFIRMED STAGE

IV. Recovery and Return to Safety	12. Consult with appropriate officials to develop a Remediation and Recovery Plan. a. Evaluate options for treating contaminated water and rehabilitating system components. b. Select treatment and rehabilitation technology/approach. c. Develop strategy for disposal of contaminated residuals. d. Develop sampling and analysis plan to verify remediation. e. Develop communications and public relations plan. 13. Implement Remediation and Recovery Plan. a. Verify that water is safe by performing additional sampling and analysis to confirm the progress of system treatment and remediation. b. Notify public that water is safe. c. Notify outside agencies that water is safe. d. Return to normal operations. e. Store water samples for ***(enter predetermined time period here).***	*Remediation and recovery activities will likely be planned and implemented by a number of agencies. The first step of the process is to establish the roles and responsibilities of each organization* *The samples obtained during site characterization and monitoring should be stored in case the situation changes and further analysis is determined to be necessary.*
V. Report of Findings	G. File incident reports with internal and external agencies as required.	
VI. AP-1C Revision Dates		

AP 2 - Structural Damage from Explosive Device (Assault on Utility)

AP Summary:	This Action Plan applies to an incident where intentional structural damage has occurred to the water system as a result of an explosive device. The assumed intent of the explosion is to disrupt normal system operations any point within the system, including raw water, treatment, finished water storage, or the distribution network.	
Initiation and Notification:	Initiate this AP if it appears that an explosive device has caused damage, or has the potential to cause damage to one or more components of the water system. The event will begin with an "incident discovery" which may come to the City by one (or more) of the following: • Security Equipment • Employee Discovery • Witness Account of Explosion • Notification By Adversary • Notification by Fire Department • Notification By Law Enforcement • Notification By News Media Call 911 and notify City Manager or City Manager's Designated Alternate immediately upon discovery of the explosion. The City Manager should then notify others as appropriate. Examples include: • Local Fire Department • Local Police Department • FBI • ATF Take all practical measures to ensure that the building or facility is evacuated.	*The individual who first notices or receives word of the explosion should contact the City Manager immediately by whatever means of communication are available.* *Notification phone numbers can be obtained from the Organization Contact List in Appendix C of the ERP.*
Initiation and Notification:	In cases where an adversary calls a City employee in advance that employee should complete the **Bomb Threat Checklist** OR **Phone Threat Report Form** found in Section VIII of the ERP. Initiate partial or full ERP activation. Initiate partial or full activation of the Emergency Operations Center (EOC). Engage other organization as needed (Law Enforcement, Fire Protection, FBI). Perform internal and external notifications according	*The **Bomb Threat Checklist** and the **Phone Threat Report Form** contain questions that should be asked the caller if possible to help determine the specifics of the threat including the location of the explosive device, type of device, time of detonation, and reason for the attack.* *The City Manager will decide whether to initiate the ERP on a partial or full basis. The City Manager will also decide when and to what extent to activate*

AP 2 - Structural Damage from Explosive Device (Assault on Utility)		
	to ERP.	*the EOC.*
Equipment Identified:		*This equipment is available to assist in the execution of this AP.*
Specific Activities:		
I. Assess the Problem	Deploy Damage Assessment Team(s) (DAT) • Perform a thorough assessment of the structural damage caused by the explosion. • Determine how explosion is affecting system operations. Check and monitor all other water system functions and facilities to ensure that the rest of the system is operating normally. (The initial explosion could be a diversion to a larger event, or it could be the first in a series of similar attacks.) If the damage appears to be intentional, treat as a crime scene. Consult with local police, state police, and the FBI on evidence preservation. Isolate damaged facility from rest of water system and take measures to bypass the damaged area if possible. Inform local police, state police, and the FBI of potential hazardous materials.	*The DAT will work in conjunction with local/state law enforcement in terms of incident command and control.* ***UNDER NO CIRCUMSTANCES WILL THE DAT TEAM ENTER THE AREA CONTAINING THE EXPLOSIVE DEVICE UNTIL AFTER THE LOCAL LAW ENFORCEMENT EXPLOSION SPECIALISTS (BOMB SQUAD) HAS DETERMINED THAT THE AREA IS SAFE.***
II. Isolate and Fix the Problem	Physically secure water system facilities and implement heightened security procedures throughout the system. Based on extent of damage, consider alternate (interim) treatment schemes. Issue public notification, "Boil Water", "Do not Drink", or "Do not Use" Notices and other Press Releases as appropriate. Request assistance from outside contractors or other water utilities if needed to help repair the damage.	
III. Monitoring	Perform sampling and monitoring activities and analysis to determine if the explosion has rendered the water supply unsafe for customers. Perform a system pressure evaluation to determine	

AP 2 - Structural Damage from Explosive Device (Assault on Utility)		
	how the explosion has affected customers and fire water capability in each pressure zone.	
IV. Recovery and Return to Safety	Repair damage to critical equipment and facilities as soon as possible. Determine and mitigate effects on other system components. For example, replace water storage capacity if it was diminished during repairs. Clean and disinfect system components as necessary. Resume normal operations. Asses need for additional protection/security measures.	*The City Manager will inspect the repairs and will give the OK to resume normal operation of the water system* *The City Manager will evaluate a heightened security posture. As a result, security will be increased or decreased as necessary according to the perceived threat.*
V. Report of Findings	File incident reports.	*The Utility should file an internal report for the Utility's files, and also provide information as requested to Local Law Enforcement and other outside agencies.*
VI. AP-2 Revision Dates		

AP 3 – Employee Assaulted with Weapon
(Assault on Utility)

AP Summary:	This Action Plan applies to the threat of an employee(s) being assaulted by an intruder (possibly an ex-employee), with a weapon. Incidents of this type will vary in scale and severity, but the following should generally apply across the spectrum of threat conditions. **If you believe this threat is of current importance and have not yet dialed 911 or an emergency equivalent, do so immediately before proceeding.**	
Initiation and Notification:	Initial notification of the incident will vary in both method and urgency, however in any scenario the first priority is the welfare of the assault victim. Under all circumstances, emergency personnel should be notified and consulted immediately. This threat requires a response addressing three distinct categories: Ensuring the health and safety of the victim and other employees. Notifying and facilitating involvement of the proper authorities. Communicating specifics of the incident to other staff, the media, and the victim's relatives. Remain aware of these aspects of your response as the AP is initiated and consulted.	*The individual who first notices or receives word of the assault should contact 911 immediately by whatever means of communication may be available.* *Notification phone numbers can be obtained from the Organization Contact List in Appendix C of the ERP.*
Equipment Identified:		*This equipment is available to assist in the execution of this AP.*
Specific Activities:		
I. Assess the Problem	Assessment of the severity of injury should not be made by City staff, proper diagnosis should be made only by trained medical personnel. The following general steps will be prudent: The first task upon discovery of the incident is to dial 911 and report the incident in detail. An ambulance (or other transportation to the hospital in less urgent situations) should be immediately arranged in all cases.	*Notification phone numbers can be obtained from the Organization Contact List in Appendix C of the ERP.*

AP 3 – Employee Assaulted with Weapon (Assault on Utility)		
	Decision-making control of the situation should be readily surrendered to the proper authorities. In the event of a hostage situation or extended incident, City staff should notify the authorities and evacuate the area quickly. Under no circumstances should Utility personnel attempt to subdue the adversary or bring personal weapons onto the scene.	
II. Isolate and Fix the Problem	If witnesses were present, they should be readily available to provide information to the authorities. The area surrounding the incident is a crime scene and care should be taken not to alter anything that may impair the ability of the authorities to interpret or recreate the assault. The weapon, if present, should not be handled or touched in any way.	
III. Monitoring	Communication with the media should be handled in a proactive fashion, with statements made only by the identified Utility spokesperson. Similarly, employees should not be left to spread the word through gossip and hearsay. An announcement carrying relevant details should be disseminated promptly. If the assault victim is injured or otherwise unable to perform his/her duties, the replacement personnel may also be under significant stress. Care should be taking in selecting replacement personnel including monitoring of performance and behavior	
IV. Recovery and Return to Safety	Staff stress may have serious ramifications. It is important to evaluate these effects in an ongoing fashion and address them accordingly. The Utility should consider temporary mental health counselors under such tragic circumstances. In the event of a fatality, notification of family is an unfortunate duty, which may be best handled by the local police or other authorities experienced in such tasks. If security was breached during the incident, rapidly address any weakness the incident may have identified.	

AP 3 – Employee Assaulted with Weapon (Assault on Utility)		
	Evaluate access to the incident location and modify where necessary. If the adversary was acting with an identifiable motive, consider the mentality and culture of the utility to evaluate if the underlying issue may be significant and widespread. If assault was of a sexual nature, consider awareness training for City staff. The need to maintain a heightened security posture should be evaluated, and security should be increased and decreased as necessary according to the perceived threat.	
V. Report of Findings	In addition to completing the appropriate filings with the local police and other agencies, the utility should assemble relevant personnel to review the effectiveness of the action plan and reinforce lessons learned in the process.	
VI. AP-3 Revision Dates		

AP 4 – Bomb Threat (Assault on Utility)		
AP Summary:	This Action Plan applies to the receipt of a bomb threat via telephone or in person. It is important to develop this plan in counsel with the local police and the local fire department services.	
Initiation and Notification:	Initiate this AP as soon as the bomb threat is received As soon as possible, notify: • 911 • GM The Incident Commander should then notify others as appropriate. Examples include: • Local Fire Department • Local Police Department • FBI • ATF	*Notification phone numbers can be obtained from the Organization Contact List in Appendix C of the ERP.*
Equipment Identified:	**Equipment** **Location**	
Specific Activities:		
I. Assess the Problem	As a rule, all bomb threats should be considered credible until proven otherwise.	*Due to the diversity of facilities, each utility is encouraged to undertake an audit of their own facilities and consult with local emergency services such as fire and police while creating their evacuation plan. If it is not possible during the creation, then certainly consult before instituting the plan.*
II. Isolate and Fix the Problem	**Threat received via Telephone** 1. Remain Calm 2. If possible, record the message 3. Fill out Bomb Threat Checklist while performing the following: • Listen • Be Calm and Courteous • Keep the caller on the line as long as possible • Ask him/her to repeat the message • Record every word spoken by the person	*It is always desirable that more than one person listens in on the call. To do this, have a pre-established signaling system in place to engage another listener if possible.* *Not hanging up the phone may be useful to law enforcement authorities in tracing the call. Hanging up and dialing *57 (where available) may allow a trace of the call. Consult with City management*

AP 4 – Bomb Threat (Assault on Utility)

	• Do not speak to anyone unless directed to do so • WHEN caller hangs up, THEN implement the City policy to either hang up or not hang up the phone. 4. Notify the City Manager if not already done 5. Call the local police (911 or the emergency number for your area) and report the threat immediately. 6. Implement the City policy on searching for the bomb. 7. Implement the City policy evacuation. 8. IF evacuating building, THEN Take the Bomb Threat Checklist with you.	*and local law enforcement.* *Develop a plan for conducting a bomb search. Establish time considerations in the plan commensurate with utility size and resources. For example, if time until detonation is less than ½ hour, immediate evacuation may be advisable. If greater than ½ hour a search should be conducted. Consult with the local police, local fire department, or other local authority to determine who will conduct the search. In most cases, because of their familiarity with the facility, the search is best conducted by utility personnel, however this requires that they be trained properly in search techniques. The police or fire department may be available to assist in the training or be able to provide advice as to who can provide the training.*
II. Isolate and Fix the Problem	1. Make a quick visual sweep of your area for any unusual items and proceed to a designated gathering area sufficiently located away from the building. **2. Direct any media questions to the City Manager.** **3. If a bomb is found note:** 4. Exact location of the object 5. Size of object 6. Type of container or wrappings and marking on package 7. Any sound coming from object **Threat received in person:** • Cooperate with the individual or group. • Try to get the attention of a co-worker. • Co-worker call 911. • Co-worker call City Manager. • Create a description of the adversary. • Direct any media questions to the City Manager.	*Let the trained bomb technician determine what is or is not a bomb.* *Note that a bomber wishing to cause personal injuries could place a bomb near an exit normally used to evacuate and then call in the threat.*

AP 4 – Bomb Threat (Assault on Utility)		
III. Monitoring	During a search of the building, rapid two-way communication is essential. 1. Use existing installed telephones. 2. Alert medical personnel to stand by in the event of an accident caused by the explosion of the devise. 3. Alert fire department to stand by. **In event of an explosion:** 1. Get out of the building as quickly as calmly as possible. 2. **IF** items are falling from bookshelves or the ceiling, **THEN** get under a sturdy table or desk until the situation has stabilized enough for your safe passage. 3. Ensure your own safety before trying to help others.	***DO NOT USE RADIOS OR OTHER WIRELESS DEVICES DURING A SEARCH****. The radio transmission energy can cause premature detonation of an electric initiator (blasting cap).*
IV. Recovery and Return to Safety	**IF** evacuated, **THEN** do not return to the building until it is determined safe by appropriate authorities.	
V. Report of Findings	Debrief after every bomb threat response to improve procedures.	*The Utility should file an internal report for the Utility's files and also provide information as requested to Local Law Enforcement and other outside agencies*
VI. AP 10A Revision Dates		

AP 5 – Chlorine Release

AP Summary:	This Action Plan applies to an uncontrolled release of any quantity of chlorine gas.	
Initiation and Notification:	When a release of chlorine gas has been confirmed. Notify: • City Manager • City Manager's Designated Alternate	*The individual who first notices the release should contact the City Manager immediately by whatever means of communication may be available.* *Notification phone numbers can be obtained from the Organization Contact List in Appendix C of the ERP.*
Equipment Identified:		*Chlorine is a highly toxic gas stored under pressure on this site.* *Chlorine is toxic by inhalation and high concentrations can cause skin irritation and severe eye injury. See MSDS*
Specific Activities:		
I. Assess the Problem	1. Determine number and severity of any injured personnel. 2. Estimate the rate and volume of the release. 3. Determine wind directions and potential for additional on-site and off-site impacts. 4. Based on number of adequately trained and equipped personnel, determine response capability (in-house or off-site personnel). Activate the facility Emergency Operations Center (EOC), as appropriate.	*Personnel need to be moved to or seek shelter away from the release area.* *Fully PPE protected personnel may be required to rescue personnel in the release area.* *Rate & volume of release, size of container, and wind direction will all influence the ability to control the release as well as determine the impact of the release on both on-site and off-site personnel*
II. Isolate and Fix the Problem	Note: Only trained personnel using pre-planned procedures should respond to uncontrolled chlorine releases. Attempt to install a Chlorine Emergency Kit **ONLY** if you are familiar with the kit and trained in its use. 1. Remove clothing of contaminated personnel. 2. Bag the clothing. 3. Wash victims thoroughly with soap and water.	*Shelter-in-Place, Evacuation, or a combination may be an appropriate response.* *The facility Incident Commander will have the best initial information on the magnitude of the release and be best informed to dictate on-site as well as suggest off-site actions.*

AP 5 – Chlorine Release

	4. Rinse eyes with plain water for 10 to 15 minutes. 5. Have Safety/Security notify the incoming emergency equipment and ambulances of staging location. 6. Detect small chlorine leaks with an atomizer or squeeze bottle filled with aqueous ammonia. (A white cloud will show the location of the leak). 7. Attempt to close the main source valve prior to entering the area. 8. **IF** this does not stop the release (or it is not possible to reach the valve), **THEN** allow the gas to release in place or remove it to a safe area and allow the gas to be released there.	*Victims need to be provided with fresh air (and oxygen by trained personnel) and have contaminated clothing removed to prevent further injury.* *Only trained and properly equipped personnel can assure a successful control of this release. Untrained or under-equipped personnel will only become more victims.*
III. Monitoring	1. Monitor the surrounding area for Chlorine gas levels and oxygen. (The Chlorine level must be below 0.5 ppm and the atmosphere must have at least 19.5 percent oxygen before personnel can be allowed in the area without Self Contained Breathing Apparatus (SCBAs.)) 2. Victim should be monitored for signs of exposure which can include: • Coughing • Chest Tightness • Burning sensation in the nose, throat, and eyes • Burning pain, redness, blisters similar to frostbite • Blurred Vision • Nausea and Vomiting • Fluid in the lungs within 2-4 hours • Difficulty breathing or shortness of breath • Watery Eyes	*0.5 ppm chlorine over 8 hours has shown no effects.* *Oxygen can be replaced by chlorine gas. A 19.5% O2 level is required for entry.* *Some symptoms of exposure can be delayed so all potentially exposed personnel should be routinely monitored.* *Facility area monitoring should continue until all levels reach below 0.5 ppm after repairs are completed.*
IV. Recovery and Return to Safety	1. Maintain detailed notes of all actions 2. Re-entry by un-protected facility personnel should not occur until all repairs are made and the ppm of chlorine is below 0.5. Community re-entry levels should be established by off-site emergency personnel, but should not be higher than 0.5 ppm. 3. Conduct a detailed evaluation of the failure that caused the release. This could include engineering, personnel, security, and metallurgical evaluations. 4. Hold post-incident discussions to include all responders and actors in the response and recovery	*Notes will provide details of who, what, when, and why decisions were made. This will help in the evaluation of the incident response and also in cost recovery.* *Exposure to chlorine should not exceed OSHA levels for workers. Lower levels of exposure to chlorine may be established for members of the community. Exposure levels for community members should be separately determined.*

AP 5 – Chlorine Release		
V. Report of Findings	1. All the components of the incident should be correlated and established in writing. This would include why the release occurred, how the response was managed and suggestions to improve the facility/community response in the future. The report should incorporate all relevant data from the forensics of the release to suggested changes in the emergency response plans and procedures. 2. Suggestions from the report should be submitted to the governing board/individuals for evaluation and actions to be taken.	*To learn from the incident and reduce the likelihood of future such events, a Report of Findings should be provided to the decision makers for the Utility so consideration can be given for changes in facility structure, security, procedures, or personnel.*
VI. AP 6 - Revision Dates		

AP 6 – Power Outage

AP Summary:	This Action Plan applies to events that result in power outages. Note that this Action Plan may need to be implemented in conjunction with other Action Plans (for example, severe weather) as necessary. Consider agreement with the power company to determine the priority of drinking water and wastewater systems for recovery prior to the emergency.	
Initiation and Notification:	Initiate this AP upon a loss of offsite power Notify: • Incident Commander • Alternate Incident Commander Others as appropriate, examples include: • Fuel supplier (back up generator) • Critical Care Customers • Large Water Users	*Notify the Incident Commander by whatever means of communication may be available.* *Notification phone numbers can be obtained from the Organization Contact List in Appendix C.*
Equipment Identified:	**Equipment** **Location** Mobile battery-powered radios Mobile/cellular phones Flashlights Spare batteries Accessory requirements (cables for generators, transformers, load banks, bus bars, distribution panels, feeder panels, fuses, outlets, load centers, etc) Emergency kits	*Radios should have access to a frequency compatible with the local fire dept, sheriff, public health officials, other government departments, utilities, services, or consultants.* *Cell phones may not be available during power outages.*

AP 6 – Power Outage

Specific Activities:		
I. Assess the Problem	1. Call local hydro-electric supply company – request information on the estimated down time. 2. **IF** backup generation is available, **THEN** assess the ability to supply fuel for extended periods. 3. Assess ability for HVAC or alternate to provide proper temperatures for SCADA, computer, and control systems. 4. Estimate potable water requirements under the emergency condition and determine if the utility can still meet requirements. 5. **IF** telephone is also down, **THEN** SCADA communications may be blocked. 6. Loss of power could affect utility access gates, CCTV, intrusion alarms and other remote monitoring abilities. Loss of power may be a diversionary tactic for other terrorist activity. Be alert.	*Consider agreements with fuel supply company to supply fuel automatically upon a power loss if the capability to store fuel on site is not practical. A fuel tank with capacity for at least 24 hours of run time is advisable.* *If on-staff personnel are not experienced with power-generation equipment, it is necessary to arrange for professional assistance to install and operate the mobile units.* *Evaluate back-up power with controllers that sense problems with purchased power and come up automatically.* *Complete assessment as quickly as possible.*
II. Isolate and Fix the Problem	7. Turn off unnecessary electrical equipment. 8. Start back up generators as necessary for key components: Note: Uninterruptible Power Supply (UPS) for SCADA and computers, battery back-up for Remote Terminal Unit (RTU) may only supply power for a few hours.	*This can prevent injuries and damage from unexpected equipment startups, power surges to the equipment and possible fires. If power goes out, an Uninterruptible Power Supply (UPS) provides battery power at a constant rate for several minutes, allowing you to safely turn off equipment with minimal risk or loss.* *If you permanently connect a backup electrical generator, the connection may have to meet certain technical standards required by law. Some states also require you to notify your electric utility. If you do not, utility personnel working nearby could be seriously injured.*

AP 6 – Power Outage		
II. Isolate and Fix the Problem	9. Increase disinfectant residual as a precaution to potential contamination. 10. **IF** not able to meet community requirements for water **THEN** arrange for water to be supplied by another source. See Mutual aid agreements Section II B. of ERP and Section III.G of ERP for Alternate Water Sources. 11. Notify priority customers 12. Notify users of interruption of service if backup pump(s) is/are not capable of maintaining supply. 13. Issue "Boil Water", "Do not Drink", or "Do not Use" Notices and Press Releases as appropriate. See Section VIII.A.1 of ERP for **Press Release Forms**. 14. Initiate back up plan for retrieval of current information from outside sources.	*A temporary portable generator should not be connected to building wiring unless the building meets the same technical standards legally required for a permanent generator. Most buildings are not so equipped. As an alternative, use properly rated extension cords to connect electrical loads directly to the generator receptacles.* *This is an analysis of all available sources of water, not just those used under conditions of normal operation. These sources might include both new intakes or wells, public or private ponds, reservoirs, swimming pools, interconnections with other water utilities, water stored within building water systems, water provided in bottles or tank trucks from outside sources of potable water, local dairies or bottling plants, etc.* *Since computers may be down, access to Water ISAC, police, government, etc. could be compromised.*
II. Isolate and Fix the Problem	15. Consider initiating back-up portable pumping and generating capability to serve areas with limited storage, critical wastewater collection and treatment operations. 16. Facilities with freezing temperatures should turn off and drain the following lines in the event of a long term power loss: a. Fire sprinkler system b. Standpipes c. Potable Water Lines d. Toilets	
III. Monitoring	17. **IF** damage to equipment occurs, **THEN** contact vendor/mutual aid companies to replace/repair damaged equipment. 18. Monitor the status of the backup power supply and regularly test whether battery	*Ask your vendors about specific limitations of your equipment. Find out how long it would take to repair or replace damaged equipment.*

AP 6 – Power Outage		
	levels are adequate and the backup generators are functional.	
IV. Recovery and Return to Safety	19. Conduct disinfection, flushing, and bacteriological sampling after repairs of equipment lost. 20. **IF** power outage occurs during freezing conditions **THEN** allow electronic equipment to reach ambient temperatures before energizing to prevent condensate from forming on circuitry. 21. Fire and potable water piping should be checked for leaks from freeze damage after the heat has been restored to the facility and water turned back on. 22. Notify public/customers when it is safe to use the drinking water again.	
V. Report of Findings	23. All the components of the incident should be correlated and established in writing. This would include how the response was managed and suggestions to improve the facility / community response in the future. The report should incorporate all relevant data from the incident and suggested changes in the emergency response plans and procedures. 24. Suggestions from the report should be submitted to the governing board/individuals for evaluation and actions to be taken.	*To learn from the incident and reduce the likelihood of future such events, a Report of Findings should be provided to the decision makers for the Utility so consideration can be given for changes in facility structure, security, procedures or personnel.*
VI. AP-7 Revision Dates		

