

Emergency/Disaster Response Plan

This template is recommended for California public water systems that serve less than 1,000 service connections (or population less than 3,300).

Water System Name: _____

Water System ID No: _____

Number of Service Connections: _____

Population Served: _____

To continue minimum service levels and mitigate the public health risks from drinking water contamination that may occur during a disaster or other emergency events and in order to provide reliable water service and minimize public health risks from unsafe drinking water during those events, the [\[insert water system name\]](#) water system proposes the following plan that defines how it will respond to emergencies and/or disasters that are likely to affect its operation.

Disasters/emergencies that are likely to occur in the water system's service area that are addressed are: earthquake, major fire emergencies, water outages due to loss of power, localized flooding, water contamination, and acts of sabotage.

- 1) **DESIGNATED RESPONSIBLE PERSONNEL:** For designated responsible personnel and chain of command and identified responsibilities, see the attached table "Water System Emergency /Disaster Personnel and Responsibilities".
- 2) **INVENTORY OF RESOURCES:** An inventory of system resources that are used for normal operations and available for emergencies; includes maps and schematic diagrams of the water system, lists of emergency equipment, equipment suppliers, and emergency contract agreements that are kept at the water system office.
- 3) **EMERGENCY OPERATIONS CENTER:** The water system office has been designated as the communication network emergency operations center. Emergency contact information for equipment suppliers is attached. The telephone and FAX will be the primary mode of communication in an emergency.

Agency	Address, City	Phone #	FAX #
Water System (Primary Site)			
Water System (Alternate Site)			
Fire Department			
Law Enforcement			

In addition, should telephone communication be lost, the water system has made arrangements with [\[describe contact and procedures\]](#), to provide emergency communications with emergency response agencies.

- 4) **OTHER AGENCY COORDINATION:** Coordination procedures with governmental agencies for health and safety protection; technical, legal, and financial assistance, and public notification procedures are continually being developed and updated through regulation and experience and will be added as necessary to this plan. (See External Emergency Contact sheet.)

- 5) **RESPONSE PROCEDURES:** Personnel will, as quickly as possible, determine the status of other employees, assess damage to water system facilities, provide logistics for emergency repairs, monitor progress of repairs and restoration efforts, communicate with health officials and water users according to the "Emergency Notification Plan" on file with the regulatory agency (i.e., California Department of Health Services (CDHS) or Local Primacy Agency (LPA)), and document damage and repairs. A copy of the approved "Emergency Notification Plan"(ENP) and user notification templates is attached. [\[Please fill out the blank ENP provided or contact your CDHS District Engineer or LPA for an ENP that has the contact information for contacts at the office that regulates your public water systems\].](#)

- 6) **PUBLIC NOTIFICATION PROCEDURES:** Public notice procedures should be developed before a disaster and not during the event. Public notices are a significant part of communicating with customers. Standard public notifications have been developed by CDHS for use during an emergency such as: 1) precautions during a water outage or low pressure problem; 2) Boil Water Order (BWO); 3) Unsafe Water Alert (UWA), or; 4) Do Not Drink Notices,. Each utility will need to modify the standard forms with specific contact information and guidance to customers depending on the nature of the emergency event. In addition, water systems need to have copies of public notices in the appropriate languages for use by non-English language speaking customers in their service areas.

A BWO, UWA or Do Not Drink Notice can be issued by one, or a combination of the following agencies:

- CDHS – Drinking Water Program (Designated personnel-District Engineer, Regional Engineer or Branch Chief).
- Local County Health Department or local Environmental Health Agency (Designated personnel-County Health Officer or Director of Environmental Health Department for small water systems under county jurisdiction).
- Affected Water System (Designated personnel-responsible person in charge of the affected water system, i.e., Manager, Owner, Operator etc. The water systems ERP should identify the designated personnel in their ERP).

All public notifications (BWO, UWA or Do Not Drink Notices) should be coordinated with the CDHS District Engineer, County Environmental Health Department and the County Health Officer prior to issuing a public notice. However, any one of the three agencies can act in an emergency to immediately issue a BWO or UWA, if delays would jeopardize public health and safety. The CDHS District Engineer or the water system must notify the County Health Department and the County Health Officer prior to or immediately after issuing a public notice. Notice must be given directly to a person, and a message left on voicemail or answering machine is not sufficient to meet this requirement. Details of the person responsible for completing this notification and the method that will be utilized is contained in the ERP, and is attached to this plan.