AP 7 – Water Supply Interruption (Sabotage)		
AP Summary:	This action plan applies to water supply interruptions. These events will vary in scale from compromised incremental supply volumes to complete, catastrophic loss of water supply. The ability for a utility to successfully respond to a catastrophic water supply interruption will be highly correlated to the existence of interconnections and alternative sources of supply.	
Initiation and Notification:	Catastrophic water supply interruptions will generally be identified by other events, such as physical equipment damage, severe weather, or others, which are likely to have a specific direct action plan. Incremental interruptions due to longer-term events such as drought or acute loss of one source, will lead to a prescribed series of contingency measures, as outlined below.	*It is recognized that many utilities will already have an action plan in place to address this event.* *Notification phone numbers can be obtained from the Organization Contact List in Appendix C of the ERP.*
Equipment Identified:		*This equipment is available to assist in the execution of this AP.*
Specific Activities:		
I. Assess the Problem	There are a number of potential levels of severity involved in a water supply interruption. A series of stages of action corresponding to increasing impacts on water are: • Normal Conditions • Water Alert • Water Warning • Water Crisis • Water Emergency	
II. Isolate and Fix the Problem	Each stage has specific customized definitions, in terms of percent of Water Supply reduction, with appropriate actions or restrictions at each stage. Utilities will have a series of escalating penalties for successive violations of restrictions. These stages are: **Normal Conditions –** Normal conditions apply. Water is available; but in arid environments there are specific watering days for various addresses or penalties for excess watering.	
II. Isolate and Fix the	**Water Alert** -- A 5% or greater reduction in water usage is to meet the immediate needs of customers. Voluntary conservation encouraged. The water shortage situation is	

AP 7 – Water Supply Interruption (Sabotage)		
Problem	explained to the public and voluntary water conservation is requested (see standard press releases). The City maintains an ongoing public information campaign consisting of distribution of literature, speaking engagements, bill inserts, and conversation messages printed in local newspapers. **Water Warning** -- A 15% or greater reduction in water usage is to meet the immediate needs of customers. Water supply shortage is moderate. The utility aggressively continues its public information and education programs. Consumers are asked for a 15 percent or greater voluntary or mandatory water use reduction. Additional landscape irrigation restrictions may be implemented. Businesses may be asked not to serve water in restaurants unless requested. **Water Crisis –** A 30% or greater reduction in water usage is to meet the immediate needs of customers. Water supply shortage is severe. Additional requirements may include: Dramatic landscape irrigation restrictions; Restrictions on use of potable water to fill or refill new swimming pools, artificial lakes, ponds, or streams until the water crisis is declared over; Prohibition of water use for ornamental ponds and fountains; Restrictions on washing of automobiles and equipment (such as requiring that it shall be done on the lawn or at a commercial establishment that uses recycled or reclaimed water); Restriction of flushing of sewers or fire hydrants to cases of emergency and essential operations, and; Introduction of a permanent water meter on existing non-metered services and/or flow restrictors on existing metered services at customer's expense upon receipt of the second water violation.	
II. Isolate and Fix the Problem	**Water Emergency** -- A 50% or greater reduction in water usage is to meet the immediate needs of customers. Water shortage is critical. Additional requirements may include: Disallowing all landscape irrigation; Disallowing potable water use for construction purposes such as dust control, compaction, or trench jetting. In addition, large industrial users, for example canneries and other food manufacturers, may be required to reduce or cease all	

AP 7 – Water Supply Interruption (Sabotage)		
	water use. In addition to these incremental stages, the Utility should prepare for a catastrophic interruption of water supplies. A catastrophic event that constitutes a proclamation of a water shortage would be any event, either natural or manmade, that causes a severe water supply interruption, synonymous with or with greater severity than the "Water Warning" water supply shortage condition outlined above.	
III. Monitoring	Communication of water supply interruption stages should be handled according to the identified public notification procedures. Press releases should also be handled according to the identified utility procedures.	
IV. Recovery and Return to Safety	Alternative water supply options have been identified in the utility emergency response plan (ERP). In the event of a catastrophic, immediate need, it is likely these will be utilized. This includes information on local interconnections with neighboring sources, area water haulers, temporary storage options, etc. If there have been lines with no water or negative pressures, a precautionary boil notice should be issued by the utility until line tests on two consecutive days show the lines to be safe. Chlorine residuals should be increased temporarily. The water system may have to valve off portions of the distribution system until above ground storage tanks are refilled. Valved off areas have the potential for external contamination to enter the system through leaking joints or cracked pipe. Before placing a valved off area back in service, the system should issue a precautionary boil notice, increase the chlorine residual throughout the system and obtain safe bacteriological samples from representative areas of the system on two consecutive days. The precautionary boil notice may be lifted once the required safe samples are obtained. The system should be repressurized slowly to avoid water hammer and the potential for damage to the lines.	.

AP 7 – Water Supply Interruption (Sabotage)		
	Air should be bled from lines as they refill since entrapped air can impede flows and may cause line damage.	
V. Report of Findings	In addition to completing the appropriate filings with local authorities and agencies, it is recommended that the Utility assemble the relevant personnel to review the effectiveness of the action plan and reinforce lessons learned in the process.	
VI. AP-9 Revision Dates		

AP 8 – Cybersecurity

Incident Action Checklist – Cybersecurity

For on-the-go convenience, the actions in this checklist are divided up into three "rip & run" sections and provide a list of activities that water and wastewater utilities can take to prepare for, respond to and recover from a cyber incident. You can also populate the "My Contacts" section with critical information that your utility may need during an incident.

Cyber Incidents and Water Utilities

Cyberspace and its underlying infrastructure are vulnerable to a wide range of hazards from both physical attacks as well as cyberthreats. Sophisticated cyber actors and nation-states exploit vulnerabilities to steal information and money and are developing capabilities to disrupt, destroy or threaten the delivery of essential services such as drinking water and wastewater.

As with any critical enterprise or corporation, drinking water and wastewater utilities must evaluate and mitigate their vulnerability to a cyber incident and minimize impacts in the event of a successful attack. Impacts to a utility may include, but are not limited to:

- Interruption of treatment, distribution or conveyance processes from opening and closing valves, overriding alarms or disabling pumps or other equipment
- Theft of customers' personal data such as credit card information and social security numbers stored in on-line billing systems
- Defacement of the utility's website or compromise of the email system
- Damage to system components
- Loss of use of industrial control systems (e.g., SCADA system) for remote monitoring of automated treatment and distribution processes

Cyber incidents can compromise the ability of water and wastewater utilities to provide clean and safe water to customers, erode customer confidence and result in financial and legal liabilities. The following sections outline actions drinking water and wastewater utilities can take to prepare for, respond to and recover from cyber incidents.

Actions to Prepare for a Cyber Incident

Utility

- [ ] Identify all mission critical information technology (IT) systems, considering business enterprise, process control and communications. Document the key functions of the mission critical objectives, and identify the personnel or entity responsible for operating and maintaining each IT system.

- [ ] Identify an overall IT security lead to coordinate with each IT system manager and oversee all cyber-related duties.

- [ ] Ensure that IT system managers enforce cybersecurity practices on all business enterprise, process control and communications systems. For example, verify adherence to user authentication, current anti-virus software and installation of security patches.

- [ ] Identify priority points of contact for reporting a cyber incident and requesting assistance with response and recovery. Include any state resources that may be available such as State Police, National Guard Cyber Division or mutual aid programs, as well as the Department of Homeland Security Cybersecurity and Infrastructure Security Agency (CISA) at https://www.cisa.gov/reporting-cyber-incidents.

- [ ] Review and update the utility's emergency response plan (ERP) to address a cyber incident impacting business enterprise, process control and communications systems. Account for all potential impacts on operations, and ensure emergency contacts are current.

- [ ] Prevent unauthorized physical access to IT systems through security measures such as locks, sensors and alarms. Include workstations and process control systems (e.g., programmable logic controllers or PLCs).

- [ ] Train all essential personnel to perform mission critical functions during a cyber incident that disables business enterprise, process control and communications systems. Include the manual operation of water collection, storage, treatment and conveyance systems.

- [ ] Conduct drills and exercises for responding to a cyber incident that disables critical business enterprise, process control and communications systems.

Actions to Prepare for a Cyber Incident *(continued)*

IT Staff or Vendor

- ☐ Establish a program for maintaining updated anti-virus software on all critical IT systems, along with rapid installation of all security patches.
- ☐ Set up an automatic back-up on critical systems and ensure the process is producing a readable, uncorrupted restore file on a routine basis.
- ☐ Implement rigorous user authentication, including multi-factor authentication where possible. Use individual accounts and unique passwords for each employee, and restrict IT system access privileges to the level needed for a user's duties.
- ☐ Restrict internet access to process control systems unless absolutely necessary.
- ☐ Where possible, separate process control system traffic from business traffic through the use of a firewall. If this is not possible, logically filter traffic through the use of a firewall.
- ☐ Identify all routes of remote access to IT systems. Eliminate remote access where possible, and restrict remaining access (e.g., do not allow persistent remote access to control networks).
- ☐ Assess the use of additional strategies to protect IT systems, such as application whitelisting, network segmentation with restricted communication paths and active monitoring for adversarial system penetration.
- ☐ Conduct a detailed assessment of vulnerabilities in all mission critical IT systems. Consider use of the tools and subject matter experts provided by the DHS Cybersecurity and Infrastructure Security Agency (https://www.cisa.gov/cybersecurity). Develop an action plan to mitigate all significant vulnerabilities identified in the assessment.

Notes:

Actions to Respond to a Cyber Incident

Utility

- [ ] If possible, disconnect compromised computers from the network to isolate breached components and prevent further damage, such as the spreading of malware. Do not turn off or reboot systems – this preserves evidence and allows for an assessment to be performed.
- [ ] Notify IT personnel and/or IT vendor of the incident and the need for emergency response assistance. In addition, DHS CISA can assist with IT system response and recovery (https://www.cisa.gov/reporting-cyber-incidents).
- [ ] Assess any damage to utility systems and equipment, along with disruptions to utility operations.
- [ ] Execute the utility ERP as needed, including notification of utility personnel, actions to restore operations of mission critical processes (e.g., switch to manual operation if necessary), and public notification (if required).
- [ ] Report the cyber incident as required to law enforcement and regulatory agencies.
- [ ] Notify any external entities (e.g., vendors, other government offices) that may have remote connections to the affected network(s).
- [ ] Document key information on the incident, including any suspicious calls, emails, or messages before or during the incident, damage to utility systems, and steps taken in response to the incident (including dates and times).

IT Staff or Vendor

- [ ] Review system and network logs, and use virus and malware scans to identify affected equipment, systems, accounts and networks.
- [ ] Document which user accounts were or are logged on, which programs and processes were or are running, any remote connections to the affected IT systems or network(s) and all open ports and their associated applications.
- [ ] If possible, take a "forensic image" of the affected IT systems to preserve evidence. Tools to take forensic images include Forensic Tool Kit (FTK) and EnCase.
- [ ] If possible, identify any malware used in the incident, any remote servers to which data may have been sent during the incident, and the origin of the incident. DHS CISA can assist with the forensic analysis (www.cisa.gov/reporting-cyber-incidents).
- [ ] Research and identify if any employee or customer personally identifiable information (PII) was compromised.
- [ ] Check the system back-up time stamp to determine if the back-up was compromised during the incident.
- [ ] Document all findings, and avoid modifying or deleting any data that might be attributable to the incident.

Notes:

Actions to Recover from a Cyber Incident

Utility

- [ ] Continue to work with IT staff, vendors and integrators, government partners and others to obtain needed resources and assistance for recovery.
- [ ] Notify affected employees and customers if any PII was compromised.
- [ ] Submit an incident report through WaterISAC (866-H2O-ISAC). Membership is not required to submit a report.
- [ ] Develop a lessons learned document and/or an after action report (AAR) to document utility response activities, successes, and areas for improvement. Create an improvement plan (IP) based on your AAR and use the IP to update your vulnerability assessment, ERP and contingency plans.
- [ ] Register for cybersecurity alerts and advisories from water sector and government partners to be aware of new vulnerabilities and threats. Two sources of cybersecurity alerts are WaterISAC, which has a basic membership that is free, and ICS-CERT (https://ics-cert.us-cert.gov/alerts).

IT Staff or Vendor

- [ ] Remove any malware, corrupted files and other changes made to IT systems by the incident.
- [ ] Restore IT systems as required (e.g., re-image hard drives, reload software). DHS CISA can assist with the IT system recovery (https://www.cisa.gov/reporting-cyber-incidents).
- [ ] Restore compromised files from a system back-up that has not been compromised.
- [ ] Install patches and updates, disable unused services and perform other countermeasures to harden the system against known vulnerabilities that may have been exploited.

Notes:

My Contacts and Resources

CONTACT NAME	UTILITY/ORGANIZATION NAME	PHONE NUMBER
	Law Enforcement	
	IT Staff/Vendor	
	SCADA Staff/Vendor	
	DHS Cybersecurity and Infrastructure Security Agency (CISA)	
	Local Laboratory	
	State Primacy Agency	
	Local Emergency Management Agency	
	Local Health Department	
	WARN Chair	
	State Emergency Management Agency	

Resources

- Best Cybersecurity Practices (Water ISAC)
- Cyber Security Evaluation Tool (DHS ICS-CERT)
- Advisories (DHS ICS-CERT)
- Cybersecurity Advisors (DHS)
- DHS Cybersecurity and Infrastructure Agency (CISA)
- Cybersecurity Guidance and Tool (AWWA)

Notes:

AP 9 – Pandemic

Incident Action Checklist – Pandemic Incidents

The actions in this checklist are divided up into three "rip & run" sections and are examples of activities the water sector (drinking water and wastewater systems) can take to prepare for, respond to and recover from a pandemic. You can also populate the "My Contacts" sections with critical information that your utility may need during a pandemic.

Coronavirus Pandemic and Water Utilities

For general information from EPA about COVID-19 and water, see www.epa.gov/coronavirus. The risk of transmission of COVID-19 via drinking water and wastewater is low. However, there are other impacts to drinking water and wastewater utilities, which may include, but are not limited to:

- Staff shortages due to absenteeism;
- Supply chain disruptions (chemicals, materials, personal protective equipment);
- Field operations interruptions (repairs, meter reading, sampling); and
- Inability to maintain all operations.

Many water and wastewater utilities have created pandemic resilience plans based on best practices and experiences from past global outbreaks such as the avian flu in 2003 and swine flu in 2009. Utilities should review and update those plans and stay in close contact with their local health department and regulatory agency as the COVID-19 situation is dynamic and evolving rapidly. Water and wastewater systems need the most up-to-date information in order to make decisions that are right for their utility based on the pandemic impacts to their specific community.

Sign up for any COVID-19 alerts or notifications available from your regulatory agency and local emergency management agencies and health departments to stay up to date.

General COVID-19 Information

- U.S. Coronavirus Website
- U.S. Centers for Disease Control and Prevention Drinking Water and Wastewater COVID-19 (CDC)
- World Health Organization COVID-19 (WHO)
- Association of State Drinking Water Administrators COVID-19 (ASDWA)
- Water Information Sharing and Analysis Center COVID-19 (Water ISAC)
- Water Environment Federation COVID-19 (WEF)
- American Water Works Association COVID-19 (AWWA)
- Coronavirus Research Update (WRF)

Information on Hygiene and Water Safety

- OSHA Guidance for Wastewater Workers COVID-19 (OSHA)
- Water, Sanitation, Hygiene and Waste Management for COVID-19 (WHO, UNICEF)
- Memorandum on Identification of Essential Critical Infrastructure Workers During COVID-19 Response (DHS)

Actions to Prepare for a Pandemic

Planning

- [ ] Identify a lead, back-up, and team of individuals to serve as the Pandemic Response Team.
    - Develop a process for maintaining situational awareness of the current and future spread of the virus, as well as community impacts.
    - Develop strategies for managing the pandemic such as identifying response actions based on current information and the system's emergency response plan and continuity of operations plan.
- [ ] Update your drinking water emergency response plan (ERP) and wastewater ERP to ensure all contacts (24/7 availability), system diagrams and standard operating procedures for system operations are up to date.
- [ ] Develop or update a Continuity of Operations Plan (COOP) that specifically addresses the challenges of a pandemic and plans for significant staff shortages. Resources to help in the development of the plan include the Pandemic Continuity of Operations Template and Business Continuity Planning for Water Utilities: Guidance Document. The COOP should include, at a minimum, plans for the following:
    - Defining Roles and Responsibilities During the Pandemic
    - Protecting Employee Health
    - Maintaining Essential Operations and Critical Positions
    - Maintaining Essential Equipment, Materials and Supplies
    - Communications
    - Addressing Community Mitigation Impacts – Impacts of required social distancing, quarantine, school, and business closures, etc.
    - Identifying Delegations of Authority – Including orders of succession
    - Training – Cross-training and pandemic plan training
- [ ] Join your state's Water and Wastewater Agency Response Network (WARN) or other local mutual aid network. In addition, check to see if you are included in a statewide mutual aid law. WARNs may be able to provide assistance in the form of personnel, equipment, materials and technical assistance.
    - In addition, the Rural Community Assistance Partnership (RCAP), National Rural Water Association (NRWA), Rural Utilities Service (RUS), Indian Health Service (IHS), the Inter Tribal Council of Arizona (ITCA) and the United South and Eastern Tribes (USET), among others, may be able to provide licensed operators or technical assistance.
- [ ] Assess your system's Information Technology (IT) capability to ensure it can accommodate remote work arrangements without compromising security.
- [ ] Work with local law enforcement and health departments to ensure water sector staff are considered first responders, as specified in the Department of Homeland Security's (DHS) Crisis Emergency Response and Recovery Access (CERRA) Framework, and will have the ability to conduct field work when necessary if quarantines are placed on a community.
    - DHS developed a memorandum that identifies drinking water and wastewater personnel as essential workers during the COVID-19 response
- [ ] Share your COOP, and any specific pandemic issues, with your local emergency management agency (EMA) and health departments, regulatory agency, and any consecutive systems.
- [ ] Conduct internal and external (e.g. EMA, health department, regulatory agency) pandemic specific tabletop exercises regularly. Be sure to conduct remote exercises to ensure capability during a pandemic.

Actions to Prepare for a Pandemic *(continued)*

Protecting Employee Health

- [ ] Reinforce good personal hygiene practices with all staff.
  - Post proper hand washing techniques, with pictures, at all sinks.
  - Share preventative measures (washing hands, covering cough, not touching face, etc.) provided by the CDC to minimize risk.
- [ ] Ensure availability of adequate proper personal protective equipment (PPE), infection control (hand sanitizer, tissues, disinfecting wipes, electronic cleaners), and cleaning supplies. The disinfection of electronics may require specific supplies.
- [ ] Set up a pandemic policy for screening employees for symptoms, setting up extended sick leave and telework, keeping critical staff on-site for an extended period of time (with access to beds, food, water, medical supplies, communications), and social distancing in the office (no meetings, keeping 6 feet apart, etc.).
- [ ] Establish pandemic-specific health and safety protocols for field sampling conducted by staff or others providing sampling assistance in the event of staff shortages.
- [ ] Work with staff to develop their own family response plans so their families are taken care of during a pandemic while they are working.

Notes:

Maintaining Essential Operations

- [ ] Identify critical positions (plant operator, sampler, in-house and contract laboratory personnel, etc.) and skills, along with back-ups for each of those positions.
- [ ] Identify critical functions (disinfection, pumping, sampling and analysis, aeration, purchasing chemicals and supplies, etc.) and the minimum staff required to keep those functions operating.
- [ ] Develop a list of critical customers who need a continuous source of potable drinking water (e.g., hospitals, nursing homes, dialysis clinics, manufacturers).
- [ ] Assess staffing alternatives:
  - Determine the process to use for your state's WARN to request personnel during a pandemic. Reach out to your state or tribe's assistance providers such as RCAP, NRWA, RUS, IHS, ITCA, and USET to determine their ability to provide personnel if your staff cannot report to work due to illness, caring for an ill family member, or being quarantined themselves.
  - Cross-train staff to handle multiple positions and critical operations.
  - Ensure redundancy in laboratory personnel and, when possible, have contracts with multiple commercial laboratories as a contingency measure in cases of laboratory staff shortages.
  - Assess your remote operations capabilities (i.e., SCADA).
- [ ] Communicate with the laboratory that does your analytical work to ensure that they have a pandemic plan in place and are available to receive and analyze your samples. Also, make sure they have a back-up laboratory option in place.
  - The Water Laboratory Alliance (WLA) is a nationwide network of laboratories that serves the water sector. The WLA is part of the national Environmental Response Laboratory Network. Encourage your laboratory to become a member of the WLA to ensure national capabilities during a pandemic.

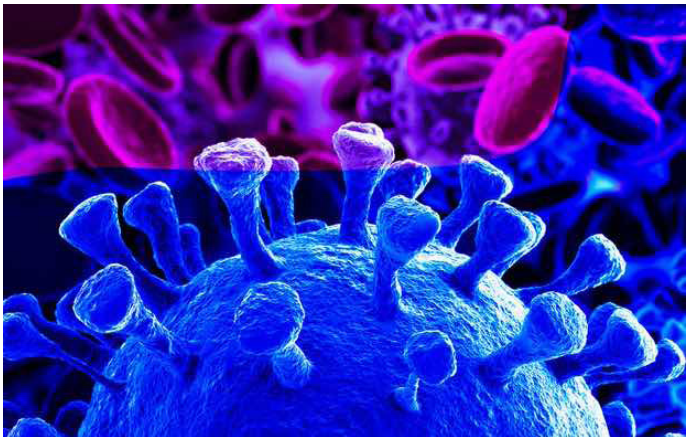
Actions to Prepare for a Pandemic *(continued)*

Maintaining Essential Facilities, Equipment, and Supplies

- [ ] Identify critical facilities (booster pump, chlorinator, aerator, etc.) and supplies (chlorine, other treatment chemicals, fuel, electricity, etc.) that must stay operational and available.
- [ ] Create an inventory of all critical materials, chemicals, supplies and equipment.
- [ ] Contact all vendors and manufacturers to ensure they have a pandemic plan in place and can deliver needed supplies.
    - Stock up on treatment chemicals and critical materials and equipment, as space, costs, and expiration dates allow.
- [ ] If possible, source materials and chemicals from two or more suppliers from different regions to mitigate supply chain disruptions.
    - Work with your vendors and require them to identify who their second-tier sources are to make sure the vendors you are using are not using the same source (which would equate to a sole source supply).

Communication

- [ ] Develop communication templates so you can communicate with your customers quickly.
- [ ] Identify appropriate distribution mechanisms such as via the website, social media, local news, reverse 911, etc.
- [ ] Identify emergency contacts with your local health department, regulatory agency, and EMA to communicate throughout the pandemic.



Notes:

Actions to Respond to a Pandemic

Initial Actions

- [ ] Activate your Pandemic Response Team
- [ ] Execute your pandemic COOP and Emergency Response Plan
  - Activate defined emergency roles and responsibilities
- [ ] **Stay in close contact with your regulatory agency** to coordinate on any issues that arise (lack of certified operators, laboratory capacity, or access to sample locations).

Protecting Employee Health

- [ ] Inform all staff on the latest CDC recommendations to limit the further transmission of the virus.
- [ ] Close all offices to the public.
  - Communicate with customers via phone, email, social media, and websites.
  - Offer payment options online, via mail, or through drop boxes.
- [ ] Temporarily suspend any in-home non-sampling appointments by staff such as water efficiency visits. Compliance sampling activities must continue. Work with homeowners concerning any health and safety issues with compliance sampling and follow established pandemic-specific health and safety protocols.
- [ ] Consider temporarily suspending drinking water shut-offs due to non-payment in order to protect staff and maintain essential water services to individuals.
- [ ] Limit or cease all in-person meetings, gathering of people in the same location, and travel.
- [ ] Ensure that workers and those with overlapping expertise are generally separated to minimize the risk of co-transmission.
- [ ] Increase the frequency of cleaning and disinfecting all surfaces and equipment, including control rooms, vehicles, computers, phones, tablets, break rooms, and conference rooms.
- [ ] Implement telework for as many staff as is feasible to maintain operations.
- [ ] Assess all construction and maintenance activities and limit to only critical projects.

Maintaining Essential Operations

- [ ] Implement minimum staffing plans and set up shift rotations.
- [ ] If you begin or anticipate experiencing critical staffing shortages:
  - Keep your regulatory agency up to date on your situation.
  - Reach out to your WARN. WARN members may be able to assist with personnel, equipment, supplies, and technical assistance.
  - If you are not a WARN member or your WARN is unable to assist, reach out to neighboring utilities and develop mutual aid agreements, if possible.
  - Reach out to your local assistance providers such as RCAP, NRWA, RUS, IHS, ITCA, and USET about their ability to provide licensed operators or technical assistance.
  - If the above resources are not available, contact your local EMA. Make sure to be specific about the type of personnel you need and for the type of water system (license level, plant rating, treatment, drinking water, wastewater, etc.).
- [ ] Make immediate preparations to house critical staff on-site (with access to beds, food, water, medical supplies, communications, etc.).
- [ ] Communicate often with the laboratory that does your analytical work to ensure that they are available to receive and analyze your samples and make sure they have a back-up laboratory option in place.

Actions to Respond to a Pandemic *(continued)*

- [ ] Remind all staff to anticipate cyber threats including social engineering, phishing, and other opportunistic cyber-attack tactics preying on fear and the need for information that could disrupt billing or supervisory control and data acquisition (SCADA) operations.
    - Remind staff not to click on any links that could execute a hostile program.
    - Back-up all critical files and ensure security systems (firewalls, anti-virus) are functioning on all remote equipment.

Maintaining Essential Facilities, Equipment, and Supplies

- [ ] Secure all facilities in preparation for limited access and surveillance.
- [ ] Stay in close contact with your suppliers of equipment, materials, treatment chemical, and other supplies, especially if you were not able to stockpile chemicals or materials. If you anticipate an impending shortfall of chemicals, contact your WARN to see if other utilities can assist, your assistance providers (RCAP, NRWA, RUS, IHS, ITCA, USET) to see if they have resources, and your local emergency management agency who can request chemicals through state or tribal emergency authorities or make requests to the federal level.

Communication

- [ ] Drinking Water - Communicate with your customers as soon as possible and often about the safety of their water supply using guidance provided by the EPA and CDC.
    - If there is a temporary loss of water (line break, pump failure), remind customers to use the CDC-recommended alternative to hand washing, which is hand sanitizer with at least 60 percent alcohol content.
- [ ] Wastewater - Communicate with your customers (local news, social media, or webpage) about wet wipes and the consequences of flushing them down the toilet (e.g., sewage backups).
- [ ] Stay in close contact with your regulatory agency, local health department, and local EMA.

Documentation

- [ ] Document all events, timeframes, and resulting impacts, so this information can be used as part of the post-incident investigation.
    - Be sure to document all hours (regular and overtime) and keep invoices for all equipment, supplies, contracts, vendors, etc.

Notes:

Actions to Recover from a Pandemic

- [ ] Assign a utility representative to continue providing updates to customers regarding current mitigation actions, as well as preparation for future incidents.
- [ ] Work with vendors and internal departments to return to normal service.
- [ ] Develop a lessons-learned document and an after-action report (AAR) to document your response activities, including what went well and what did not go well. Create an improvement plan (IP) based on your AAR and use the IP to update your vulnerability assessment, ERP and COOP.
- [ ] Revise budget and asset management plans to address increased costs from response-related activities and follow-up actions.
- [ ] Identify mitigation measures that can help increase utility resilience for future pandemics.
- [ ] Conduct annual utility-specific pandemic awareness training with all employees.

Notes:

My Contacts and Resources

CONTACT NAME	UTILITY/ORGANIZATION NAME	PHONE NUMBER
	Primacy Agency	
	Local Health Department	
	Local EMA	
	WARN Chair	
	Local Laboratory	
	State EMA	

Resources

Mutual Aid Programs

- Water/Wastewater Agency Response Network (EPA)

Emergency Response and Continuity of Operations Planning

- Drinking Water Emergency Response Plans (EPA)
- Wastewater Emergency Response Plan Template (RCAP)
- Pandemic Continuity of Operations Template (GLCAP)
- Business Continuity Planning for Water Utilities: Guidance Document (WRF, AWWA, EPA)
- Business Continuity Planning in the Event of an Influenza: A Reference Guide (AMWA, WaterISAC)
- Tabletop Exercise Tool, Pandemic Scenario (EPA)

Other Tools and Resources

- Water Laboratory Alliance – Drinking Water and Wastewater (EPA)
- Crisis Emergency Response and Recovery Access (CERRA) Framework (DHS)
- Water Utility Communication During Emergency Response (EPA)
- Water Utility Response On-The-Go (EPA)
- Resources for Small Public Water System Operators (EPA)

AP 10 – Wildfire

Incident Action Checklist – Wildfire

The actions in this checklist are divided up into three "rip & run" sections and are examples of activities that water and wastewater utilities can take to: prepare for, respond to and recover from wildfires. For on-the-go convenience, you can also populate the "My Contacts" section with critical information that your utility may need during an incident.

Wildfire Impacts on Water and Wastewater Utilities

A wildfire is any instance of uncontrolled burning in grasslands, brush or woodlands. Wildfires can be caused by lightning, human carelessness or arson. Wildfires often begin unnoticed spread quickly and present a direct risk to property and infrastructure, in addition to potential degradation of the water supply. In some cases, source water quality issues can persist for 5-10 years following a wildfire. Areas that have experienced a wildfire are also at an increased risk of flash flooding and mudslides because the ground where vegetation has burned away cannot effectively absorb rainwater. Often, post-fire impacts (including those impacts resulting from flash floods) are more detrimental to drinking water and wastewater systems than the fire itself. Specific impacts to drinking water and wastewater utilities may include, but are not limited to:

- Infrastructure damage to the facility or distribution system due to proximity to the fire or firefighting activities
- Loss of water quantity due to increased withdrawals for firefighting activities
- Source water quality changes due to increased nutrients and other pollutants, which can result in higher turbidity, algal blooms, potential odor and taste issues, and subsequent higher treatment costs
- Increased sediment in reservoirs as a result of runoff and flash floods from burned areas, which can affect water quality, and reduced reservoir capacity and effective service lifespan
- Increased sediment and debris in stormwater runoff following flash floods, impacting water quality and treatment processes
- Decreased water supply downstream, as loss of forest canopy can lead to increased evaporation and reduction in the amount of water stored in snowpack

The following sections outline actions water and wastewater utilities can take to prepare for, respond to and recover from wildfires.

Examples of Water Sector Impacts and Response to a Wildfire

Denver Water responds to impacts from wildfire and flooding

On May 18, 1996, the 11,900-acre Buffalo Creek fire occurred on a tributary to the upper South Platte River, the main source of Denver, Colorado's water supply. While Buffalo Creek itself contributes a very small share of Denver's water supply, it is located directly upstream of the Strontia Springs Reservoir, the intake point for the Foothills Treatment Plant – a facility that handles approximately 80% of Denver's water.

Two months after the Buffalo Creek fire, heavy thunderstorms occurred directly over the burned area, causing a flash flood that washed more sediment into the reservoir than had accumulated over the previous 13 years, resulting in an estimated loss of 30 years of the reservoir's planned 50-year life.

The emergency cleanup costs totaled nearly $1 million. Chronic cleanup costs due to increased turbidity totaled $250,000 in water treatment costs per year, and dredging was estimated to cost $15 to $20 million over 10 years.

To mitigate future damage, the utility installed sensors upstream of the reservoir to monitor the amount of debris and sediment coming down the river, allowing the utility to shut down its treatment plant before flash floods could cause damage. Denver Water and the US Forest Service Rocky Mountain Region are also investing $33 million over a 5-year period for mechanical thinning, fuel reduction, creating fire breaks, erosion control, decommissioning roads and reforestation.

Source: EPA "Adaptation Strategies Guide for Water Utilities, 2012"

My Contacts and Resources

CONTACT NAME	UTILITY/ORGANIZATION NAME	PHONE NUMBER
	Local EMA	
	State EMA	
	State Primacy Agency	
	WARN Chair	
	Power Utility	

Planning

- Fire mapping and outlooks:
  - Active Fire Mapping Program (U.S. Forest Service [USFS])
  - National Significant Wildland Fire Potential Outlooks (National Interagency Coordination Center [NICC])
  - NOAA National Weather Service – Fire Weather (National Oceanic and Atmospheric Administration [NOAA])
  - Fire Weather Outlooks and Forecasting Tools (National Weather Service [NWS])
  - Incident Information System (InciWeb)
  - Geospatial Multi-Agency Coordination (GeoMAC) Group Wildland Fire Support application (U.S. Geological Survey [USGS])
  - Fire Forecast (National Public Radio)
  - Wildfire Assessment System (USFS)
- National Interagency Fire Center (NIFC)
- NIFC Burned Area Emergency Response (BAER)
- Firewise Communities (National Fire Protection Association [NFPA])
- Ready.gov Wildfire Preparedness (Federal Emergency Management Agency [FEMA])
- Fire Management Planning for Public Water Systems (CoWARN)
- Best Management Practices for Fire Preparedness and Response (Florida Rural Water Association [FRWA])
- U.S. Drought Portal (National Integrated Drought Information System [NIDIS])
- Wildfire Impacts on Water Quality (Southwest Hydrology)
- All-Hazard Consequence Management Planning for the Water Sector (Water Sector Emergency Response Critical Infrastructure Partnership Advisory Council (CIPAC) Workgroup)
- Preparing for Extreme Weather Events: Workshop Planner for the Water Sector (EPA)
- Tabletop Exercise Tool for Water Systems: Emergency Preparedness, Response, and Climate Resiliency (EPA)

Coordination

- Water/Wastewater Agency Response Network (WARN) (EPA)
- Community Based Water Resiliency (EPA)

Facility and Service Area

- Defensible Space Guidance (CAL FIRE)
- Private Wells after the Fire: A private well owner's guide to protecting your drinking water source (Arizona Department of Environmental Quality [ADEQ])
- Firewise Landscaping and Plant Lists (NFPA)
- Firewise Guide to Landscape and Construction (NFPA)
- Post-Fire Rehabilitation Techniques (Colorado State University)
- Recovery Assistance for Water Utilities Dealing with the Effects of Wildfire (CoWARN)
- Water Quality Concerns Fact Sheet (ADEQ)
- Municipal Water Supply Systems and Evaluation Methods for Fire Protection (FEMA)

Power, Energy and Fuel

- EPA Region 1 Water/Wastewater System Generator Preparedness Brochure (EPA)

Documentation and Reporting

- Federal Funding for Utilities in National Disasters (Fed FUNDS) (EPA)

Mitigation

- Burned Area Emergency Response (BAER) Treatment Catalog (USFS)
- Plants for Wildfire Protection and Restoration (USDA)
- Land Rehabilitation FAQ: Lower North Fork Fire (Jefferson Conservation District)
- Climate Resilience Evaluation and Awareness Tool (CREAT)
- Adaptation Strategies Guide (EPA)

Actions to Prepare for a Wildfire

Planning

- [ ] Actively monitor fire and weather conditions and be aware of regional wildfires.
- [ ] Review and update your utility's emergency response plan (ERP), and ensure all emergency contacts are current.
- [ ] Conduct briefings, training and exercises to ensure utility staff is aware of all preparedness, response and recovery procedures.
- [ ] Identify priority water customers (e.g., hospitals), obtain their contact information, map their locations and develop a plan to restore those customers first, in case of water service disruptions.
- [ ] Develop an emergency drinking water supply plan and establish response partner contacts (potentially through your local emergency management agency [EMA] or mutual aid network) to discuss procedures, which may include bulk water hauling, mobile treatment units or temporary supply lines, as well as storage and distribution.
- [ ] Review and update fire management plans, including contingency plans for system operation if critical facilities are impacted by wildfire and access is limited or not possible.
- [ ] Conduct a hazard vulnerability analysis in which you review historical records to understand the past frequency and intensity of wildfires and how your utility may have been impacted. Consider taking actions to mitigate wildfire impacts to the utility, including those provided in the "Actions to Recover from a Wildfire: Mitigation" section.
- [ ] Complete pre-disaster activities to help apply for federal disaster funding (e.g., contact state/local officials with connections to funding, set up a system to document damage and costs, take photographs of the facility for comparison to post-damage photographs).
- [ ] Ensure proper safety gear is available for field employees.

Coordination

- [ ] Join your state's Water/Wastewater Agency Response Network (WARN) or other local mutual aid network.
- [ ] Coordinate with WARN members and other neighboring utilities to discuss:
  - Outlining response activities, roles and responsibilities and mutual aid procedures (e.g., how to request and offer assistance)
  - Conducting joint tabletop or full-scale exercises
  - Obtaining resources and assistance, such as equipment, personnel, technical support or water
  - Establishing interconnections between systems and agreements with necessary approvals to activate this alternate source. Equipment, pumping rates and demand on the water sources need to be considered and addressed in the design and operations
  - Establishing communication protocols and equipment to reduce misunderstandings during the incident
- [ ] Coordinate with other key response partners, such as your local EMA, to discuss:
  - How restoring system operations may have higher priority than establishing an alternative water source
  - Potential points of distribution for the delivery of emergency water supply (e.g., bottled water) to the public, as well as who is responsible for distributing the water
- [ ] Understand how the local and utility emergency operations center (EOC) will be activated and what your utility may be called on to do, as well as how local emergency responders and the local EOC can support your utility during a response. If your utility has assets outside of the county EMA's jurisdiction, consider coordination or preparedness efforts that should be done in those areas.

Actions to Prepare for a Wildfire *(continued)*

- [ ] Meet with the fire agency with authority in your utility's area. This could include a local fire department, state conservation and forestry offices, and/or the US Forest Service. Review plans, discuss response activities (e.g., fire suppression chemical use) and identify hazards and vulnerabilities at your utility.

- [ ] Ensure credentials to allow access will be valid during an incident by checking with local law enforcement.

- [ ] Sign up for mobile and/or email alerts from your local EMA, if available.

Communication with Customers

- [ ] Develop outreach materials to provide your customers with information they will need during a wildfire (e.g., clarification about water advisories, instructions for private well and septic system maintenance, and information about fire prevention and mitigation).

- [ ] Review public information protocols with local EMA and public health/primacy agencies. These protocols should include developing water advisory messages (e.g., boil water) and distributing them to customers using appropriate mechanisms, such as reverse 911.

Facility and Service Area

- [ ] Inventory and order extra equipment and supplies, as needed:
  - Motors
  - Fuses
  - Chemicals (ensure at least a two week supply)
  - Cellular phones or other wireless communications device
  - Emergency Supplies
    - Tarps/tape/rope
    - Cots/blankets
    - First aid kits
    - Foul weather gear
    - Plywood
    - Flashlights/flares
    - Sandbags (often, sand must be ordered as well)
    - Bottled water
    - Batteries
    - Non-perishable food

- [ ] Ensure communication equipment (e.g., radios, satellite phones) works and is fully charged.

- [ ] Develop a GIS map of all system components and prepare a list of coordinates for each facility.

- [ ] Practice mechanical thinning, weed control, selective harvesting, controlled burns and creation of fire breaks on utility managed property, and encourage these practices on property that may directly impact the utility, its water supply and/or water quality.

Notes:

Actions to Prepare for a Wildfire *(continued)*

- [ ] Address and, if possible, remove vegetation from around facilities located in medium to high fire danger zones. Consider replacing flammable vegetation with fire-resistant landscaping.
- [ ] Create a zone of defensible space of approximately 50-100 feet for utility equipment and facilities (e.g., wellheads, structures, supports to wires and transformers). Consult with your local fire department for specific recommendations or requirements.
- [ ] Install manual or automatic irrigation systems to provide wetting of components and groundcover for vulnerable areas (e.g., chlorine storage, control equipment buildings).
- [ ] Assess the possibility of and procedures for using reclaimed water for fire suppression (prepare public notice and talking points).
- [ ] Document pumping requirements and storage capabilities, as well as critical treatment components and parameters.
- [ ] Back-up essential records and data, and store in a fireproof safe or offsite facility.

Personnel

- [ ] Identify essential personnel and ensure they are trained to perform critical duties in an emergency (and possibly without communication), including the shut down and start up of the system.
- [ ] Establish communication procedures with essential and non-essential personnel. Ensure all personnel are familiar with emergency evacuation and shelter in place procedures.
- [ ] Pre-identify emergency operations and clean-up crews. Establish alternative transportation strategies if roads are impassable.
- [ ] Consider how evacuations or limited staffing due to transportation issues (potentially all utility personnel) will impact your response procedures.
- [ ] Identify possible staging areas for mutual aid crews if needed in the response, and the availability of local facilities to house the crews.
- [ ] Encourage personnel, especially those that may be on duty for extended periods of time, to develop family emergency plans.

Power, Energy and Fuel

- [ ] Evaluate condition of electrical panels to accept generators; inspect connections and switches.
- [ ] Document power requirements of the facility; options for doing this may include:
  - Placing a request with the US Army Corps of Engineers 249th Engineer Battalion (Prime Power): http://www.usace.army.mil/249thEngineerBattalion.aspx
  - Using the US Army Corps of Engineers on-line Emergency Power Facility Assessment Tool (EPFAT): http://epfat.swf.usace.army.mil/
- [ ] Confirm and document generator connection type, capacity load and fuel consumption. Test regularly, exercise under load and service backup generators.
- [ ] Fill fuel tanks to full capacity and ensure that you have the ability to manually pump gas in the event of a power outage. Ensure this equipment and other hazardous materials are located in a safe zone.
- [ ] Contact fuel vendors and inform them of estimated fuel volumes needed if utility is impacted. Determine your ability to establish emergency contract provisions with vendors and your ability to transport fuel if re-fueling contractors are not available. Develop a backup fueling plan and a prioritization list of which generators to fuel in case of a fuel shortage.
- [ ] Collaborate with your local power provider and EOC to ensure that your water utility is on the critical facilities list for priority electrical power restoration, generators and emergency fuel.

Actions to Respond to a Wildfire

Planning

- [ ] Identify possible alternate water supplies and operational changes to assist in mitigating demand and water quality concerns.

Coordination

- [ ] Once the wildfire is about 40% contained, reach out to your local EMA, the incident's Public Information Officer (PIO) and the Burned Area Emergency Response (BAER) team to maintain awareness of the situation and, if possible, to lend assistance as resource advisors or observers.
- [ ] Notify your local EMA and state regulatory/primacy agency of system status.
- [ ] If needed, request or offer assistance (e.g., equipment, personnel) through mutual aid networks, such as WARN.
- [ ] Assign a representative of the utility to the incident command post or the community's EOC.

Communication with Customers

- [ ] Notify customers of any water advisories and consider collaborating with local media (television, radio, newspaper, etc.) to distribute the message. If emergency water is being supplied, provide information on the distribution locations.

Facility and Service Area

Overall

- [ ] Conduct damage assessments of the utility to prioritize repairs and other actions.
- [ ] Check that back-up equipment and facility systems, such as controls and pumps, are in working order, and ensure that chemical containers and feeders are intact.

Drinking Water Utilities

- [ ] If possible, refill storage tanks each day to ensure maximum storage for demand, including fire suppression.
- [ ] Work with the local EMA to identify passable access roads and to ensure that utility facilities in forest areas are clearly identified.
- [ ] Keep intakes and access hatches clear of debris.
- [ ] Monitor raw water quality, develop a sampling plan and adjust treatment as necessary.
- [ ] Notify regulatory/primacy agency if operations and/or water quality or quantity are affected.
- [ ] Utilize pre-established emergency connections or setup temporary connections to nearby communities, as needed. Alternatively, implement plans to draw emergency water from pre-determined tanks or hydrants. Notify employees of the activated sites.

Notes:

Actions to Respond to a Wildfire *(continued)*

- [ ] Prepare and deploy equipment as needed to support firefighting operations, such as tanker trucks and related pumping equipment, as well as bulldozers for the construction of firebreaks.
- [ ] Conduct sediment removal activities, such as installing permanent or temporary debris basins.

Wastewater Utilities

- [ ] Inspect the utility and service area, including lift stations, for damage and power availability. Inspect the sewer system for debris and assess the operational status of the mechanical bar screen. If necessary, run system in manual operation.
- [ ] Notify regulatory/primacy agency of any changes to the operations or required testing parameters.

Documentation and Reporting

- [ ] Document all damage assessments, mutual aid requests, emergency repair work, equipment used, purchases made, staff hours worked and contractors used during the response to assist in requesting reimbursement and applying for federal disaster funds. When possible, take photographs (with time and date stamp). Proper documentation is critical to requesting reimbursement.
- [ ] Work with your local EMA on the required paperwork for public assistance requests.

Personnel

- [ ] Account for all personnel and provide emergency care, if needed. If personnel are in the field, communicate with the National Weather Service (NWS) on local wind conditions in the fire area so staff are aware of how quickly winds are shifting and if evacuation from facilities is required.
- [ ] Deploy emergency operations and clean-up crews. Identify key access points and roads for employees to enter the utility and critical infrastructure; coordinate the need for debris clearing with local emergency management or prioritize it for employee operations.

Power, Energy and Fuel

- [ ] Use backup generators, as needed, to supply power to system components.
- [ ] Monitor and plan for additional fuel needs in advance; coordinate fuel deliveries to generators.
- [ ] Maintain contact with electric provider for power outage duration estimates.

EPA

Notes:

Actions to Recover from a Wildfire

Coordination

- [ ] Continue work with response partners to obtain funding, equipment, etc.
- [ ] Coordinate with land owners and other partners to restore and treat burned areas.

Communication with Customers

- [ ] Assign a utility representative to continue to communicate with customers concerning a timeline for recovery and other pertinent information.