The following standard public notices are provided in the Appendix of this report.

Consumer Alert During Water Outages or Periods of Low Pressure –

If a water system is experiencing power outages, water outages or low pressure problems, a consumer alert may be issued to the public. The notice provides consumers information on conserving water and how to treat the water with household bleach if the water quality is questionable.

Boil Water Order (BWO) – A BWO should be issued when minimum bacteriological water quality standards cannot be reasonably assured. To assure public health protection a BWO should be issued as soon as it is concluded by the designated personnel that the water supply is or may be biologically unsafe. Examples of these situations include:

1. Biological contamination of water supply system, including but not limited to:
 - Positive total or fecal coliform bacteriological samples;
 - Prolonged water outages in areas of ruptured sewer and/or water mains;
 - Failed septic tank systems in close proximity to ruptured water mains;
 - Ruptured water treatment, storage, and/or distribution facilities in areas of known sewage spills
 - Known biological contamination;
 - Cross-connection contamination problems;
 - Illness attributed to water supply.
2. Unusual system characteristics, including but not limited to:
 - Prolonged loss of pressure;
 - Sudden loss of chlorine residual;
 - Severe discoloration and odor;

- Inability to implement emergency chlorination.
3. Implemented due to treatment inadequacies.

A BWO is not appropriate in response to most types of chemical contamination. A BWO may also be inappropriate in cases where boiling the water may tend to concentrate regulated contaminants that are known to be in the water and that are just below an MCL (e.g. Nitrates or Nitrites that are over 50% of the MCL).

Unsafe Water Alert (UWA)/“Do Not Drink” – In the event a water quality emergency due to known or suspected chemical (non-bacteriological) contamination to a water system a UWA or “Do Not Drink” should be issued. Water should not be used for drinking and cooking, but may be used for sanitation purposes (e.g. toilet flushing, clothes washing, etc.). Examples of these situations include:

1. Known or suspected widespread chemical or hazardous contamination in water supply distribution, including but not limited to:
 - Ruptured water distribution system (storage tanks, mains) in area of known chemical spill coupled with loss of pressure;
 - Severe odor and discoloration;
 - Loss of chlorine residual;
 - Inability of existing water treatment process to neutralize chemical contaminants prior to entering the distribution system.
2. Threatened or suspected acts of sabotage confirmed by analytical results, including but not limited to:
 - Suspected contamination triggered by acts of sabotage or vandalism.
3. Emergency use of an unapproved source to provide a supplemental water supply.

Unsafe Water Alert (UWA)/“Do Not Use” – In the event a known or suspected contamination event to a water system, where the contaminate may be chemical, biological or radiological a UWA or “Do Not Use” should be issued. Water should not be used for drinking, cooking, or sanitation purposes. Examples of these situations include:

1. Known or suspected widespread chemical or hazardous contamination in water supply distribution, including but not limited to
 - Terrorist contamination event.

Cancellation of Public Notification

Once a BWO/UWA is issued, the only agency that can rescind the public notice is the drinking water primacy agency. CDHS DWP or the LPA will not lift the BWO for a microbial contaminant until two rounds of samples, collected one day apart, for coliform bacteria samples have been analyzed and the results are negative. The two sets of sample results should be faxed to the CDHS DWP District Office or LPA office for final approval before rescinding the BWO. Special chemical sampling may be required to get approval to rescind an UWA, please contact the CDHS DWP District Office or LPA to determine what sampling will be required.

7) RESUME NORMAL OPERATIONS: The steps that will be taken to resume normal operations and to prepare and submit reports to appropriate agencies will include identifying the nature of the emergency (e.g., earthquake-causing water outage/leaks, fire or power outage causing water shortage/outage, sabotage resulting in facility destruction or water contamination).

a. Leaks (Result of earthquake, etc.)

- i. Immediately increase system disinfectant residual as a precaution, until normal service is resumed. Determine the locations of leaks and make temporary repairs using clamps and other pipe repair devices that will allow for repairs to be made while system pressure is maintained. If this is not possible, isolate leaks by turning off power or flow, to repair or replace the pipe. Repair or isolate major breaks to allow service to the maximum system population possible.
- ii. Disinfect all repairs as per attached AWWA Standards¹;
- iii. Reestablish normal service.

b. Low pressure or service interruption (Result of earthquake, fire, storm, water source outage, power outage, etc.) – See also section on Leaks, above.