Facility and Service Area

- [ ] Complete damage assessments.
- [ ] Complete permanent repairs, replace depleted supplies and return to service.

Documentation and Reporting

- [ ] Compile damage assessment forms and cost documentation into a single report to facilitate the sharing of information and the completion of state and federal funding applications. Visit EPA's web-based tool, Federal Funding for Utilities—Water/Wastewater—in National Disasters (Fed FUNDS), for tailored information and application forms for various federal disaster funding programs: http://water.epa.gov/infrastructure/watersecurity/funding/fedfunds/
- [ ] Develop a lessons learned document and/or an after action report (AAR) to keep a record of your response activities. Update your vulnerability assessment, ERP, fire models and fire management plans.
- [ ] Revise budget and asset management plans to address increased costs from response-related activities.

Mitigation

- [ ] Identify mitigation and long-term adaptation measures that can prevent damage and increase utility resilience. Consider impacts related to future climate conditions and the increased frequency of wildfires when planning for system upgrades (e.g., installing buffer strips, removing hazardous fuels).
- [ ] Consider implementing the following mitigation measures to prepare for possible flash flooding events following a wildfire:
  - Monitor the watershed, as conditions may be different post-fire. Identify potential failure points within your service area: ensure culverts can handle increased flow, and determine runoff points and areas where water will now collect
  - Install a rain gauge upstream of intake for early warning of heavy precipitation that could lead to high turbidity water and sensors to monitor the amount of debris and sediment coming downstream
  - Consider instituting erosion control measures to protect against runoff and sediment concerns that occur during suppression and precipitation

Notes:

AP 11 – Earthquake

AP Summary:	This Action Plan applies to earthquake events. In general, these events occur without any lead times, making it impossible to take proactive measures. Response and recovery can be time consuming during such events, and they can involve loss of electrical power supply, damage of structures and equipment, disruptions of service, and injuries to utility personnel.	
Initiation and Notification:	An earthquake usually occurs without any type of warning. Due to the suddenness, all personnel should attempt to find immediate shelter. This may include: • Standing in a doorway and bracing your hands and feet against each side. • Getting under a desk or heavy table. • Standing flat against an interior wall. • Do not seek cover under laboratory tables or benches as chemicals could spill and harm personnel. After an earthquake has stopped, initiate this earthquake AP 8D.	*Notification phone numbers can be obtained from the Organization Contact List in Appendix C of the ERP.*
Equipment Identified:		*This equipment is available to assist in the execution of this AP.*
Specific Activities:		
I. Assess the Problem	In general, the City Manager will organize an assessment team to undertake the following activities: • Inspect all structures for obvious cracks and damage. • Assess condition of all electrical power feeds and switchgear. • If SCADA is working, immediately review system for all types of malfunctions, including telemetry, pressure in the distribution system, and operation of pumps and other equipment. • If buildings have any sign of damage, such as cracked walls, broken windows, downed power lines, do not enter, but wait for trained personnel. • If buildings appear safe, cautiously inspect condition of interiors for damaged equipment, leaks, chemical spills, etc. • Communicate all findings via radio to Emergency Operations Center (EOC) or City Manager, as appropriate. • Activate personnel accountability network to check for injury of staff.	*Be prepared for aftershocks. Although smaller than the main shock, aftershocks cause additional damage and may bring weakened structures down. Aftershocks can occur in the first hours, days, weeks, or even months after the quake. Follow the same procedures as for earthquakes.*

AP 11 – Earthquake		
I. Assess the Problem	Earthquakes can cause significant power outages because of the impact on outside generation and transmission lines. After a major earthquake, power might be interrupted for an extended period of time over the entire operations area. In this instance, power restoration will most probably be slow and, depending upon the infrastructure damage, localized. Some isolated areas could take considerably longer for power restoration than others.	
II. Isolate and Fix the Problem	General earthquake procedures during an earthquake are as follows: 1. Seek shelter under a deck, table, doorway, or inside wall. 2. Once the shaking has stopped, gather valuables, and quickly make your way outside. (DO NOT USE ELEVATORS.) 3. Avoid electric wires, poles, and equipment, once outside. 4. Prepare for aftershocks.	
III. Monitoring	At all times, personnel should observe the following general steps: • Stay calm and await instructions from the designated official. • Keep away from overturned fixtures, windows, filing cabinets, and electrical power. • Provide assistance and/or call for medical help for injured employees as needed. • If major structural damage has occurred, order a complete evacuation. The building should be inspected by trained personnel for damage before reentry. • Protect from further danger by putting on long pants, a long-sleeved shirt, sturdy shoes, and work gloves. • Look for and extinguish small fires. Eliminate fire hazards. • Monitor the radio for instructions. • Expect aftershocks. • Use the telephone only to report life-threatening emergencies.	
IV. Recovery And Return to Safety	General earthquake procedures after an earthquake are as follows: 1. Activate Emergency Operations Center (EOC). 2. Contact emergency assistance (local police, local fire department, rescue squad, etc.) as necessary to respond to injuries of staff. 3. The City Manager is to notify customers, media, and state and local authorities if service is disrupted or if significant demand management is necessary. 4. Inspect facilities for structural damage, including: buildings, storage tanks, pipelines, and process equipment. Consider the use of an outside engineering consultant. 5. Prioritize and repair water main leaks.	

AP 11 – Earthquake		
	6. Contact neighboring purveyors for mutual aid arrangements, and open connections as needed. 7. Respond to side effects (loss of power, fire chemical spills, etc.)	
V. Report of Findings	Assemble relevant personnel to review effectiveness of action plan and reinforce lessons learned.	
VI. AP-8D Revision Dates		

AP 12 – Issue Public Notifications

AP Summary:	This Action Plan applies to developing and releasing public notifications.	
Do Not Drink and/or Boil Water Notices	Once the Chief Plant Operator and Utilities Supervisor determine that a current or past condition warrants contacting SWRCB, they are to do so and discuss the situation with them. The current points of contact at SWRCB are listed in Appendix C. 1. Once SWRCB directs that a Do Not Drink or a Boil Water Notice be issued, immediately notify the City Manager before any action is taken. 2. The City Manager and the City Attorney shall prepare a public notice release containing the following information: • The known problem • The affected area • The cause • Any action the public needs to take • An estimate of how long the condition will last, and what the City is doing to correct the problem. • Sample notification forms that have been reviewed by SWRCB are included in the Appendix. They are to be used as guides for preparation of any notification. 3. Once SWRCB approves the verbiage, the notice shall be given to the City Manager for distribution to the local media. 4. Once the Do Not Drink or a Boil Water Notice has been crafted, approved, and sent out for dissemination, the Chief Plant Operator or designee shall then prepare a "Notice to Lift Order" so as to have it already prepared for when it is needed. This "Notice to Lift" should be forwarded to the City Manager with explicit instructions to not release it until specifically notified by the Chief Plant Operator SWRCB that the Public Notice should be lifted. 5. When the affected area is small, the local customer service representative and Water Operators shall either distribute the Do Not Drink or a Boil Water Notice door-to-door. Pass the word to residents verbally or hang notices on doors. City personnel shall provide notification support when large areas are affected. The Utilities Supervisor shall coordinate supplemental support.	*Notification phone numbers can be obtained from the Organization Contact List in Appendix C of the ERP.*

AP 12 – Issue Public Notifications		
	6. The City is required to distribute the notice to the local media via all available means of electronic communication, i.e. radio stations, television stations, and newspapers. For radio, request that the announcement be made every 30-minutes. Current listings for media that should be contacted to assist in disseminating this information are listed in Appendix C.	
Regulation Notice Violation	When a Public Notice of Regulation Violation needs to be issued, the process can occur slower that when a Boil Water and/or Do Not Drink Notice is being issued. When these are issued it does not necessarily mean that the public is "at risk" by drinking the water. A regulatory procedural violation can occur with a health impact occurring. Public Notice of Regulation Violation requires the following: 1. Once a regulation violation has been discovered, uncovered, or observed it should be promptly reported to the Chief Plant Operator who shall notify the City Manager, and Utilities Supervisor. 2. The Chief Plant Operator, or designee, shall prepare the notice. 3. The preparer shall then contact SWRCB regarding the notice. 4. Once SWRCB approves the verbiage they will provide their opinion as to whether a direct mailing of the notice will be required, or if dissemination in local newspapers will suffice. 5. Once this process has taken place, the City Manager will be notified. 6. The approved notice shall be delivered to the City Manager office for formal release. 7. All City staff shall be adequately informed of the notice, and they should be provided with answers to typical questions they may receive from the public. Public Works staff should not be uninformed when asked about the situation by a citizen.	
Lifting of a Boil Water and/ or Do Not Drink Notice	When two consecutive negative bacteriological results have been obtained or other contamination issues have been resolved, the Chief Plant Operator shall contact SWRCB and ask for permission to lift the Boil Water or Do Not Drink Notice. Once SWRCB approval has been received, the "Notice to Lift" shall be forwarded to the City Manager, if he does not already have it. If he does already have the Notice to Lift, he should be given the authorization to release it to the public.	

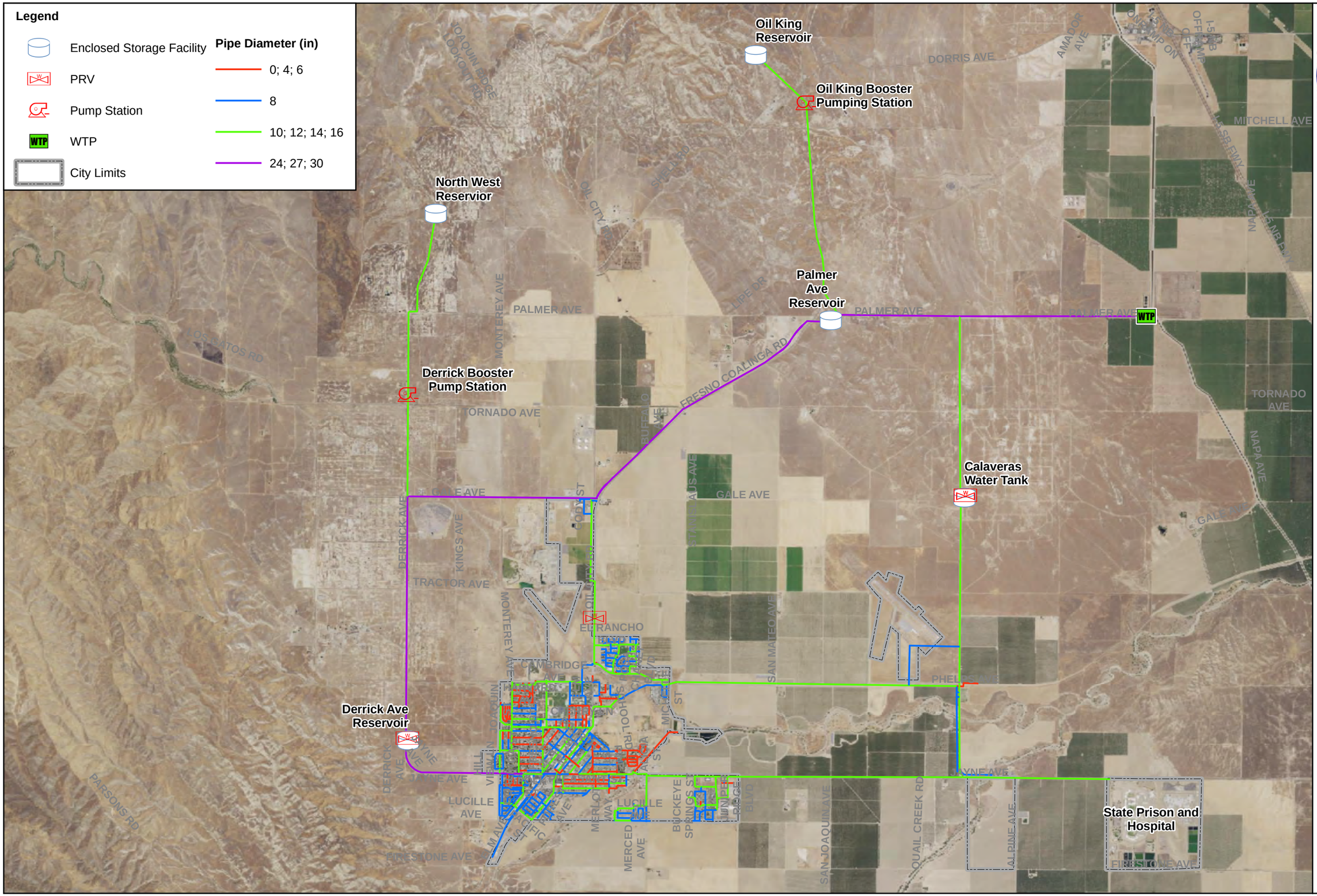
AP 12 – Issue Public Notifications

Public Notification Responsibilities of Operations Staff	1. Water Quality Staff: • In the event of bacteriological contamination, the water treatment staff shall verify chlorine residual (when possible/available) throughout the system. • The City shall also take additional samples, both chlorine and bacteriological, and arrange any assistance deemed necessary from the City's water treatment plant or contract laboratory staff. • The Chief Plant Operator is responsible for identifying and working with the Public Works Director and other Public Works employees to correct the source of the problem as quickly and efficiently as possible. • All members of the Public Works staff shall strive to remain informed about the current situation in order to ensure they are adequately prepared to answer questions from the public. When a customer asks a question regarding an important issue or special circumstance and the employee is unaware, it reflects poorly on the entire organization. • Supervisors shall take the time to adequately inform their staffs regarding any on-going situation that could negatively impact the citizens. 2. Production Staff: • They are predominantly responsible for identifying and resolving any and all problems related to the water treatment plant and storage reservoirs. • The Chief Plant Operator is responsible to work with the Utilities Supervisor to correct the source of the problem as quickly and efficiently as possible. • All members of the production staff shall strive to remain informed about the current situation in order to ensure they are adequately prepared to answer questions from the public. When a customer asks a question regarding an important issue or special circumstance and the employee is unaware, it reflects poorly on the entire organization. • Supervisors shall take the time to adequately inform their staffs regarding any on-going situation that could negatively impact the citizens. 3. Distribution Staff: • They shall be responsible for identifying and resolving any problems related to the distribution system, transmission mains and/or backflow prevention devices.	

AP 12 – Issue Public Notifications		
	• The distribution system supervisors are responsible to work with the other supervisors to correct the source of the problem as quickly and efficiently as possible. • All members of the distribution system staff shall strive to remain informed about the current situation in order to ensure they are adequately prepared to answer questions from the public. When a customer asks a question regarding an important issue or special circumstance and the employee is unaware, it reflects poorly on the entire organization. • Supervisors shall take the time to adequately inform their staffs regarding any ongoing situation that could negatively impact the citizens.	

Appendix B
System & Facility Information

- Water System Overview Map
- Equipment and Supplies
- City of Coalinga Sampling Supplies
- City of Coalinga Personal Protective Equipment


Legend
Enclosed Storage Facility
PRV
Pump Station
WTP
City Limits
Pipe Diameter (in)
0; 4; 6
8
10; 12; 14; 16
24; 27; 30
Oil King Reservoir
Oil King Booster Pumping Station
North West Reservoir
Palmer Ave Reservoir
Derrick Booster Pump Station
Derrick Ave Reservoir
Calaveras Water Tank
State Prison and Hospital
WTP
DORRIS AVE
MITCHELL AVE
PALMER AVE
TORNADO AVE
GALE AVE
TRACTOR AVE
EL RANCHO
CAMBRIDGE AVE
PHELPS AVE
LUCILLE AVE
FIRESTONE AVE
DERRICK AVE
MONTEREY AVE
OIL CITY RD
SHELLEY
LIPE DR
FRESNO COALINGA RD
LOS BANOS RD
PARSONS RD
KINGS AVE
CODY ST
SAN MATEO AVE
SAN JOAQUIN AVE
QUAIL CREEK RD
ALPINE AVE
NAPA AVE
AMADOR AVE
I-5 NB RAMP ON
I-5 NB RAMP OFF
I-5 NB FWY
I-5 SB FWY
City of Coalinga
Emergency Response Plan
Water System Overview Map
1 inch = 5,000 feet
0
2,500
5,000

Equipment and Supplies

Description	Quantities
AIR IMPACT WRENCH	1
AIR GRINDER	1
ARROW BOARD	4
AIR MOTOR	3
AIR COMPRESSOR LEROI	1
AX	
BORING MACHINE	1
BORING DRILL - EARTH	
BROOMS ASSORTED USE	6
BACKFLOW - DIFFERENTIAL TEST GAUGE	
BOAT ALUMINUM	
CEMENT - BLADE FOR DUCTILE SAW	
CEMENT - BULL FLOAT	1
CEMENT - EDGER	1
CEMENT - FINISHER WITH EXTENSIONS	1
CEMENT - TAMPER	1
CEMENT - TROWEL	1
CEMENT - WOOD FLOAT	1
CEMENT MIXER	1
CABLE GRIP	
CHISEL	
POCKET COLORIMETER	
CONDUIT BENDER	3
CONSOLE	
CRIMPER - COPPER ASSORTED SIZES	2
CRIMPER - PLASTIC ASSORTED SIZES	2
CUTTER-COPPER MINI	
CUTTER - COPPER	
CUTTER - 4 WHEEL	3
CUTTER - HYDRAULIC - WHEEL	1
CUTTING TOOL - COPPER	
CUTTING RATCHET PVC	4
CUTTING TOOL - SOIL	
COMPRESSOR 60 GAL	1
COMPRESSOR SPEEDAIR	
DIFFUSER	1
DESCALER	
DIGGING BAR	3
DRILL — AC	

Equipment and Supplies

Description	Quantities
DRILL - CORDLESS	1
DRILL PNEUMATIC	
DRILL PRESS (DAYTON)	
DRILL BIT	
EASY OUT	4
EMERGENCY LIGHT W/GENERATOR	1
ALTEK THERMOCOUPLE 222	
NASSAN CALIBRATOR	
FLUKE	
FLUKE PRESSURE/VACUUM MODULE	
ALTEK LOOP CALIBRATOR	
CLAMP ON VOLT/AMP METER	1
HACH CHLORINE POCKET COLORIMETER	
DREMEL TOOL	
AEMC DC/AC MICO	
INSULATION RESISTANCE TESTER	
VOLT/OHM/AMMETER	
FACE SHIELD	1
FAN CIRCULATING	
FAN VENTILATION	1
FILE - ASSORTED USE	3
FIRE EXTINGUISHER	12
FIRST AID KIT	12
FLARING TOOL ASSORTED SIZES	
FLASHLIGHT ASSORTED SIZES	7
FORCEPS - CURVED	
FORCEPS - STRAIGHT	
FRAMING SQUARE	1
GAS CAN	3
GAGE - PRESSURE	2
GAGE - THREAD	
GATE KEY	
GEO PHONE	
GENERATOR - PORTABLE	1
GREASE GUN	2
GRINDER BENCH	1
GRINDER	
GRINDER - HORIZONTAL	1
HAMMER - BALL PEEN	4
HAMMER - CAULKING	
HAMMER - CLAW	2
HAMMER - SLEDGE ASSORTED SIZES	3
HIGH RISE	

Equipment and Supplies

Description	Quantities
HIGH RISE - LANE CLOSED	
HOSE	
HYDRANT KEY - FRESNO	
HYDRANT KEY - APOLLO	
KNEE PADS	1
LADDER - STEP ASSORTED SIZES	2
LADDER - EXTENSION ASSORTED SIZES	
LEVEL SIGHT	
LEVEL - TORPEDO	3
LOCATOR - PANCAKE	
LOCATOR MAGNETIC PROBE	
LOCATOR NOGGIN PLUS SMART CART	
LOCATOR - GOLD AK	
BLOWER - GAS	
EDGER	
HEDGER/TRIMMER	
POLE CHAIN SAW.	1
HOE	
HULA HOE	
TROY BILT 6HP TRIM MOWER PART #52028 LOCATED AT R	
LOPPERS	
PITCH FORK	1
PRUNING SHEARS	2
RAKE ASSORTED USES	2
SAW - PRUNING	2
SPRAYER ASSORTED SIZES	5
REDMAN POLE TRIMMER	
ECHO WEED EATER	
HONDA MOWER	
M - SCOPE	
METER FIELD TESTER	1
METER TESTER LARGE	
MEASURING WHEEL	1
METER HOOK	
MICROWAVE PROGRAMMER	
NUT DRIVER ASSORTED SIZES	11
PACKING PULLER	
PALLET JACK	1
PIPE THREADER - RIGID	1
PIPE TONGS ASSORTED SIZES	5
PLIERS	4
PLIERS - CHANNEL LOCK	4

Equipment and Supplies

Description	Quantities
PLASMA CUTTER	
PLIERS ASSORTED USES	14
PRESSURE GAUGE	
PRESSURE WASHER	
PROBE	
PUMP WILDEN DIAPHRAGM	2
PUMP - GAS	
PUMP TEAL	
PUMP CHEMICAL	
PUMP VERTICAL GXV390	
PUMP - HAND	1
PUMP - TRASH	1
PUNCH GREENLEE KNOCKOUT.	
PUMP TRASH SERIAL	1
PUMP HONDA TRASH ASSORTED SIZES	4
PUMP WATER SERIAL	
PUNCH	
PUNCH SET	
PUTTY KNIFE	
RASP	
RATCHET ASSORTED SIZES	10
RATCHET BOX WRENCH ASSORTED SIZES	4
RUBBER MALLET	
SAW - BACK SAW-ZALL	
SANDER PNEUMATIC	
SANDER ELECTRIC	
SANDER DISC.	
SAW - CHAIN	1
SAFETY WHIP CHECK	
SAW CIRCULAR	1
SAW CUT OFF MACHINE	
SAW-ZALL	
SAW MACHINE METAL CUT-OFF	
SAW - DUCTILE	
SAW DUCTILE STIHL	2
SAW DUCTILE HUSQ.	
SAW - HACK	4
SAW BAND (WILTON) MODEL 5634002	
SAW - HAND	4
SAW CONCRETE	1
SCALER PNEUMATIC NEEDLE	
SCREWDRIVER- PHILLIPS ASSORTED SIZES	24
SCREWDRIVER- STANDARD ASSORTED SIZES	24

Equipment and Supplies

Description	Quantities
SCREW EXTRACTOR	
SEAT CUSHION - COOK	
SHOVEL - ASSORTED USES	13
SHUT OFF KEY ASSORTED SIZES	8
SLING	
SOCKET - DEEP ASSORTED SIZES	33
SOCKET EXTENSION	
SOCKET IMPACT DEEP ASSORTED SIZES	6
SOCKET IMPACT REGULAR	
SOCKET - UNIVERSAL JOINT	
SOCKET- REGULAR ASSORTED SIZES	19
SOCKET EXTENSION DEEP	
SAFETY RAIN JACKET / PANTS	4
SAFETY KNEE HIGH RUBBER BOOTS	
SAFETY HIP BOOTS STEEL TOED	
SAFETY FULL FACE SHIELD	
SAFETY FIRST AID KIT	6
SAFETY MOUTH BARRIER	
SAFETY VEST	6
SAFETY GLASSES	6
SAFETY GOGGLES	6
SAFETY RESPIRATOR	
SAFETY DUST MASK	1
SAFETY HARD HAT	6
SAFETY RUBBER GLOVES	
SAFETY COTTON GLOVES	6
SAFETY WORK GLOVES LEATHER	6
SAFETY ADVIL	
SAFETY EAR PLUGS TAPERED	1
SAFETY EAR MUFFS	2
SAFETY HYDROGEN PEROXIDE SPRAY.	
SAFETY HEAD WARMERS	
SAFETY COLD PAK	
SAFETY HOT PAK	
SAFETY BACK BRACE SUPPORT	6
SAFETY WELDING GLOVES	1
SAFETY WELDING GOGGLES	1
SAFETY WELDING HOOD	1
SAFETY RUBBER APRON (CHLORINE)	
SAFETY STEEL TOE PROTECTORS	
SAFETY KNEE PADS	
SAFETY ANTISEPTIC HAND WIPES	
SAFETY EYE DROPS	