- i. Increase production, if possible, to provide maximum system output.
- ii. Increase disinfectant residual as a precaution against potential contamination.

If any customers have experienced low pressure or a water outage as a result of an earthquake, fire, storm, water source outage, power outage or any other event or failure, immediately contact your CDHS or the LPA to determine if a Boil Water Order (BWO) must be issued to users. ***Note: Whether issued by the water system or a regulatory agency, the BWO can only be rescinded or lifted by CDHS or the LPA. Normally the regulatory agency will consider rescinding a BWO after total***

¹ Copies of the AWWA C651 Standard for Disinfecting Water Mains or the C652 Standard for Disinfection of Water-storage Facilities, can be purchased by contacting the American Water Work Association, or online at <http://www.awwa.org/>

coliform sampling on two consecutive days show an absence of total and fecal coliform organisms.

c. Power outage

- i. Place emergency generator on line to provide minimum water pressure to system.
- ii. Increase disinfectant residual as precaution to potential contamination.
- iii. See also water outages, above.

d. Contamination

- i. Immediately, contact CDHS or LPA in accordance with the Emergency Notification Plan. Follow the directions of CDHS or the LPA regarding steps to be taken, emergency notification of users, and public notification.
- ii. Identify location and source of contamination.
- iii. If contamination is from system source, isolate or treat source.
- iv. If contamination is an act of sabotage, take appropriate action based on nature of contamination. Immediately contact local law enforcement and your regulatory agency (CDHS or LPA). Actions should be taken in consultation with the regulatory agency and could include shutting off water until all contaminants are identified.

e. Physical destruction of facility or evidence of tampering (sabotage)

- i. Immediately contact local law enforcement and regulatory agency for consultation.
- ii. Consider the steps necessary to isolate the facilities or portions of the system that may be affected (close valves, turn off pumps, etc.).

All emergencies will be documented along with action taken, and kept in the files of the water system office. Acts of sabotage will be reported to the local law enforcement agency.

Water System Emergency/Disaster Personnel and Responsibilities

Name	Telephone No. (Work)	Role
Title	Telephone No. (Home)	
		Initial contact at office, in charge for all emergencies until replaced by Chairperson or Director
Secretary		
		In charge for all emergencies
Board Chairperson/Owner		
Board Member/Resident Manager		
Board Member		
Board Member		
Board Member		
Treasurer		
		Emergency assistance and support
Operator		

External Emergency Contact List

Agency/Department	Telephone No. (Day) Telephone No. (After Hours)
Another Water Agency	
Fire Department	
Local Law Enforcement	
County Office of Emergency Services	
FBI Office (terrorism or sabotage) (Also notify local law enforcement.)	
California Office of Emergency Services — Warning Center (24-hr. number)— <i>Note: Ask for referral to CDHS Duty Officer-Drinking Water Program</i>	(800) 852-7550 or (916) 845-8911
DHS District Office	
Local Environmental Health Agency	

Water system contact information:

Name:

Address:

City, State, Zip code:

Phone:

FAX:

Emergency Supplier Contact Numbers and Supply List

- A. List of equipment on hand for emergency repairs
1. **Example** (*Miscellaneous pipes and fittings, 2", 4", 6" & 8", approximately 100 count 20 of each.*)
 - 2.
 - 3.
- B. List of sources of needed equipment, not on hand
1. (Sources for backhoe, jackhammer, technical support. Sources under contract.)
 2. (Sources for electrical and pump repair.)
 3. (Sources for emergency generators in case of prolonged power outages.)
 - 4.
- C. List of distributors or suppliers of replacement parts for the system
1. (Sources for PVC pipe, valves, and fittings.)
 2. (Sources for pumps, pressure tank, and gauges.)
 - 3.
- D. List of emergency supplier/equipment phone numbers:

	Name	Phone (Day)	Phone (After-hours)
Electrician			
Laboratory			
Electric & Pump (repair service)			
Chemical Disinfectant Supplier			
Other Water Agency (equipment support)			

APPENDIX

[Please include the following completed forms in the Appendix]