Equipment and Supplies

Description	Quantities
SAFETY CPR PAKS	
SAFETY ANTI-VIBRATION GLOVES	
SAFETY HAND CREAM	
SAFETY ANTISEPTIC WIPES	
SAFETY ALCOHOL PADS	
SAFETY BANDAIDS	
SAFETY SUNBLOCK	
SAFETY BURN GEL PAKS	
TAMPER	
TAPE - FISH	
TAPE MEASURE ASSORTED SIZES	16
TAPPING MACHINE - CL-12	
TAPPING MACHINE - B - 100	
TAPPING MACHINE - E -5	1
TAP MACHINE MUELLER D-5	1
TAP TOOL SET RIGID	
TAPPING MACHINE - D	
THRU BOLT SET	
THREADER - DIE	
THREADER - TAP	
TIMING LIGHT INDUCTIVE	
TIN SNIPS	
TOOL BOX	
TOOL BUCKET	
TORCH - PORTABLE	
TRAFFIC CONES	50
TRAFFIC SIGN - SLOW/STOP	
TRENCHER	
UMBRELLA/STAND	
UTILITY KNIFE	4
VALVE BOX CLEANER - DUCK BILLS	1
VACUUM WET/DRY	1
VALVE KEY - AIR	
VISE TRUCK	3
VISE GRIP	4
UTILITY RAPTOR GAS DEBI-HAULER	
WACKER	2
WATER JUG ASSORTED SIZES	5
WELDER MH-175 MIG (907049)	
WELDING - CUTTING ATTACHMENT	
WELDER PORTABLE	
WELDER MDL251 TRAILBLAZER 220V	
WELDER\ ARCH GENERATOR	

Equipment and Supplies

Description	Quantities
WELDING - GOGGLES	
WELDING - HELMET	
WELDING - HOSE	
WELDING - REGULATOR- ACETYLENE	
WELDING - REGULATOR- OXYGEN	
WELDING - STRIKER	
WELDING - TIP	
WELDING - TORCH HANDLE	
WHEEL CUTTER ASSORTED SIZES	2
WIRE BRUSH	4
WIRE CUTTER	
WOOD FOLDING RULER	
WRENCH - ALLEN	
WRENCH - CHAIN	
WRENCH - COMBINATION ASSORTED SIZES	86
WRENCH - CRESCENT ASSORTED SIZES	14
WRENCH - HYDRANT HAND	
WRENCH - HYDRANT T HANDLE	
WRENCH- OPEN END BOX ASSORTED SIZES	9
WRENCH METER	4
WRENCH PIPE	1
WRENCH PIPE ALUMINUM ASSORTED SIZES	3
WRENCH - SPANNER	4
BACKHOE	1
DUMP TRUCKS	2
WOOD BARRICADE TYPE II W/LIGHT	50
LIGHT TOWER/GENERATOR	1
CHOP SAW	1
VACUUM TRUCK	1
HYDRAULIC SHORING	1

City of Coalinga Sampling Supplies

- Torch
- Sample Bottles
- Latex Gloves
- Hand Sanitizer
- Bleach
- Ziploc Bags
- Portable Analyzers
  - Hach SL-100
  - Hach pH Probe
  - Pocket Colorimeter
  - Hach 1900
- Reagents
- Chain of Custody
- Wire Brush
- Logbook
- Deionized Water
- Chem wipes
- Pens

City of Coalinga Personal Protective Equipment

- Face Shield
- Goggles
- Safety Glasses
- Hearing Protection
- Gloves
- Tyvek Suits
- Chemical Apron
- Respirator
- Self-Contained Breathing Apparatus (SCBA)
- Harness
- Gas Monitor
- Steel Toe Boots
- Flotation Device

Appendix C
Emergency Phone Lists

Table C-1 EMERGENCY NOTIFICATION

911 Area	Direct Phone Number
Mobile Phone	911

The individual(s) who discover the threat or emergency situation will immediately notify 911 (if necessary) Coalinga's Emergency Answer Service. The *dispatcher* at the emergency answer service will then notify the City Manager. The remainder of the Coalinga staff will be notified according to contact procedures.

Table C-2 CITY OF COALINGA EMERGENCY RESPONSE PERSONNEL

Name	Position	Address	Desk Phone	Extension	Cell Phone
Ron Ramsey	Mayor	400 San Madele, Coalinga	559-935-1533	405	559-930-0536
Ray Singleton	Mayor Pro Tem	601 Hazelhurst Way, Coalinga	559-935-1533	403	
Manny Ramirez	Councilman	255 Casa Buena Ln, Coalinga			
Adam Adkisson	Councilman	115 Hill View Ln, Coalinga			
James Horn	Councilman	108 S Joaquin Ave, Coalinga			
Marissa Trejo	City Manager	634 Tommy Circle, Lemoore	559-935-1533	111	559-633-0704
Sean Brewer	Asst. City Manager/ Public Works & Utilities	1981 Rio Grande Ct., Coalinga	559-935-1533	143	916-761-6210
Marissa Trejo	Human Resource Manager	634 Tommy Circle, Lemoore	559-935-1533	111	559-633-0704
Darren Blevins	Police Chief	305 Stanford Ave, Coalinga	559-935-1533	152	559-341-7512
Greg DuPuis	Fire Chief	300 W Elm Ave, Coalinga	559-935-1533	302	559 -935-1652
Anthony Uribe	Utilities Supervisor	216 University Ave, Coalinga	559-404-0967	1	559-362-6567
Eric Deleon	Public Works Supervisor	601 College Ave, Coalinga	559-935-5004		559-974-1257
Jared Salona	Chief Plant Operator	435 W Houston Ave, Coalinga	559-404-0967	2	559- 341-9613

Name	Position	Address	Desk Phone	Extension	Cell Phone
Gabe Subia	Plant Shift Operator	240 Fisher LN, Coalinga	559-383-4514		559-403-8816

TABLE C-3 MEDICAL FACILITIES

Facility	Location	Contact Numbers
Coalinga State Hospital	24511 West Jayne Coalinga, CA	559-935-4324
Coalinga Hospital District	1191 Phelps Ave, Coalinga, CA	559-935-4375

TABLE C-4 CRITICAL CARE FACILITIES

Facility	Location	Contact Numbers
DaVita Coalinga Dialysis	1147 Phelps Ave., Coalinga, CA	559-934-0690
Coalinga Pleasant Valley Prison	24863 W Jayne Ave., Coalinga, CA	559-935-4900 Ext. 506
Coalinga State Hospital	24511 West Jayne Ave., Coalinga, CA	559-935-4375
Coalinga Hospital District	1191 Phelps Ave, Coalinga, CA	559-935-4375
Ralph Neat Center	1191 Phelps Ave, Coalinga, CA	559-935-6400

TABLE C-5 LOCAL AGENCIES

Agency/Department	Address	Contact Numbers
City of Coalinga Water Treatment and Distribution	30500 Jayne Ave, Coalinga, CA 93210	559-935-1533
City of Coalinga Wastewater Treatment & Collections	135 E. Sacramento Coalinga, CA 93210	559-935-1533
City of Coalinga Police Department	270 North 6th Street, Coalinga, CA 93210	559-935-2313
City of Coalinga Fire Department	300 Elm Ave, Coalinga, CA 93210	559-935-1652

TABLE C-6 COUNTY OF FRESNO

Agency	Address	Contact Numbers
Fresno County Department of Public Health	1221 Fulton St, Fresno, CA 93721	559- 600-3200
Fresno County Office of Emergency Services (OES)	Fresno, CA 93721	559-445-3391
Fresno County Sheriff's Office	2200 Fresno St, Fresno, CA 93721	559-600-3111 or 911
Fresno County Fire Department	210 S. Academy Sanger, Ca 93657	559-493-4300 or 911
Fresno County Public Works	2220 Tulare Street 6th Floor Fresno, CA 93721	559- 600-4078
Fresno County Street Division	2600 Fresno St #4, Fresno, CA 93721	559-621-8650
Fresno County Water and Sanitation	2600 Fresno St #3065, Fresno, CA 93721	559-621-6888
Fresno County Environmental Health	1221 Fulton Mall Fresno, CA 93721	559-600-3357

TABLE C-7 STATE AGENCIES

Agency	Contact Name	Contact Numbers
SWRCB-DDW District Engineer	Jose Robledo If can't get a hold of "DE", call the CA Warning Center's 24/7 phone number, and ask for the DHS Duty Officer. A DHS manger will be contacted and call the water system	559-447-3300
Department of Water Resources South Central Office	General Kevin Faulkenberry, Region Manager Amanda Peisch-Derby, Regional Coordinator	916-653-5791 559-230-3300 559-230-3307
Department of Forestry and Fire Protection		559-784-2452 or 911
Department of Fish and Wildlife		559-243-4005
Department of Toxic Substances Control		800-728-6942
OES	Warning Center (Ask for DHS Duty Officer-Drinking Water Program)	800-852-7550 916-845-8911
LEPC/CalOES Liaison	Matthew Palmer	562-795-2900

TABLE C-8 FEDERAL AGENCIES

Agencies	Contact Numbers
Federal Bureau of Investigation (FBI)	310-477-6565
Environmental Protection Agency (EPA)	415-947-8000
CHEMTREC	800-262-8200
Department of Homeland Security (DHS)	202-282-8000
Health and Human Services (HHS)	877-696-6775
Center for Disease Control (CDC)	888-246-2675
Alcohol, Tobacco, and Firearms (ATF)	818-265-2660

TABLE C-9 LABORATORIES

Laboratory	Contact Numbers
BSK Analytical Laboratories	559-497-2888

TABLE C-10 UTILITIES

Utility	Name	Contact Numbers
Underground Service Alert (USA)		811
Pacific Gas & Electric	Gas Line Leak	800-743-5000
Southern California Gas Co.	Gas Emergencies	800-427-2200

TABLE C-11 VENDORS AND CONTRACTORS

Equipment/Supply	Source	Telephone Number
Equipment Rental Companies:		
Backhoes Dump Trucks Skip Loaders Dozers Water Trucks Excavators Loaders	Goldsmith Construction Co.	(661) 431-0161
	Quinn Rentals	(559) 268-8800
	Sunbelt Rentals	(661) 392-8802
	United Rentals	(559) 834-6207
Communication Equipment:		
Cell Phone	All Employees	
Portable Radio	All Employees	
General Equipment:		
Pumps	Shar- Craft Incorporated	(661) 324-4985
Motors:	Electric Motor Shop, Inc.	(559) 650-1153
	Allied Electric Motor	(559) 486-4222
Instrumental Controls:		
Electric Controls	Brian's Electric & Controls	(559) 994-9161
Automation Controls	ICAD Automation Controls	(559) 498-0290
SCADA and Controls	Telstar	(559) 584-7116
Electrical:		
Electrical Services	Brian's Electric	(559) 994-9161
Electrical Services	HR Electric	(559) 707-4912
Electrical Services	Lighthouse Electrical Inc.	(559) 498-3017
Electrical Services	Solomon Electric & Data Inc.	(559) 892-8819

TABLE C-12, CRITICAL CARE CUSTOMERS

Customer Name	Address	Primary Contact Information
DaVita Coalinga Dialysis	1147 Phelps Ave, Coalinga, CA	559-934-0690
Coalinga Pleasant Valley Prison	24863 W Jayne Ave	(559) 935-4900 Ext. 506
Coalinga State Hospital	24511 West Jayne	(559) 935-4324
Coalinga Hospital District	1191 Phelps Ave	(559) 935-4375
Ralph Neat Center	1191 Phelps Ave	(559) 935-6400

TABLE C-13, RADIO STATIONS

Call Letters	Dial/ AM	Dial/ FM	Address	City	State	Zip Code	Area Code	Phone
KAAT		103.1	320 West Bedford Avenue	Fresno	CA	93711	559	436-1031
KALZ	1400	96.7	83 E Shaw Ave, Suite 150	Fresno	CA	93710	559	230-4242
KARM		89.7	1300 S Woodland St	Visalia	CA	93277	559	627-5276
KBIF	900		3401 W Holland Ave	Fresno	CA	93722	559	222-0900
KBOS		95	83 E Shaw Ave, Suite 150	Fresno	CA	93710	559	247-5595
KCBL			84 E Shaw Ave, Suite 150	Fresno	CA	93710	559	230-4300
KCRZ		104.9	700 E Mineral King Ave	Visalia	CA	93292	559	739-8378
KDUV		100.1	130 N. Kelsey St.	Visalia	CA	93291	877	530-5388
KEYQ	980		2310 Ponderosa	Fresno	CA	93010	866	252-2253
KFCF		88.1	1449 N Wishon Ave	Fresno	CA	93728	559	233-2221
KFIG	1430		1415 Fulton Street	Fresno	CA	93721	559	497-5118
KFRR		104.1	1416 Fulton Street	Fresno	CA	93721	559	497-5118
KFSO		92.9	83 E Shaw Ave, Suite 150	Fresno	CA	93722	559	247-5665
KFSR		90.7	5201 N Maple Ave	Fresno	CA	93723	559	278-9070
KGST	1600		1110 E Olive Ave	Fresno	CA	93728	559	497-1100
KIRV	1510		3401 West Holland Ave	Fresno	CA	93722	559	222-0900
KJFX		95.7	1415 Fulton Street	Fresno	CA	93721	559	229-4957
KJUG		106.7	700 East Mineral King Ave	Visalia	CA	93292	559	739-8378
KJWL		105.5	1415 Fulton Street	Fresno	CA	93721	559	497-5118

Call Letters	Dial/ AM	Dial/ FM	Address	City	State	Zip Code	Area Code	Phone
KLBN		101.9	1110 E Olive Ave	Fresno	CA	93728	559	497-1125
KMAK		100.3	PO Box 5	Selma	CA	93662	559	891-7039
KMJ		105.9	1071 W Shaw Ave	Fresno	CA	93711	559	490-5800
KOKO		94.3	1805 E Desert Park Ave	Palm Springs	CA	92262	844	552-6646
KOOR	790		1071 W Shaw Ave	Fresno	CA	93711	559	247-7979
KOQO		101.9	1071 W Shaw Ave	Fresno	CA	93712	559	247-2102
KRDU	1130		597 N Alta	Dinuba	CA	93710	559	230-4300
KRNC		105.9	1071 W Shaw Ave	Fresno	CA	93711	559	247-5225
KRZR		103.7	83 E Shaw Ave, Suite 150	Fresno	CA	93710	559	247-2000
KSKS		93.7	1071 W Shaw Ave	Fresno	CA	93711	559	490-5800
KSLK		105.5	1415 Fullton Street	Fresno	CA	93721	559	497-5118
KTNS	1060		200 S A Street	Oxnard	CA	93030	805	240-2070
KUBB		96.3	514 W 19th Street	Merced	CA	95340	209	723-2191
KVPR		89.3	2589 Alluvial Ave	Clovis	CA	93611	559	862-2480
KVSR		101	1071 W Shaw Ave	Fresno	CA	93711	559	490-6018
KWOL		105.5	1072 W Shaw Ave	Fresno	CA	93711	559	490-5800
KZFO		92.1	4928 E Clinton Way Suite	Fresno	CA	93727	559	455-0180

TABLE C-14, TV STATIONS

CallLtrs	Channel	Address	City	State	Zip Code	Area Code	Phone
KAIL	53	4974 E Clinton Way	Fresno	CA	93727	559	412-2825
KFRE	59	5111 E. McKinley Ave.	Fresno	CA	93727	559	255-2600
KFSN	30	1777 G Street	Fresno	CA	93706	559	442-1170
KFTV	21	601 W. Univision Plaza	Fresno	CA	93704	559	430-8471
KGMC	43	706 W Herndon Ave	Fresno	CA	93650	559	435-7000
KGPE	47	5035 E McKinley Ave	Fresno	CA	93727	559	222-2411
KMPH	26	5111 E. McKinley Ave.	Fresno	CA	93727	559	255-2600

CallLtrs	Channel	Address	City	State	Zip Code	Area Code	Phone
KNXT	49	1550 N Fresno	Fresno	CA	93703	559	488-7440
KSDI	33	706 W Herndon Ave	Fresno	CA	93650	559	451-0333
KSEE	24	5035 E McKinley Ave	Fresno	CA	93727	559	222-2411
KVPT	18	3619 E. Ventura Ave	Fresno	CA	93702	866	436-6388

TABLE C-15, NEWSPAPERS

Name	Address	City	State	Zip code	Area Code	Phone	Published
Fresno Bee, The	1626 E St.	Fresno	CA	93786	559	441-6330	Daily
Madera Tribune	2591 Mitchell Court #107	Madera	CA	93637	559	674-2424	Daily
Vida En El Valle	3425 N 1st St. Suite 201	Fresno	CA	93726	559	225-4957	Weekly
Fresno Business Journal	929 L St Suite A	Fresno	CA	93721	559	237-0114	Tri-weeekly

TABLE C-16, ALTERNATIVE WATER SUPPLIES

Company	Contact Numbers
Alhambra Water	866- 335-3165
Alpine Drinking Water	559-277-1239
Arrowhead Mountain Spring Water	800-873-775
Crystal Clear Drinking Water	559-224-3586
Golden Pure Water	559-492-1053
Imperial Pure Water	559- 452-1125
Monterey Water Company	559- 277-9644
Mountain Spring Pure Water	559- 721-7888
Pure and Fresh Drinking Water	559- 224-1905
Pure Water	559-587-9085
Sequoia Springs Bottle Water	888-420-8040
Sparklets Water	800-201-6218
Valley Spring Water	559-434-0965
Yosemite Water	559-497-2700

Appendix D
Public Notices and Press Releases

- Consumer Alert – Low Pressure
- Boil Water Notice
- Press Release: Boil Drinking Water and Not Bathe
- Press Release: Boil Water Order Lifted
- Boil Water Notice Cancellation
- Boil Water Fact Sheet
- UWA – Do Not Drink
- UWA – Do Not Use

PUBLIC NOTICE

CONSUMER ALERT DURING WATER OUTAGES OR PERIODS OF LOW PRESSURE

1. If you are experiencing water outages or low water pressure, immediately discontinue any non-essential water usage. This includes all outdoor irrigation and car washing. Minimizing usage will reduce the potential for the water system to lose pressure or completely run out of water. Please notify City of Coalinga Water District of the outage or low pressure.

2. If the water looks cloudy or dirty, you should not drink it. Upon return of normal water service, you should flush the hot and cold-water lines until the water appears clear and the water quality returns to normal.

3. If you are concerned about the water quality or are uncertain of its safety, you may add eight drops of household bleach to one gallon of water and let it sit for 30 minutes or alternatively, if you are able, water can be boiled for one minute at a rolling boil to ensure its safety.

4. Use of home treatment devices does not guarantee the water supply is safe after low pressure situations.

5. Do not be alarmed if you experience higher than normal chlorine concentrations in your water supply since the State Water Resources Control Board is advising public water utilities to increase chlorine residuals in areas subject to low pressure or outages.

6. The California Department of Public Health has also advised public water systems to increase the bacteriological water quality monitoring of the distribution system in areas subject to low pressure. They may be collecting samples in your area to confirm that the water remains safe. You will be advised if the sampling reveals a water quality problem.

7. Your water system is committed to make certain that an adequate quantity of clean, wholesome, and potable water is delivered to you. We recommend that you discuss the information in this notice with members of your family to ensure that all family members are prepared should water outages or low water pressure occur.

BOIL WATER ORDER Date:

City of Coalinga water is contaminated with fecal coliform bacteria

BOIL YOUR WATER BEFORE USING
Failure to follow this advisory could result in stomach or intestinal illness.

Fecal coliform bacteria was found in the water supply on _____. This bacteria can make you sick, and is a particular concern for people with weakened immune systems.

Fecal coliforms are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems. The symptoms above are not caused only by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice. People at increased risk should seek advice about drinking water from their health care providers.

Due to the recent event, _____, the California Department of Health Services, in conjunction with the Fresno County Health Department, and the City of Coalinga Public Works Division, are advising residents of Coalinga to use boiled tap water or bottled water for drinking and cooking purposes as a safety precaution.

DO NOT DRINK THE WATER WITHOUT BOILING IT FIRST. Bring all water to a boil, **let it boil for five (5) minutes,** and let it cool before using, or use bottled water. Boiled or bottled water should be used for drinking, making ice, brushing teeth, washing dishes, and food preparation **until further notice**. Boiling kills bacteria and other organisms in the water.

- An alternative method of purification for residents that do not have gas or electricity available is to use fresh liquid household bleach (Clorox, Purex, etc.). To do so, add 8 drops (or 1/4 teaspoon) of bleach per gallon of clear water or 16 drops (or 1/2 teaspoon) per gallon of cloudy water, mix thoroughly, and allow to stand for 30 minutes before using. A chlorine-like taste and odor will result from this purification procedure and is an indication that adequate disinfection has taken place.

- Water purification tablets may also be used by following the manufacturer's instructions.

We will inform you when tests show no bacteria and you no longer need to boil your water. We anticipate resolving the problem within _____.

For more information call:

Water Utility contact: [Name, title, phone & address of responsible utility representative] .
California Department of Health Services at (559)447-3300.
Local Environmental Health Jurisdiction: Fresno County at (559)445-3391.

General guidelines on ways to lessen the risk of infection by microbes are available from the EPA Safe Drinking Water Hotline at 1(800) 426-4791. *Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.*

BOIL WATER ORDER

Date:

City of Coalinga water is contaminated with bacterium *E. coli*

BOIL YOUR WATER BEFORE USING
Failure to follow this advisory could result in stomach or intestinal illness.

E. coli bacteria was found in the water supply on _____. This bacteria can make you sick, and is a particular concern for people with weakened immune systems.

E. coli is bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems. The symptoms above are not caused only by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice. People at increased risk should seek advice about drinking water from their health care providers.

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- Water purification tablets may also be used by following the manufacturer's instructions.

We will inform you when tests show no bacteria and you no longer need to boil your water. We anticipate resolving the problem within _____.

For more information call:
Water Utility contact: [Name, title, phone & address of responsible utility representative] .
California Department of Health Services at (559) 447-3300.
Local Environmental Health Jurisdiction: Fresno County at (559) 445-3391.

General guidelines on ways to lessen the risk of infection by microbes are available from the EPA Safe Drinking Water Hotline at 1(800) 426-4791. *Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.*

Boil Water Order Fact Sheet

Question: How did this bacteria get into the water?
Answer: There are several different ways bacteria can enter the water system, some of which are cross connections between potable and nonpotable water sources caused by low pressure, loss of pressure, or valves that failed.

Question: What are the symptoms?
Answer: Diarrhea, stomach cramps, and, in a few cases, vomiting.

Question: I have the above symptoms, so how do I confirm I have ingested this bacteria and how do I get rid of it?
Answer: See your family doctor for diagnosis and treatment.

Question: I made my baby's formula with this water. Will my baby get sick?
Answer: Not if you boiled the water for 5 minutes first. If you didn't, wait and see if your child develops the symptoms. If he/she does, take him/her to the doctor for treatment.

Question: Will my reverse osmosis (RO) home treatment device remove the bacteria?
Answer: Some properly working RO units are capable of removing this bacteria; however, you need to check with your manufacturer to see if your will. The safest way to make sure your water is safe is to boil it for 5 minutes.

Question: Will my home softening unit remove this bacteria?
Answer: No.

Question: Can my child drink from the drinking fountains at school?
Answer: Not if the school is in the affected area.

Question: Is it OK to shower or bathe?
Answer: No.

Question: Is it OK to launder our clothes?
Answer: Yes. You cannot absorb this bacteria through the skin.

Question: How long with the boil order last?
Answer: Usually 48 hours, which is how long it takes for the City to take additional samples and analyze them. However, you should boil the water until you hear on _____ radio station (_____ dial setting) or read in the local paper that the order to boil water has been lifted.

If you have additional questions, please contact our Boil Order Hotline at _____.

INFORMACION IMPORTANTE SOBRE SU AGUA POTABLE

Este aviso contiene información muy importante sobre su agua potable, por favor léalo bien.

[Water System Name] [XX/XX/XXXX]

AVISO DE HERVIR EL AGUA

Para Evitar Enfermarse, Hierva Su Agua Antes de Beberla o Preparar Comida

Debido al reciente [evento (ejemplo: corte de agua, corte de luz, inundación, incendio, temblor u otra situación de emergencia)], el cual ocurrió en [date], la Junta Estatal de Control de Recursos de Agua (División de Agua Potable), el [County Name] County Health Department, y el Sistema de Agua [Water System name], están advirtiéndoles a los residentes de [City, Town, System] que como precaución de seguridad, solo usen agua de la llave hervida o agua embotellada para beber y para cocinar. Esto es para evitar enfermedad intestinal o del estómago. El área afecta- da incluye: [INSERT GEOGRAPHHICAL DESCRIPTION, STREET BOUNDARIES, ETC.]

Le informaremos cuando las pruebas muestren que el agua es segura para beber y usted ya no tenga que hervir su agua. Esperamos resolver el problema dentro de [estimated time frame].

Si tiene preguntas sobre el agua de la llave para otros usos, como para bañarse, y lavar los trastes, favor de llamar a su sistema de agua o lea esta guía: https://www.cdc.gov/healthywater/emergency/dwa-comm-toolbox/before/tools/What-to-Do-During-a-Boil-Water-Advisory.docx

Opcional: En los siguientes lugares hay Agua Potable disponible: [List locations]. Favor de llevar un contenedor limpio para el agua (de 5 galones máximos de capacidad).

No beba el agua sin antes hervirla

- Hierva toda el agua por un (1) minuto (a punto de ebullición).
- Deje enfriar el agua antes de beberla.
- Hasta nuevo aviso, use agua hervida o embotellada para beber, lavarse los dientes, y para preparar comida.
- Hervir el agua mata las bacterias y otros organismos en el agua.

Si no puede hervir su agua

Puede usar blanqueador sin olor de uso doméstico (household bleach)

- Para agua clara, agregue 8 gotas (1/8 de cucharadita) de blanqueador para 1 galón de agua. Para agua turbia, use una prenda de ropa limpia para filtrarla, y agregue 16 gotas (1/4 de cucharadita) de blanqueador para 1 galón de agua turbia.
- Mezcle bien. Deje reposar el agua por 30 minutos antes de usarla.
- Puede ser que el agua sepa o huela a blanqueador. Esto significa que el agua ha sido desinfectada.

Tabletas desinfectantes de agua

- Siga las instrucciones del fabricante.

Para más información

Si está preocupado por su salud o la salud de un miembro de la familia, contacte a su proveedor de salud o a [local health department].

Representante del Proveedor de Servicio de Agua: [Utility representative Name, title, phone & address]
Oficina de Distrito de la Junta Estatal de Agua: [(XXX) XXX-XXXX]
Jurisdicción de Salud Ambiental Local: [XXXXX County at (XXX) XXX-XXXX]

Por favor publique o comparta esta información con otras personas que beben esta agua, especialmente aquellos que no hayan recibido este aviso directamente (por ejemplo, las personas en apartamentos, asilos, escuelas, y negocios). Puede hacerlo poniendo este aviso en un lugar público o distribuyendo copias en persona o por correo.

PRESS RELEASE

For more information, call
Randy Arp, Field Services Manager
(559) 935-1533

Bacteria in water system requires
residents in the _____ areas of
Coalinga
to **BOIL DRINKING WATER**
AND NOT BATHE

For Immediate Release
Date: _____

All consumers in the _____ areas of the City of Coalinga indicated on the following map – from the _____ – are advised to boil their drinking water as a precautionary measure. The boil water order begins immediately, will last for at least the next 48 hours, and will continue until further notice. Water should be boiled until the water is at rapid boil for 5 minutes prior to drinking, or residents may use bottled water for consumption. It is also recommended for the affected area that **consumers do not bathe or shower in the possibly contaminated water until further notice**. Residents in the _____ portion of the City are not affected and do not need to boil water or avoid bathing.

Water samples indicate that bacteria has entered the system due to _____. The source of the contamination is _____. The City of Coalinga is taking measures to resolve the problem. Customers will experience an increase in chlorine smell and taste in the water. Consumers who experience any gastrointestinal problems should contact their physician immediately.

Normally, the City's _____.

The Coalinga Public Works Division will lift the boil water order 24 hours after no bacteria are detected in the water system.

PRESS RELEASE

For more information, call
Randy Arp, Field Services Manager
(559) 935-1533

Boil Water Order Lifted for **ALL** areas
of the City of Coalinga

For Immediate Release
Date: _____

Test results of recent water samples indicate that **no** bacteria remain in the City of Coalinga's water system due to _____. Therefore, the boil water order is lifted immediately.

All consumers may **stop** boiling their water. Water from the entire Coalinga water system is once again safe to drink from the tap. Consumers may safely resume bathing or showering without fear of any contamination. Customers do not need to take any additional preventive measures, such as flushing pipes, reverse osmosis units, or water filters.

CANCELLATION OF BOIL WATER ORDER

On _____ (date), you were notified to boil/disinfect all tap water used for drinking and cooking purposes.

The City of Coalinga Public Works Division, in conjunction with the California Department of Health Services, has determined that, through abatement of the health hazard and comprehensive testing of the water, your water is safe to drink.

It is no longer necessary to boil your tap water or for you to consume bottled water.

For more information call:

City of Coalinga Public Works Division : Randy Arp, Field Services Manager, (559) 935-1533

California Department of Health Services: _____.

CANCELACIÓN DEL AVISO DE HERVIR EL AGUA

[NOMBRE DEL SERVICIO DE AGUA]
[Fecha]

El [Fecha] le notificaron que tenía que hervir o desinfectar toda el agua de la llave que utilizara para beber y cocinar.

El Sistema de Agua de [Water System Name] junto con la Junta Estatal de Control de Recursos de Agua, o la Jurisdicción Local de Salud Ambiental han determinado tras la supresión del riesgo de salud, seguido por un análisis completo del agua, que puede beber el agua de su llave sin peligro. **Ya no es necesario que hierva el agua de su llave ni que consuma agua de botella.**

Para más información llame a:

Contacto en el Servicio de Agua: [Name, title, and phone number or email of utility representative]

Junta Estatal de Control de Recursos de Agua: [Name, title, and phone number or email of overseeing DDW District]

Jurisdicción Local de Salud Ambiental: [Name, title, and phone number or email of overseeing LPA (if applicable)]

Fact Sheet About What to Do During a Boil Water Advisory

Boiling water

To boil water

- Fill a pot with water.
- Heat the water until bubbles come from the bottom of the pot to the top.
- Once the water reaches a rolling boil, let it boil for 1 minute.
- Turn off the heat source and let the water cool.
- Pour the water into a clean container with a cover for storage.

Disinfecting water

If you are unable to boil your water, disinfect it instead.

If tap water is clear:

- Use unscented bleach (bleach that does not have an added scent).
- Add 1/8 teaspoon (8 drops or about 0.75 milliliters) of unscented household liquid bleach to 1 gallon (16 cups) of water.
- Mix well and wait 30 minutes or more before drinking.
- Store disinfected water in clean container with a cover.

If tap water is cloudy:

- Filter water using clean cloth.
- Use unscented bleach (bleach that does not have an added scent).
- Add 1/4 teaspoon (16 drops or 1.5 milliliters) of unscented household liquid bleach to 1 gallon (16 cups) of water.
- Mix well and wait 30 minutes or more before drinking.
- Store disinfected water in clean container with a cover.

Remember that containers may need to be sanitized before using them to store safe water.

To sanitize containers:

- Use unscented bleach (bleach that does not have an added scent).
- Make a sanitizing solution by mixing 1 teaspoon (5 milliliters) of unscented household liquid bleach in 1 quart (32 ounces, 4 cups, or about 1 liter) of water.
- Pour this sanitizing solution into a clean storage container and shake well, making sure that the solution coats the entire inside of the container.

- Let the clean storage container sit at least 30 seconds, and then pour the solution out of the container.
- Let empty container air dry OR rinse it with clean water that has already been made safe, if available. Never mix bleach with ammonia or other cleaners. Open windows and doors to get fresh air when you use bleach.

Water filters

Boil tap water even if it is filtered. Most kitchen and other household water filters typically ***do not*** remove bacteria or viruses.

Preparing and cooking food

- Wash all fruits and vegetables with boiled water that has cooled or bottled water.
- Bring water to a rolling boil for 1 minute before adding food to cook.
- Use boiled water when preparing drinks, such as coffee, tea, and lemonade
- Wash food preparation surfaces with boiled water.

Feeding babies and using formula

- Breastfeeding is best. Continue to breastfeed. If breastfeeding is not an option:
- Use ready-to-use baby formula, if possible.
- Prepare powdered or concentrated baby formula with bottled water. Use boiled water if you do not have bottled water. Disinfect water for baby formula if you cannot boil your water (see above for directions on how to use bleach to disinfect water).
- Wash and sterilize bottles and nipples before use.
- If you cannot sterilize bottles, try to use single-serve, ready-to-feed bottles.

Ice

- Do not use ice from ice trays, ice dispensers, or ice makers.
- Throw out all ice made with tap water.
- Make new ice with boiled or bottled water.

Bathing and showering

Be careful not to swallow any water when bathing or showering.
Use caution when bathing babies and young children. Consider giving them a sponge bath to reduce the chance of them swallowing water.

Brushing teeth

Brush teeth with boiled or bottled water. Do not use untreated tap water.

Washing dishes

Household dishwashers generally are safe to use if the water reaches a final rinse temperature of at least 150 degrees or if the dishwasher has a sanitizing cycle.

To wash dishes by hand:

- Wash and rinse the dishes as you normally would using hot water.
- In a separate basin, add 1 teaspoon of unscented household liquid bleach for each gallon of warm water.
- Soak the rinsed dishes in the water for at least one minute.
- Let the dishes air dry completely.

Laundry

It is safe to do laundry as usual.

Pets

Pets can get some of the same diseases as people. It is a good idea to give them boiled water that has been cooled.

For more information, see or contact:

- **Personal Preparation and Storage of Safe Water** (http://www.cdc.gov/healthywater/emergency/safe_water/personal.html) CDC provides guidance on the amount of water needed for good health, as well how to prepare and store safe water before and during an emergency.
- **Hygiene and Handwashing** (http://www.cdc.gov/healthywater/emergency/hygiene/index.html): CDC provides guidance on alternative hygienic practices when water is not available or is contaminated.
- **A Guide to Water Filters** (http://www.cdc.gov/parasites/crypto/gen_info/filters.html): CDC maintains a guide for filters that remove *Cryptosporidium* or *Giardia*.
- **EPA Safe Drinking Water Hotline**: 1-800-426-4791
- **Consumer Information** (http://water.epa.gov/drink/info/index.cfm): EPA provides information and guidance about drinking water quality, emergencies, contaminants, public health issues, and treatment and storage.
- **Water system**: [name, title, phone, e-mail, website]
- **State or local public health department**: [name, title, phone, e-mail, website]

- **Primacy Agency**: [name, title, phone, e-mail, website]

Hoja informativa acerca de lo que hacerse durante una advertencia de uso de agua hervida

Durante una advertencia de uso de agua hervida, la mejor opción es usar agua embotellada hasta que las autoridades indiquen otra cosa. Si no tiene agua embotellada disponible, la segunda mejor opción es hervir el agua del grifo para que sea segura para beber. Si no es posible hervir el agua del grifo, puede desinfectarla para que sea segura para beber.

Cómo hervir el agua

Para hervir el agua

- Llene una olla con agua.
- Caliente el agua hasta que haya burbujas que suban rápidamente desde el fondo de la olla hasta la superficie.
- Continúe calentando el agua por un minuto más.
- Apague la fuente de calor y deje que se enfríe el agua.
- Vierta el agua en un envase limpio y tápelo para su almacenamiento.

Cómo desinfectar el agua

Si no puede hervir el agua, puede desinfectarla para que sea segura para beber.

Necesitará tener un recipiente limpio y desinfectado donde guardar el agua que desinfecte. Recomendamos lave y desinfecte su recipiente antes de desinfectar el agua, mediante los siguientes pasos:

1. Lave el recipiente con agua y jabón de lavar platos y enjuáguelo por completo.
2. Desinfecte el recipiente con una solución que se obtiene al disolver 1 cucharadita de cloro de uso doméstico no perfumado (cloro sin perfume agregado) en un cuarto de galón de agua (32 onzas, 4 tazas o aproximadamente 1 litro).
3. Cubra el recipiente y agítelo bien para que la solución desinfectante con cloro toque todas las superficies de dentro.
4. Espere al menos 30 segundos y vierta la solución desinfectante fuera del recipiente.
5. Deje que el recipiente vacío y desinfectado se seque al aire antes de usarlo O enjuáguelo con agua limpia y segura que tenga disponible de antemano.

Nota: Cuando prepare el agua segura, es mejor usar recipientes de agua de uso alimentario, como los que pueden encontrarse en las tiendas de artículos para camping o de excedentes militares. Si no puede usar un recipiente de

agua de uso alimentario, asegúrese de que el recipiente que elija:

- Tenga una tapa que pueda cerrarse completamente.
- Esté hecho de materiales durables que no se puedan romper (es decir, no de vidrio).

NO USE recipientes que se hayan usado previamente para almacenar sustancias químicas tóxicas líquidas o sólidas (cloro, pesticidas, etc.).

Cómo desinfectar el agua del grifo
Si el agua del grifo es clara:

- Use cloro no perfumado (cloro sin perfume agregado). La etiqueta debe decir que contiene 8.25% de hipoclorito de sodio.
- Agregue 6 gotas (medidas con un gotero de medicamentos) o 0.5 mililitros de cloro en 1 galón (16 tazas) de agua.
- Mezcle bien y espere 30 minutos o más antes de beber.
- Guarde el agua desinfectada en un recipiente limpio, desinfectado y con tapa.

Si el agua del grifo está turbia:

- Filtre el agua con un paño limpio.
- Use cloro no perfumado (cloro sin perfume agregado). La etiqueta debe decir que contiene 8.25% de hipoclorito de sodio.
- Agregue 12 gotas, 1 mililitro o 1/8 de cucharadita de cloro en 1 galón (16 tazas) de agua.
- Mezcle bien y espere 30 minutos o más antes de beber.
- Guarde el agua desinfectada en un recipiente limpio, desinfectado y con tapa.

Filtros de agua

Debe hervir el agua del grifo aunque esté filtrada. La mayoría de los filtros de agua de cocina o de los otros filtros de uso doméstico **no eliminan** las bacterias ni los virus.

Los filtros recolectan los microbios del agua, por lo tanto, todos los filtros de agua deben ser reemplazados después de que la advertencia haya terminado. Las personas que cambien los cartuchos deben usar guantes y lavarse las manos después. Deje correr agua por el filtro durante [X] minutos y luego reemplace la parte removible del filtro según corresponda.

Cómo preparar y cocinar alimentos

Use agua embotellada o agua hervida (que se haya enfriado) para lo siguiente:

- Lavar todas las frutas y verduras.
- Cocinar los alimentos.

- Preparar bebidas, como café, té y limonada.
- Lavar las superficies donde se preparan los alimentos.

Alimentación de bebés y uso de fórmula

La alimentación con leche materna es lo mejor. Continúe amamantando. Si amamantar no es una opción:

- Use fórmula para bebés lista para usar, si es posible.
- Use agua embotellada para preparar la fórmula para bebés en polvo o concentrada. Use agua hervida si no tiene agua embotellada disponible.
- Antes de usar los biberones y las tetinas lávelos y esterilícelos con agua embotellada o hervida (que se haya enfriado).
- Si no puede esterilizar los biberones, trate de usar biberones de un solo uso o listos para usar.

Hielo

- No use el hielo de las hieleras, los dispensadores de hielo ni las máquinas de hielo.
- Bote todo el hielo hecho con agua del grifo.
- Haga hielo nuevo con agua embotellada o hervida.

Lavado de manos

En muchas situaciones, puede usar el agua del grifo con jabón para lavarse las manos. Siga las pautas de las autoridades de salud pública locales o del personal de manejo de emergencias. Asegúrese de restregarse las manos con agua y jabón (fría o tibia) durante 20 segundos y de enjuagárselas bien bajo agua corriente. Es importante secarse las manos por completo con una toalla o al aire.

Baños y duchas

Tenga cuidado de no tragar agua cuando se bañe o se duche.
Sea precavido cuando bañe a bebés y niños pequeños. Considere darles baños de esponja para reducir la probabilidad de que traen agua.

Cepillarse los dientes

Cepíllese los dientes con agua embotellada o agua hervida (que se haya enfriado).

Lavado de platos

Use platos, tazas, vasos y utensilios desechables, si es posible. Si no tiene platos

desechables, siga las instrucciones a continuación. En general es seguro usar los lavaplatos de uso doméstico si el agua alcanza una temperatura final de enjuague de al menos 150 grados o si el lavaplatos tiene un ciclo de desinfección.

Para lavar los platos a mano:

- Lave y enjuague los platos como lo haría normalmente usando agua caliente.
- En un recipiente por separado, disuelva una cucharadita de cloro líquido de uso doméstico no perfumado por cada galón de agua tibia.
- Deje remojaren el agua los platos ya enjuagados por al menos un minuto.
- Deje que los platos se sequen por completo al aire antes de volverlos a usar.

Lavado de ropa

Es seguro lavar la ropa normalmente.

Mascotas

Las mascotas pueden enfermarse por los mismos microbios que las personas. Es una buena idea darles para beber agua embotellada o agua hervida (que se haya enfriado).

Para obtener más información

- **Cómo crear y almacenar una reserva de agua de emergencia** (http://www.cdc.gov/healthywater/emergency/drinking/creating-storing-emergency-water-supply.html): Los CDC proveen pautas sobre la cantidad de agua necesaria para la buena salud, así como también sobre la manera de preparar y almacenar agua que sea segura, antes y durante una emergencia.
- **Higiene, lavado de manos y cambio de pañales** (http://www.cdc.gov/healthywater/emergency/hygiene/index.html): Los CDC proveen pautas sobre las prácticas de higiene recomendadas cuando no haya agua disponible o cuando el agua esté contaminada.
- **Guía sobre los filtros de agua** (http://www.cdc.gov/parasites/crypto/gen_info/filters.html): Los CDC mantienen una guía para elegir filtros que eliminan agentes patógenos, sustancias químicas o toxinas.
- **Línea directa de la EPA de información sobre agua potable segura**: 1-800-426-4791.
- **Información para el consumidor** (http://water.epa.gov/lawsregs/rulesregs/sdwa/ccr/index.cfm): La Agencia de Protección Ambiental (EPA) proporciona información y pautas sobre la calidad del agua potable, emergencias, agentes contaminantes, problemas de salud

pública, y tratamiento y almacenamiento.

- Sistema de agua: [nombre, título, teléfono, correo electrónico, sitio web]
- Departamento de salud estatal o local: [nombre, título, teléfono, correo electrónico, sitio web]
- Agencia principal: [nombre, título, teléfono, correo electrónico, sitio web]

Date:

UNSAFE WATER ALERT

[Insert one-liner language other than Spanish here, if needed, otherwise delete.]

[System Name] water is possibly contaminated with [an unknown substance]

DO NOT DRINK YOUR WATER

Failure to follow this advisory could result in illness.

An unknown substance has been added to the drinking water supplied by the [Water System Name] due to a recent [intrusion; break-in] at [one of the wells; our treatment plant; storage tank; specific facility]. The State Water Resources Control Board, [County Name] County Health Department, and [Water System name] Water System are advising residents of [City, Town, System] to NOT USE THE TAP WATER FOR DRINKING AND COOKING UNTIL FURTHER NOTICE.

What should I do?

- **DO NOT DRINK YOUR TAP WATER---USE ONLY BOTTLED WATER.** Bottled water should be used for all drinking (including baby formula and juice), brushing teeth, washing dishes, making ice and food preparation **until further notice**.

- **DO NOT TRY AND TREAT THE WATER YOURSELF.** Boiling, freezing, filtering, adding chlorine or other disinfectants, or letting water stand will not make the water safe.

- Optional: Potable water is available at the following locations: [List locations]
  Please bring a clean water container (5 gallons maximum capacity).

We will inform you when tests show that the water is safe again. We expect to resolve the problem within [estimated time frame].

For more information call:
Water Utility contact: [Name, title, phone & address of responsible utility representative].
State Water Resources Control Board at: [insert local district office, DE and phone number].
Local County Health Department: [insert phone number of local health department].

This notice is being sent to you by [insert water system name]. California Public Water System ID # [XXXXXXX]. Date Distributed: [date].

Please share this information with all other people who receive this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand.

Date:

ALERTA DE AGUA NO SEGURA

[Insert one-liner language other than Spanish here, if needed, otherwise delete.]

El agua de [System Name] posiblemente está contaminada con [an unknown substance]

NO BEBA SU AGUA

Si descarta ésta advertencia puede enfermarse

Una sustancia desconocida fue agregada al agua potable suministrada por [Water System Name], esto fue debido a una reciente [intrusion; break-in] en [uno de los pozos; nuestra planta de tratamiento; tanque de almacenamiento; instalaciones específicas]. La Junta Estatal de Control de Recursos de Agua, el [County Name] County Health Department, y el Sistema de Agua [Water System name], están advirtiéndoles a los residentes de [City, Town, System] que NO USEN EL AGUA DE LA LLAVE PARA BEBER Y COCINAR HASTA NUEVO AVISO.

¿Qué debo hacer?

- **NO BEBA AGUA DE LA LLAVE---SOLO USE AGUA EMBOTELLADA.** Se debería usar agua embotellada para todas las bebidas (incluyendo formula de bebés y jugo), para lavarse los dientes, lavar trastes, hacer hielo y preparar comida **hasta nuevo aviso**.

- **NO INTENTE TRATAR EL AGUA USTED MISMO.** Hervir, congelar, filtrar, agregar cloro (chlorine) u otros desinfectantes, o dejar que el agua repose, no hará que el agua sea segura.

- Optional: Hay agua potable disponible en los siguientes lugares: [List locations]
  Por favor traiga un contenedor limpio para el agua (de 5 galones máximos de capacidad).

Le informaremos cuando las pruebas muestren que el agua es segura otra vez. Esperamos resolver el problema dentro de [estimated time frame].

Para más información llame a:
Contacto del Servicio de Agua: [Name, title, phone & address of responsible utility representative].
Junta Estatal de Control de Recursos de Agua (State Water Resources Control Board): [insert local district office, DE and phone number].
Departmento Local de Salud del Condado: [insert phone number of local health department].

Este aviso es enviado a usted por [insert water system name]. Núm. de Identificación de California del Sistema de Agua Público [XXXXXXX]. Fecha de distribución: [date].

Por favor comparta esta información con todas las demás personas que reciben esta agua, especialmente aquellos que no hayan recibido éste aviso directamente (por ejemplo, las personas en apartamentos, asilos, escuelas, y negocios). Puede hacerlo poniendo este aviso en un lugar público o distribuyendo copias en persona.

Date:

UNSAFE WATER ALERT

[Insert one-liner language other than Spanish here, otherwise delete.]

[System Name] water is possibly contaminated with [an unknown substance]

DO NOT USE YOUR WATER

Failure to follow this advisory could result in illness.

An unknown substance has been added to the drinking water supplied by the [Water System Name] due to a recent [intrusion; break-in] at [one of the wells; our treatment plant; storage tank; specific facility]. The State Water Resources Control Board, [County Name] County Health Department, and [Water System name] Water System are advising residents of [City, Town, System] to NOT USE THE TAP WATER FOR DRINKING, COOKING, HAND WASHING, OR BATHING UNTIL FURTHER NOTICE.

What should I do?

- **DO NOT USE YOUR TAP WATER---USE ONLY BOTTLED WATER.** Bottled water should be used for all drinking (including baby formula and juice), brushing teeth, washing dishes, making ice, food preparation and bathing **until further notice**.

- **DO NOT TRY AND TREAT THE WATER YOURSELF.** Boiling, freezing, filtering, adding chlorine or other disinfectants, or letting water stand will not make the water safe.

- Optional: Potable water is available at the following locations: [List locations]
  Please bring a clean water container (5 gallons maximum capacity).

We will inform you when tests show that the water is safe again. We expect to resolve the problem within [estimated time frame].

For more information call:
Water Utility contact: [Name, title, phone & address of responsible utility representative].
State Water Resources Control Board at: [insert local district office, DE and phone number].
Local County Health Department: [insert phone number of local health department].

This notice is being sent to you by [insert water system name]. California Public Water System ID # [XXXXXXX]. Date Distributed: [date].

Please share this information with all other people who receive this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand.

Date:

ALERTA DE AGUA NO SEGURA

[Insert one-liner language other than Spanish here, if needed, otherwise delete.]

El agua de [System Name] posiblemente está contaminada con [an unknown substance]

NO USE SU AGUA

Si descarta ésta advertencia puede enfermarse

Una sustancia desconocida fue agregada al agua potable suministrada por [Water System Name], esto fue debido a una reciente [intrusion; break-in] en [uno de los pozos; nuestra planta de tratamiento; tanque de almacenamiento; instalaciones específicas]. La Junta Estatal de Control de Recursos de Agua, el [County Name] County Health Department, y el Sistema de Agua [Water System name], están advirtiéndoles a los residentes de [City, Town, System] que NO USEN EL AGUA DE LA LLAVE PARA BEBER, COCINAR, LAVARSE LAS MANOS, O BAÑARSE HASTA NUEVO AVISO.

¿Qué debo hacer?

- **NO USE AGUA DE LA LLAVE---SOLO USE AGUA EMBOTELLADA.** Se debería usar agua embotellada para todas las bebidas (incluyendo formula de bebés y jugo), para lavarse los dientes, lavar trastes, hacer hielo, preparar comida, y bañarse **hasta nuevo aviso**.

- **NO INTENTE TRATAR EL AGUA USTED MISMO.** Hervir, congelar, filtrar, agregar cloro (chlorine) u otros desinfectantes, o dejar que el agua repose, no hará que el agua sea segura.

- Optional: Hay agua potable disponible en los siguientes lugares: [List locations]
  Por favor traiga un contenedor limpio para el agua (de 5 galones máximos de capacidad).

Le informaremos cuando las pruebas muestren que el agua es segura otra vez.
Esperamos resolver el problema dentro de [estimated time frame].
Para más información llame a:
Contacto del Servicio de Agua: [Name, title, phone & address of responsible utility representative].
Junta Estatal de Control de Recursos de Agua (State Water Resources Control Board): [insert local district office, DE and phone number].
Departmento Local de Salud del Condado: [insert phone number of local health department].

Este aviso es enviado a usted por [insert water system name]. Núm. de Identificación de California del Sistema de Agua Público [XXXXXXX]. Fecha de distribución: [date].

Por favor comparta esta información con todas las demás personas que reciben esta agua, especialmente aquellos que no hayan recibido éste aviso directamente (por ejemplo, las personas en apartamentos, asilos, escuelas, y negocios). Puede hacerlo poniendo este aviso en un lugar público o distribuyendo copias en persona.

Appendix E
California Statewide Emergency Notification

State of California—Environmental Protection Agency

State Water Resources Control Board
Division of Drinking Water

EDMUND G. BROWN JR.
Governor

WATER QUALITY EMERGENCY NOTIFICATION PLAN

Name of Utility: City of Coalinga Water Treatment Plant

Physical Location/Address: 25034 W. Palmer Ave. Fresno County 93210

The following persons have been designated to implement the plan upon notification by the State Water Resources Control Board Division of Drinking Water that an imminent danger to the health of the water users exists:

Water Utility: Contact Name & Title	Email Address	Telephone Day	Evening	Cell
1. Marissa Trejo – City Manager	mtrejo@coalinga.com		(559) 633-0704	
2. Eric Deleon - Public Works Supervisor	jsolona@coalinga.com		(559) 974-1257	
3. Jared Salona – Chief Plant Operator	jsolona@coalinga.com		(559) 341-9613	

The implementation of the plan will be carried out with the following SWRCB DDW and County Health Department personnel:

SWRCB & County Health Departments: Contact Name & Title	Telephone Day	Evening
1. **Jose Robledo, District Engineer SWRCB DDW**	**(559) 447-3300**	
2. **Kurt Sousa SWRCB DDW**	**(805) 566-1326**	**(805) 895-5337**
3.		

4. **If the above personnel cannot be reached, contact:**

Office of Emergency Services Warning Center (24 hrs) (800) 852-7550 or (916) 845-8911
When reporting a water quality emergency to the Warning Center, please ask for the State Water Resources Control Board – Division of Drinking Water Duty Officer.

NOTIFICATION PLAN

Attach a written description of the method or combination of methods to be used (radio, television, door-to-door, sound truck, etc.) **to notify customers in an emergency.** For each section of your plan give an estimate of the time required, necessary personnel, estimated coverage, etc. Consideration must be given to special organizations (such as schools), non-English speaking groups, and outlying water users. Ensure that the notification procedures you describe are practical and that you will be able to actually implement them in the event of an emergency. Examples of notification plans are attached for large, medium and small communities.

Report prepared by: Anthony Uribe, Utilities Supervisor

Signature and Title _____ Date _____

Appendix F
Incident Reports and Forms

- Written Threat Report Form
- IT Incident Response and Reporting Checklist
- Maintaining Crime Scene Integrity
- Phone Threat Report Form
- Public Health Information Report Form Instructions
- Security Incident Report Form
- Suspect Description Form
- Bomb Threat Checklist
- Threat Evaluation Worksheet
- Water Quality/ Consumer Complaint Report Form
- Witness Account Report Form
- Damage Assessment Form

Written Threat Report Form

INSTRUCTIONS

The purpose of this form is to summarize significant information from a written threat received by a drinking water utility. This form should be completed by the WUERM or an individual designated by incident command to evaluate the written threat. The summary information provided in this form is intended to support the threat evaluation process; however, the completed form is not a substitute for the complete written threat, which may contain additional, significant details.
The written threat itself (e.g., the note, letter, e-mail message, etc.) may be considered evidence and thus should be minimally handled (or not handled at all) and placed into a clean plastic bag to preserve any forensic evidence.
Remember, tampering with a drinking water system is a crime under the SDWA Amendments!

SAFETY

A suspicious letter or package could pose a threat in and of itself, so caution should be exercised if such packages are received. The US Postal Service has issued guidance when dealing with suspicious packages (http://www.usps.com/news/2001/press/pr01_1022gsa.htm).

THREAT NOTIFICATION

Name of person receiving the written threat: _____
Person(s) to whom threat was addressed: _____
Date threat received: _____ **Time threat received:** _____
How was the written threat received?

☐ US Postal service ☐ Delivery service ☐ Courier
☐ Fax ☐ E-mail ☐ Hand delivered
☐ Other _____

If mailed, is the return address listed? ☐ Yes ☐ No

_____

If mailed, what is the date and location of the postmark? _____
If delivered, what was the service used (list any tracking numbers)? _____
If Faxed, what is the number of the sending fax? _____
If E-mailed, what is the e-mail address of sender? _____
If hand-delivered, who delivered the message? _____

DETAILS OF THREAT

Has the water already been contaminated? ☐ Yes ☐ No
Date and time of contaminant introduction known? ☐ Yes ☐ No
Date and time if known: _____

Location of contaminant introduction known? ☐ Yes ☐ No
Site Name: _____
Type of facility

☐ Source water ☐ Treatment plant ☐ Pump station
☐ Ground storage tank ☐ Elevated storage tank ☐ Finished water reservoir
☐ Distribution main ☐ Hydrant ☐ Service connection
☐ Other _____

Address: _____

_____

Additional Site Information: _____

_____

Name or type of contaminant known? ☐ Yes ☐ No
Type of contaminant

☐ Chemical ☐ Biological ☐ Radiological

Specific contaminant name/description: _____

_____

Mode of contaminant introduction known? ☐ Yes ☐ No
Method of addition: ☐ Single dose ☐ Over time ☐ Other _____
Amount of material: _____

Additional Information: _____

_____

Motive for contamination known? ☐ Yes ☐ No

☐ Retaliation/revenge ☐ Political cause ☐ Religious doctrine

☐ Other _____

Describe motivation: _____

_____

NOTE CHARACTERISTICS

Perpetrator Information:

Stated name: _____

Affiliation: _____

Phone number: _____

Location/address: _____

Condition of paper/envelop:

☐ Marked personal ☐ Marked confidential ☐ Properly addressed

☐ Neatly typed or written ☐ Clean ☐ Corrected or marked-up

☐ Crumpled or wadded up ☐ Soiled/stained ☐ Torn/tattered

☐ Other: _____

How was the note prepared?

☐ Handwritten in print ☐ Handwritten in script ☐ Computer typed

☐ Machine typed ☐ Spliced (e.g., from other typed material)

☐ Other: _____

If handwritten, does writing look familiar? ☐ Yes ☐ No

_____

Language:

☐ Clear English ☐ Poor English

☐ Another language: _____

☐ Mixed languages: _____

Writing Style

☐ Educated ☐ Proper grammar ☐ Logical

☐ Uneducated ☐ Poor grammar/spelling ☐ Incoherent

☐ Use of slang ☐ Obscene

☐ Other: _____

Writing Tone

☐ Clear ☐ Direct ☐ Sincere

☐ Condescending ☐ Accusatory ☐ Angry

☐ Agitated ☐ Nervous ☐ Irrational

☐ Other: _____

SIGNOFF

Name of individual who received the threat:

Print name _____

Signature _____ Date/Time: _____

Name of person completing form (if different from written threat recipient):

Print name _____

Signature _____ Date/Time: _____

Source: EPA Response Protocol Toolbox Module 2, Section 8.6 – Interim Final December 2003

IT Incident Response and Reporting Checklist

Date_____ Time_____

Status:

- ☐ Site Under Attack
- ☐ Past Incident
- ☐ Repeated Incidents
- ☐ Unresolved

Contact Information:

Name _____
Title _____
Utility _____
Direct-dial phone _____
E-mail _____
Location / Site involved _____
Street Address _____
City _____
State/ZIP _____

1. What is the nature of the emergency? (Check all that apply)
   - ☐ Denial of Service attack
   - ☐ Unauthorized electronic monitoring
   - ☐ Network intrusion
   - ☐ Insider attack
   - ☐ Probe/scan
   - ☐ Malicious code (virus, Trojan horse, worm)
   - ☐ Website defacement
   - ☐ Other (explain)
2. Is there just one, or more than one, incident involved simultaneously?
3. Is this a single or multi-site incident?
4. What is the extent of penetration / infection?
5. Estimate the duration of attack
6. What is the entry point of the incident (network, the phone line, etc)?
7. What resources will be required to deal with this incident? (A Computer Emergency Response Team with a forensic expert might be needed immediately to analyze a major incident versus simply disconnecting the compromised equipment from the Internet for later analysis)
8. What is the source of the attack?
9. What is the target of the attack?
10. Impact of attack

11. Has there been a loss or compromise of business data?

12. What type of data has already been compromised or is at risk?

13. How critical is this data?

14. Affect on customers (Customers might be sensitive, based on the intensity level of the intellectual property loss. It could be a violation of privacy legislation versus a serious theft of software property, critically affecting a customer's enterprise-level business)

15. Estimate system downtime

16. Document damage to systems

17. Estimate financial loss

18. Has there been damage to the integrity or delivery of water or services?

19. Describe

20. Other utility systems affected

21. Severity of attack (include financial loss)

☐ Low ☐ Medium ☐ High

22. Did the attacker gain root, administrative or system access?

23. How was the incident detected?

- ☐ Intrusion detection system or audit logs
- ☐ External complaint
- ☐ User report
- ☐ Other

24. What are the known symptoms?

25. What utility areas are affected?

26. What systems are affected?

Gather as much information as possible about the systems, including suspected systems. For example:

- ☐ Operating system
- ☐ Platform
- ☐ Applications
- ☐ IP addresses
- ☐ Associated or suspected user IDs
- ☐ Most recent changes applied
- ☐ Other related items

27. Are the backups of the perceived affected systems available (provide all of the information regarding online, onsite, or offsite backups)?

See www.cert.org/tech_tips/intruder_detection_checklist.html for more information on detecting an intruder.

Maintaining Crime Scene Integrity*

Security breaches and suspicious activity need to be evaluated to determine if the actions are a result of "normal" activity, such as a construction crew working in the area, or the result of activity that could result in an intentional threat to the safety or security of the facility and it operations.

- As soon as **you** recognize that the threat is/was intentional and particularly if the actions of the threatening individuals are suspected to have been successful, **you** must notify facility management ([Security Director]/[General manager]).
- The (**[SD]/[GM]**) should immediately notify the local law enforcement agency responsible for criminal investigation at the facility as soon as they have verified a credible threat.
- **No personnel** from [UTILITY ABBREVIATION] facility should enter the area where any possible criminal activity might have occurred so as not to disturb the area. All signs of inappropriate entrance to the facility and any physical activity of the suspects must be available for evaluation by law enforcement without any disturbance.
- **[UTILITY ABBREVIATION] facility staff** and/or **law enforcement** may collect water samples prior to the collection of physical evidence.
- **[UTILITY ABBREVIATION] facility staff** should collect samples outside of the boundaries of the suspected crime scene, if possible, to avoid concerns about the integrity of the crime scene.
- The **[UTILITY ABBREVIATION] facility [GM]** should pre-designate a qualified laboratory that can assist in analysis, if the sample is suspected to contain water that has been intentionally contaminated, to insure chain of evidence custody. Law enforcement may require the collection of an additional sample set to be analyzed by their designated lab.
- **[UTILITY ABBREVIATION] facility staff** should be aware of possible physical evidence of contamination that might include discarded PPE, equipment (such as pumps and hoses), or containers with residual material. Special care should be taken by facility personnel to avoid moving or disturbing any potential physical evidence.
- **[UTILITY ABBREVIATION] facility staff** should notify [SD]/[GM] of any obvious physical evidence of contamination.
- **[UTILITY ABBREVIATION] facility staff** should not handle any physical evidence except at the direction of the appropriate law enforcement agency.
- Any photographs or videos taken by **[UTILITY ABBREVIATION] facility staff** should be reported to law enforcement for proper handling to ensure integrity of the evidence.

The **[UTILITY ABBREVIATION] [SD]/[GM]** if appropriate, should clearly designate the area of suspected criminal activity to assure that facility personnel do not inadvertency enter the area and disturb evidence.

The **[UTILITY ABBREVIATION] [SD]/[GM]** can instruct security personnel to stand by and/or lock doors/gates, and/or string tape or rope to restrict entrance, as appropriate.

The **[SD]**/**[GM]** should balance the needs of both the public health concerns and the concerns of possible criminal activity in their decisions to protect the crime scene.

** Adapted from EPA Response Protocol Toolbox: Planning for and Responding to Drinking Water Contamination Threats and Incidents Module 3: Site Characterization and Sampling Guide Section 3.6.*

Phone Threat Report Form

INSTRUCTIONS

This form is intended to be used by utility staff that regularly answer phone calls from the public (e.g., call center operators). The purpose of this form is to help these staff capturer as much information from a threatening phone call while the caller is on the line. It is important that the operator keep the caller on the line as long as possible in order to collect additional information. Since this form will be used during the call, it is important that operators become familiar with the content of the form. The sections of the form are organized with the information that should be collected during the call at the front of the form (i.e., Basic Call Information and Details of Threat) and information that can be completed immediately following the call at the end of the form (i.e., the description of the caller). The information collected on this form will be critical to the threat evaluation process.

Remember, tampering with a drinking water system is a crime under the SDWA Amendments

THREAT NOTIFICATION

Name of person receiving the call: _____

Date phone call received: _____ Time phone call received: _____

Time phone call ended: _____ **Duration of phone call:** _____

Originating number: _____ **Originating name:** _____

*If the number/name is not displayed on the caller ID, press *57 (or call trace) at the end of the call and inform law enforcement that the phone company may have trace information.*

Is the connection clear? ☐ Yes ☐ No

Could call be from a wireless phone? ☐ Yes ☐ No

DETAILS OF THREAT

Has the water already been contaminated? ☐ Yes ☐ No

Date and time of contaminant introduction known? ☐ Yes ☐ No

Date and time if known: _____

Location of contaminant introduction known? ☐ Yes ☐ No

Site Name: _____

Type of facility

- ☐ Source water ☐ Treatment plant ☐ Pump station
- ☐ Ground storage tank ☐ Elevated storage tank ☐ Finished water reservoir
- ☐ Distribution main ☐ Hydrant ☐ Service connection
- ☐ Other _____

Address: _____

_____

Additional Site Information: _____

_____

Name or type of contaminant known? ☐ Yes ☐ No

Type of contaminant

☐ Chemical ☐ Biological ☐ Radiological

Specific contaminant name/description: _____

_____

Mode of contaminant introduction known? ☐ Yes ☐ No

Method of addition: ☐ Single dose ☐ Over time ☐ Other _____

Amount of material: _____

Additional Information: _____

_____

Motive for contamination known? ☐ Yes ☐ No

- ☐ Retaliation/revenge ☐ Political cause ☐ Religious doctrine
- ☐ Other _____

Describe motivation: _____

CALLER INFORMATION

Basic Information:

Stated name: _____

Affiliation: _____

Phone number: _____

Location/address: _____

Caller's Voice:

Did the voice sound disguised or altered? ☐ Yes ☐ No

Did the call sound like a recording? ☐ Yes ☐ No

Did the voice sound? ☐ Male / ☐ Female ☐ Young / ☐ Old

Did the voice sound familiar? ☐ Yes ☐ No

If 'Yes,' who did it sound like? _____

Did the caller have an accent? ☐ Yes ☐ No

If 'Yes,' what nationality? _____

How did the caller sound or speak?

☐ Educated ☐ Well spoken ☐ Illiterate

☐ Irrational ☐ Obscene ☐ Incoherent

☐ Reading a script ☐ Other _____

What was the caller's tone of voice?

☐ Calm	☐ Angry	☐ Lisping	☐ Stuttering/broken
☐ Excited	☐ Nervous	☐ Sincere	☐ Insincere
☐ Slow	☐ Rapid	☐ Normal	☐ Slurred
☐ Soft	☐ Loud	☐ Nasal	☐ Clearing throat
☐ Laughing	☐ Crying	☐ Clear	☐ Deep breathing
☐ Deep	☐ High	☐ Raspy	☐ Cracking

☐ Other _____

Were there background noises coming from the caller's end?

☐ Silence

☐ Voice describe _____

☐ Children describe _____

☐ Animals describe _____

☐ Factory sounds describe _____

☐ Office sounds describe _____

☐ Music describe _____

☐ Traffic/street sounds describe _____

☐ Airplanes describe _____

☐ Trains describe _____

☐ Ships or large boats describe _____

☐ Other: _____

SIGNOFF

Name of call recipient: _____

Print name: _____

Signature _____ Date/Time: _____

Name of person completing form (if different from call recipient):

Print name _____

Signature _____ Date/Time: _____

Source: EPA Response Protocol Toolbox Module 2, Section 8.5 – Interim Final December 2003

Public Health Information Report Form Instructions

The purpose of this form is to summarize significant information about a public health episode that could be linked to contaminated water. This form should be completed by the WUERM or an individual designated by incident command. The information compiled in this form is intended to support the threat evaluation process.
In the case of a threat warning due to a report from public health, it is likely that the public health agency will assume incident command during the investigation. The drinking water utility will likely play a support role during the investigation, specifically to help determine whether or not water might be the cause.

PUBLIC HEALTH NOTIFICATION

Date and Time of notification: _____

Name of person who received the notification: _____

Contact information for individual providing the notification

Full Name: _____

Title: _____

Organization: _____

Address: _____

Day-time phone: _____

Evening phone: _____

Fax Number: _____

E-mail address: _____

Why is this person contacting the drinking water utility? _____

_____

Has the state or local public health agency been notified? ☐ Yes ☐ No

If "No," the appropriate public health official should be immediately notified.

DESCRIPTION OF PUBLIC HEALTH EPISODE

Nature of public health episode:

☐ Unusual disease (mild) ☐ Unusual disease (severe) ☐ Death

☐ Other: _____

Symptoms:

☐ Diarrhea ☐ Vomiting/nausea ☐ Flu-like symptoms

☐ Fever ☐ Headache ☐ Breathing difficulty

☐ Other: _____

Describe symptoms: _____

_____

Causative Agent: ☐ Known ☐ Suspected ☐ Unknown

If known or suspected, provide additional detail below

☐ Chemical ☐ Biological ☐ Radiological

Describe _____

Estimate of time between exposure and onset of symptoms: _____

Exposed Individuals:

Location where exposure is thought to have occurred

☐ Residence ☐ Work ☐ School

☐ Restaurant ☐ Shopping mall ☐ Social gathering

☐ Other: _____

Additional notes on location of exposure: _____

_____

Collect addresses for specific locations where exposure is thought to have occurred.

Is the pattern of exposure clustered in a specific area? ☐ Yes ☐ No

Extent of area

☐ Single building ☐ Complex (several buildings) ☐ City block

☐ Neighborhood ☐ Cluster of neighborhoods ☐ Large section of city

☐ Other: _____

Additional notes on extent of area: _____

_____

Do the exposed individuals represent a disproportionate number of:

☐ Immune compromised ☐ Elderly ☐ Children

☐ Infants ☐ Pregnant women ☐ Women

☐ Other: _____

☐ None, no specific groups dominate the makeup of exposed individuals

EVALUATION OF LINK TO WATER

Are the symptoms consistent with typical waterborne diseases, such as gastrointestinal disease, vomiting, or diarrhea? ☐ Yes ☐ No

Does the area of exposure coincide with a specific area of the system, such as a pressure zone or area feed by a specific plant? ☐ Yes ☐ No

Were there any consumer complaints within the affected area? ☐ Yes ☐ No

Were there any unusual water quality data within the affected area? ☐ Yes ☐ No

Were there any process upsets or operational changes? ☐ Yes ☐ No

Was there any construction/maintenance within the affected area? ☐ Yes ☐ No

Were there any security incidents within the affected area? ☐ Yes ☐ No

---

SIGNOFF

Name of person completing form:

Print name _____

Signature _____ Date/Time: _____

Source: EPA Response Protocol Toolbox Module 2, Section 8.8 – Interim Final December 2003

Security Incident Report Form

INSTRUCTIONS

The purpose of this form is to help organize information about a security incident, typically a security breach, which may be related to a water contamination threat. The individual who discovered the security incident, such as a security supervisor, the WUERM, or another designated individual may complete this form. This form is intended to summarize information about a security breach that may be relevant to the threat evaluation process. This form should be completed for each location where a security incident was discovered.

DISCOVERY OF SECURITY INCIDENT

Date/Time security incident discovered: _____

Name of person who discovered security incident: _____

Mode of discovery:

- ☐ Alarm (building)
- ☐ Alarm (gate/fence)
- ☐ Alarm (access hatch)
- ☐ Video surveillance
- ☐ Utility staff discovery
- ☐ Citizen discovery
- ☐ Suspect confession
- ☐ Law enforcement discovery
- ☐ Other _____

Did anyone observe the security incident as it occurred? ☐ Yes ☐ No

If "Yes", complete the 'Witness Account Report Form'

SITE DESCRIPTION

Site Name: _____

Type of facility

- ☐ Source water
- ☐ Treatment plant
- ☐ Pump station
- ☐ Ground storage tank
- ☐ Elevated storage tank
- ☐ Finished water reservoir
- ☐ Distribution main
- ☐ Hydrant
- ☐ Service connection
- ☐ Other _____

Address: _____

_____

Additional Site Information: _____

_____

BACKGROUND INFORMATION

Have the following "normal activities" been investigated as potential causes of the security incident?

- ☐ Alarms with known and harmless causes
- ☐ Utility staff inspections
- ☐ Routine water quality sampling
- ☐ Construction or maintenance
- ☐ Contractor activity
- ☐ Other _____

Was this site recently visited *prior* to the security incident? ☐ Yes ☐ No

If "Yes," provide additional detail below

Date and time of previous visit: _____

Name of individual who visited the site: _____

Additional Information: _____

_____

Has *this location* been the site of previous security incidents? ☐ Yes ☐ No

If "Yes," provide additional detail below

Date and time of most recent security incident: _____

Description of incident: _____

_____

_____

What were the results of the threat evaluation for this incident?

- ☐ 'Possible'
- ☐ 'Credible'
- ☐ 'Confirmed'

Have security incidents occurred at *other locations* recently? ☐ Yes ☐ No

If "Yes", complete additional 'Security Incident Reports' (Appendix 8.3) for each site

Name of 1st additional site: _____

Name of 2nd additional site: _____

Name of 3rd additional site: _____

SECURITY INCIDENT DETAILS

Was there an alarm(s) associated with the security incident? ☐ Yes ☐ No

If "Yes," provide additional detail below

Are there sequential alarms (e.g., alarm on a gate and a hatch)? ☐ Yes ☐ No

Date and time of alarm(s): _____

Describe alarm(s): _____

_____

Is video surveillance available from the site of the security incident? ☐ Yes ☐ No

If "Yes," provide additional detail below

Date and time of video surveillance: _____

Describe surveillance: _____

_____

_____

_____

Unusual equipment found at the site and time of discovery of the security incident:

☐ Discarded PPE (e.g., gloves, masks)
☐ Tools (e.g., wrenches, bolt cutters)
☐ Lab equipment (e.g., beakers, tubing)
☐ None
☐ Empty containers (e.g., bottles, drums)
☐ Hardware (e.g., valves, pipe)
☐ Pumps or hoses
☐ Other _____

Describe equipment: _____

_____

_____

_____

Unusual vehicles found at the site and time of discovery of the security incident:

☐ Car/sedan ☐ SUV ☐ Pickup truck
☐ Flatbed truck ☐ Construction vehicle ☐ None
☐ Other _____

Describe vehicles (including make/model/year/color, license plate #, and logos or markings): _____

_____

_____

_____

_____

Signs of tampering at the site and time of discovery of the security incident:

☐ Cut locks/fences
☐ Open/damaged gates, doors, or windows
☐ Open/damaged access hatches
☐ Missing/damaged equipment
☐ Facility in disarray
☐ None
☐ Other _____

Are there signs of sequential intrusion (e.g., locks removed from a gate and hatch)? ☐ Yes ☐ No

Describe signs of tampering: _____

_____

_____

_____

Signs of hazard at the site and time of discovery of the security incident:

☐ Unexplained or unusual odors
☐ Unexplained dead or stressed vegetation
☐ Unexplained clouds or vapors
☐ Unexplained dead animals
☐ Unexplained liquids
☐ None
☐ Other _____

Describe signs of hazard: _____

_____

_____

SIGNOFF

Name of person responsible for documenting the security incident:

Print name _____

Signature _____ Date/Time: _____

Source: EPA Response Protocol Toolbox Module 2, Section 8.3 – Interim Final December 2003

SUSPECT DESCRIPTION FORM

GENERAL APPEARANCE

Gender:
Male
Female

Race:
☐ White
☐ Black
☐ Middle Eastern

☐ Hispanic
☐ Asian
☐ Native American

Other_____

Hair:
Color
Style
Texture
Sideburns

Eyes:
Color
Shape
Glasses (type)

Physical Characteristics:
Age
Height
Weight
Build

Distinguishing Marks (describe):
Scars
Tattoos
Gang Insignia

Other:
Left Handed / Right Handed

CLOTHING

Color/Type:

Layered Shirts/Blouse

Cap/Hat

Coat/Jacket

Tie

Pants

Shoes

Stockings

Gloves

Jewelry

Bag/Backpack
Purse/Briefcase

SUSPECT DEMEANOR

☐Apologetic
☐Calm
☐Belligerent
☐Angry
☐Threatening
☐Nervous
☐Confuse

DISTINGUISHING TRAITS

Speech
Accent
Gait / Limp

FACIAL CHARACTERISTICS

Skin:

Color
Texture

Describe shape of:

Mouth
Lips
Ears
Cheeks
(full or sunken)
Nose
Neck
Eyes
Eyebrows

Presence of:

Adam's Apple
Chin clefts
Wrinkles

Hair:

Mustache
Beard
Other

Describe any:

Facial piercing
Ear piercing

WEAPON (describe if any)

☐ Handgun
☐ Long gun
☐ Knife

VEHICLE

Color
Make
Model
Body Style
Damage / Rust
Antenna
Bumper Sticker
Wheel Covers

Direction of Escape

What did the suspect say?

License Number_____

BOMB THREAT CHECKLIST

Be Calm and Courteous *Give a co-worker a signal to "listen in"*

Date: _____Time call started
_____Time call ended:

Check call display for phone number (if available) _____

EXACT WORDING OF BOMB THREAT:

What can you tell me?

When is the bomb going to explode?

What kind of bomb is it?

Where is the bomb right now?

What does the bomb look like?

What will cause the bomb to explode?

Did you place the bomb?

Why?

What is your name?

REMARKS:

CALLER'S VOICE

☐ Male
☐ Female

☐ Old (Age?)____
☐ Young (Age?)____

☐ Calm
☐ Excited

☐ Soft
☐ Loud

☐ Angry
☐ Cracking Voice

☐ Laughter
☐ Crying

☐ Normal
☐ Disguised

☐ High pitched
☐ Deep

☐ Nasal

☐ Slurred

☐ Distinct
☐ Ragged

☐ Rapid
☐ Slow

☐ Raspy
☐ Stutter

☐ Lisp
☐ Heavy Breather

☐ Clearing Throat
☐ Intoxicated

☐ Pleasant
☐ Whisper

☐ Familiar (who?)_____

☐_Accent (type?) _____

FAMILIARITY WITH FACILITY

☐ Much
☐ Some
☐ None

BACKGROUND SOUNDS

☐ Street
☐ Party Sounds

☐ Office Noises
☐ Train

☐ Voices
☐ Airplane

☐ PA System
☐ Animals

☐ Local Music
☐ Static on line

☐ Long Distance
☐ Motors

☐ Bells
☐ Whistles

☐ Factory Machinery
☐ Crockery

☐ Household sounds
☐ Bedlam

___Chanting
___Other

Inform the caller that the building is occupied and the detonation of a bomb could result in death or serious injury to many innocent people.

BOMB THREAT LANGUAGE

- ☐ Well Spoken
- ☐ Incoherent

- ☐ Foul
- ☐ Irrational

- ☐ Taped
- ☐ Deliberate

- ☐ Abusive
- ☐ Righteous

- ☐ Message read by threat maker

Threat Evaluation Worksheet

INSTRUCTIONS

The purpose of this worksheet is to help organize information about a contamination threat warning that would be used during the Threat Evaluation Process. The individual responsible for conducting the Threat Evaluation (e.g., the WUERM) should complete this worksheet. The worksheet is generic to accommodate information from different types of threat warnings; thus, there will likely be information that is unavailable or not immediately available. Other forms in the Appendices are provided to augment the information in this worksheet.

THREAT WARNING INFORMATION

Date/Time threat warning discovered: _____

Name of person who discovered threat warning: _____

Type of threat warning:

☐ Security breach ☐ Witness account ☐ Phone threat
☐ Written threat ☐ Law enforcement ☐ Unusual water quality
☐ News media ☐ Consumer complaints ☐ Public health notification
☐ Other _____

Identity of the contaminant: ☐ Known ☐ Suspected ☐ Unknown

If known or suspected, provide additional detail below

☐ Chemical ☐ Biological ☐ Radiological

Describe _____

_____

Time of contamination: ☐ Known ☐ Estimated ☐ Unknown

If known or estimated, provide additional detail below

Date and time of contamination: _____

Additional Information: _____

_____

Mode of contamination: ☐ Known ☐ Suspected ☐ Unknown

If known or suspected, provide additional detail below

Method of addition: ☐ Single dose ☐ Over time ☐ Other _____

Amount of material: _____

Additional Information: _____

_____

Site of contamination: ☐ Known ☐ Suspected ☐ Unknown

If known or suspected, provide additional detail below

Number of sites: _____

Provide the following information for each site.

Site #1

Site Name: _____

Type of facility

☐ Source water ☐ Treatment plant ☐ Pump station
☐ Ground storage tank ☐ Elevated storage tank ☐ Finished water reservoir
☐ Distribution main ☐ Hydrant ☐ Service connection
☐ Other _____

Address: _____

_____

Additional Site Information: _____

_____

Site #2

Site Name: _____

Type of facility

☐ Source water ☐ Treatment plant ☐ Pump station
☐ Ground storage tank ☐ Elevated storage tank ☐ Finished water reservoir
☐ Distribution main ☐ Hydrant ☐ Service connection
☐ Other _____

Address: _____

Additional Site Information: _____

Site #3

Site Name: _____

Type of facility

☐ Source water ☐ Treatment plant ☐ Pump station
☐ Ground storage tank ☐ Elevated storage tank ☐ Finished water reservoir
☐ Distribution main ☐ Hydrant ☐ Service connection
☐ Other _____

Address: _____

Additional Site Information: _____

ADDITIONAL INFORMATION

Has there been a breach of security at the suspected site? ☐ Yes ☐ No
If "Yes", review the completed 'Security Incident Report'

Are there any witness accounts of the suspected incident? ☐ Yes ☐ No
If "Yes", review the completed 'Witness Account Report'

Was the threat made verbally over the phone? ☐ Yes ☐ No
If "Yes", review the completed 'Phone Threat Report'

Was a written threat received? ☐ Yes ☐ No
If "Yes", review the completed 'Written Threat Report'

Are there unusual water quality data or consumer complaints? ☐ Yes ☐ No
If "Yes", review the completed 'Water Quality/Consumer Complaint Report'

Are there unusual symptoms or disease in the population? ☐ Yes ☐ No
If "Yes", review the completed 'Public Health Report'

Is a 'Site Characterization Report' available? ☐ Yes ☐ No
If "Yes", review the completed 'Site Characterization Report'

Are results of sample analysis available? ☐ Yes ☐ No
If "Yes", review the analytical results report, including appropriate QA/QC data

Is a 'Contaminant Identification Report' available? ☐ Yes ☐ No
If "Yes", review the completed 'Sample Analysis Report'

Is there relevant information available from external sources? ☐ Yes ☐ No
Check all that apply

☐ Local law enforcement ☐ FBI ☐ DW primacy agency
☐ Public health agency ☐ Hospitals / 911 call centers ☐ US EPA / Water ISAC
☐ Media reports ☐ Homeland security alerts ☐ Neighboring utilities
☐ Other _____

Point of Contact: _____

Summary of key information from external sources (provide detail in attachments as necessary):

THREAT EVALUATION

Has normal activity been investigated as the cause of the threat warning? ☐ Yes ☐ No

Normal activities to consider

☐ Utility staff inspections ☐ Routine water quality sampling
☐ Construction or maintenance ☐ Contractor activity
☐ Operational changes ☐ Water quality changes with a known cause
☐ Other _____

Is the threat 'possible'? ☐ Yes ☐ No

Summarize the basis for this determination: _____

Response to a 'possible' threat:

☐ None ☐ Site characterization ☐ Isolation/containment
☐ Increased monitoring/security ☐ Other _____

Is the threat 'credible'? ☐ Yes ☐ No

Summarize the basis for this determination: _____

_____

_____

Response to a 'credible' threat:

☐ Sample analysis ☐ Site characterization ☐ Isolation/containment
☐ Partial EOC activation ☐ Public notification ☐ Provide alternate water supply
☐ Other _____

Has a contamination incident been confirmed? ☐ Yes ☐ No

Summarize the basis for this determination: _____

_____

_____

Response to a confirmed incident:

☐ Sample analysis ☐ Site characterization ☐ Isolation/containment
☐ Full EOC activation ☐ Public notification ☐ Provide alternate water supply
☐ Initiate remediation and recovery
☐ Other _____

How do other organizations characterize the threat?

Organization	**Evaluation**	**Comment**
☐ Local Law Enforcement	☐ Possible ☐ Credible ☐ Confirmed	
☐ FBI	☐ Possible ☐ Credible ☐ Confirmed	
☐ Public Health Agency	☐ Possible ☐ Credible ☐ Confirmed	
☐ Drinking Water Primacy Agency	☐ Possible ☐ Credible ☐ Confirmed	
☐ Other	☐ Possible ☐ Credible ☐ Confirmed	
☐ Other	☐ Possible ☐ Credible ☐ Confirmed	

SIGNOFF

Name of person responsible for threat evaluation:

Print name _____

Signature _____ Date/Time: _____

Source: EPA Response Protocol Toolbox Module 2, Section 8.2 – Interim Final December 2003

Water Quality/Consumer Complaint Report Form

INSTRUCTIONS - *This form is provided to guide the individual responsible for evaluating unusual water quality data or consumer complaints. It is designed to prompt the analyst to consider various factors or information when evaluating the unusual data. The actual data used in this analysis should be compiled separately and appended to this form. The form can be used to support the threat evaluation due to a threat warning from unusual water quality or consumer complaints, or another type of threat warning in which water quality data or consumer complaints are used to support the evaluation. Note that in this form, water quality refers to both specific water quality parameters and the general aesthetic characteristics of the water that might result in consumer complaints.*

Threat warning is based on: ☐ Water quality ☐ Consumer complaints ☐ Other

What is the water quality parameter or complaint under consideration?

Are unusual consumer complaints corroborated by unusual water quality data?

Is the unusual water quality indicative of a particular contaminant of concern? For example, is the color, odor, or taste associated with a particular contaminant?

Are consumers in the affected area experiencing any unusual health symptoms?

What is 'typical' for consumer complaints for the current season and water quality?
Number of complaints.
Nature of complaints.
Clustering of complaints

What is considered to be 'normal' water quality (i.e., what is the baseline water quality data or level of consumer complaints)?

What is reliability of the method or instrumentation used for the water quality analysis?
Are standards and reagents OK?
Is the method/instrument functioning properly?

Based on recent data, does the unusual water quality appear to be part of a gradual trend (i.e., occurring over several days or longer)?

Are the unusual water quality observations sporadic over a wide area, or are they clustered in a particular area?
What is the extent of the area? Pressure zone. Neighborhood. City block. Street. Building.

If the unusual condition isolated to a specific area:
Is this area being supplied by a particular plant or source water?
Have there been any operational changes at the plant or in the affected area of the system?
Has there been any flushing or distribution system maintenance in the affected area?
Has there been any repair or construction in the area that could impact water quality?

SIGNOFF

Name of person completing form:

Print name_____
Signature_____ Date/Time: _____

Source: EPA Response Protocol Toolbox Module 2, Section 8.7 – Interim Final December 2003

Witness Account Report Form

INSTRUCTIONS

The purpose of this form is to document the observations of a witness to activities that might be considered an incident warning. The individual interviewing the witness, or potentially the witness, should complete this form. This may be the WUERM or an individual designated by incident command to perform the interview. If law enforcement is conducting the interview (which may often be the case), then this form may serve as a prompt for "utility relevant information" that should be pursued during the interview. This form is intended to consolidate the details of the witness account that may be relevant to the threat evaluation process. This form should be completed for each witness that is interviewed.

BASIC INFORMATION

Date/Time of interview: _____

Name of person interviewing the witness: _____

Witness contact information

Full Name: _____

Address: _____

Day-time phone: _____

Evening phone: _____

E-mail address: _____

Reason the witness was in the vicinity of the suspicious activity: _____

_____

_____

WITNESS ACCOUNT

Date/Time of activity: _____

Location of activity: _____

Site Name: _____

_____

Type of facility

- ☐ Source water
- ☐ Treatment plant
- ☐ Pump station
- ☐ Ground storage tank
- ☐ Elevated storage tank
- ☐ Finished water reservoir
- ☐ Distribution main
- ☐ Hydrant
- ☐ Service connection
- ☐ Other _____

Address: _____

_____

Additional Site Information: _____

_____

Type of activity

- ☐ Trespassing
- ☐ Vandalism
- ☐ Breaking and entering
- ☐ Theft
- ☐ Tampering
- ☐ Surveillance
- ☐ Other _____

Additional description of the activity _____

_____

_____

_____

_____

Description of suspects

Were suspects present at the site? ☐ Yes ☐ No

How many suspects were present? _____

_____

Describe each suspect's appearance:

Suspect #	Sex	Race	Hair color	Clothing	Voice
1					
2					
3					
4					
5					
6					

Where any of the suspects wearing uniforms? ☐ Yes ☐ No

If "Yes," describe the uniform(s): _____

Describe any other unusual characteristics of the suspects: _____

_____

_____

Did any of the suspects notice the witness? ☐ Yes ☐ No

If "Yes," how did they respond: _____

_____

Vehicles at the site

Were vehicles present at the site? ☐ Yes ☐ No

Did the vehicles appear to belong to the suspects? ☐ Yes ☐ No

How many vehicles were present? _____

Describe each vehicle:

Vehicle #	Type	Color	Make	Model	License plate
1					
2					
3					
4					

Where there any logos or distinguishing markings on the vehicles? ☐ Yes ☐ No

If "Yes," describe: _____

_____

Provide any additional detail about the vehicles and how they were used (if at all):

_____

_____

_____

Equipment at the site

Was any unusual equipment present at the site? ☐ Yes ☐ No

- ☐ Explosive or incendiary devices
- ☐ PPE (e.g., gloves, masks)
- ☐ Tools (e.g., wrenches, bolt cutters)
- ☐ Lab equipment (e.g., beakers, tubing)
- ☐ Firearms
- ☐ Containers (e.g., bottles, drums)
- ☐ Hardware (e.g., valves, pipe, hoses)
- ☐ Pumps and related equipment

☐ Other _____

Describe the equipment and how it was being used by the suspects (if at all):

_____

_____

_____

Unusual conditions at the site

Were there any unusual conditions at the site? ☐ Yes ☐ No

☐ Explosions or fires ☐ Fogs or vapors ☐ Unusual odors

☐ Dead/stressed vegetation ☐ Dead animals ☐ Unusual noises

☐ Other _____

Describe the site conditions: _____

_____

_____

Additional observations

Describe any additional details from the witness account: _____

_____

_____

SIGNOFF

Name of interviewer:

Print name:_____

Signature_____ Date/Time: _____

Name of witness:

Print name_____

Signature_____ Date/Time: _____

Source: EPA Response Protocol Toolbox Module 2, Section 8.4 – Interim Final December 2003

Appendix G
ERP Certification Form

Certification of Community Water System Emergency Response Plan in Compliance with America's Water Infrastructure Act of 2018

Part (A): Community Water System Identification

Community Water System Name: City of Coalinga

Community Water System Complete Mailing Address: 155 West Durian Coalinga, CA 93210

Public Water System Identification Number: CA1010004

Population Served: 17,000

Part (B): Certification Date

Date of the certification: _____

Part (C): Certification Statement

I, _____

[Name of certifying official]

hereby certify that the community water system named under Part A has completed an emergency response plan that incorporates findings of the risk and resilience assessment conducted under Section 2013(a) of America's Water Infrastructure Act of 2018 for such system (and any revisions thereto). This emergency response plan includes:

1. Strategies and resources to improve the resilience of the system, including the physical security and cybersecurity of the system;
2. Plans and procedures that can be implemented, and identification of equipment that can be utilized, in the event of a malevolent act or natural hazard that threatens the ability of the community water system to deliver safe drinking water;
3. Actions, procedures, and equipment which can obviate or significantly lessen the impact of a malevolent act or natural hazard on the public health and the safety and supply of drinking water provided to communities and individuals, including the development of alternative source water options, relocation of water intakes, and construction of flood protection barriers; and
4. Strategies that can be used to aid in the detection of malevolent acts or natural hazards that threaten the security or resilience of the system.

_____

[Signature of certifying official - click to add a digital signature, or print and sign]