Emergency Notification Plan (ENP)

System Map of Sources and Distribution Area

Consumer Alert During Water Outages or Periods of Low Pressure

Boil Water Order (Emergency Situation)

Unsafe Water Alert – Do Not Drink

Unsafe Water Alert – Do Not Use

Note: Copies of the above documents, including Spanish language version and one-liner translations for non-English speakers, can be obtained at: <http://www.dhs.ca.gov/ps/ddwem/Homeland/default.htm>



California Department of Health Services
DIANA M. BONTÁ, R.N., Dr. P.H.
 Director

State of California—Health and Human Services Agency
Department of Health Services



ARNOLD SCHWARZENEGGER
 Governor

WATER QUALITY EMERGENCY NOTIFICATION PLAN

Name of Utility: _____

Physical Location/Address: _____

The following persons have been designated to implement the plan upon notification by the State Department of Health Services that an imminent danger to the health of the water users exists:

Water Utility: Contact Name & Title	Email Address	Day	Telephone	
			Evening	Cell
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____

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

State & County Health Departments: Contact Name & Title		Telephone	
		Day	Evening
1.	DE Name, District Engineer California Department of Health Services	(XXX) XXX-XXXX	(XXX) XXX-XXXX
2.	Alternative CDHS Staff California Department of Health Services	(XXX) XXX-XXXX	(XXX) XXX-XXXX
3.	County Environmental Health Department Local Primacy Agency	(XXX) XXX-XXXX	(XXX) XXX-XXXX

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 California Department of Health Services – Drinking Water Program 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 vent of an emergency. Examples of notification plans are attached for large, medium and small communities.

Report prepared by:

 Signature and Title

 Date

PLAN I (Medium Community)

During regular working hours our people will contact the news media at television station KXYZ to broadcast the necessary warning. The local radio stations will also be contacted. The television and radio personnel are available at all hours. As a follow-up measure, we will also contact the Daily Bee, a local newspaper that serves both Ourtown and Hometown.

The warnings will be issued in both English and Spanish to cover all members of the community. Outlying areas of the water service area (such as Isolated Canyon and Lonesome Mountain subdivisions) will also be notified by sound truck and/or handbill distributed to their respective areas. Both of these areas are very small and this can be done quite quickly.

A special telephone answering service can also be quickly set up at the utility headquarters (using the regular company numbers) to answer questions that will come in from consumers. Questions are anticipated, especially from the Hometown area, because that area is served by three different water companies. A map will be available to the telephone answering personnel to determine the water company serving the caller.

It is anticipated that the time for notification to the television and radio audiences will be very short. The areas served by handbill and sound truck will also be notified within an hour. For notification to be issued in other than normal hours, the same media will be contacted and an announcement will be scheduled for as long as is necessary. A sound truck(s) will be used in the early morning hours to quickly alert the people not listening to their radio or television.

PLAN II (Small Community)

Our community is very small and the most efficient means of notification will be both sound truck and handbill. It is estimated that the entire service area can be covered in less than three hours.

PLAN III (Large Community)

The same plan as implemented in Plan I should be used here with the exceptions noted. All the news media will be contacted in the entire metropolitan area. This includes all television and radio stations and all local and general area newspapers. Maps have been prepared to be distributed to the media to locate the boundaries of the water company. This system is large enough that it may only be necessary to notify some of the water users. This information will be transmitted to the media and an answering service at the water company will respond to consumers' calls. Unless the problems are limited to isolated areas it is unreasonable to assume that contact can be made through sound truck or handbill.

PUBLIC NOTICE

Este informe contiene información muy importante sobre su agua potable.
Tradúzcalo o hable con alguien que lo entienda bien.

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 your water system 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 California Department of Health Services is advising public water utilities to increase chlorine residuals in areas subject to low pressure or outages.
6. The California Department of Health Services 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.

Date:

BOIL WATER ORDER

Este informe contiene información muy importante sobre su agua potable.
Tradúzcalo o hable con alguien que lo entienda bien.

BOIL YOUR WATER BEFORE USING **Hierva su Agua antes de Usarla**

Failure to follow this advisory could result in stomach or intestinal illness.
Falta de seguir este aviso podría tener resultados estómago o enfermedad intestinal

Due to the recent event [e.g., water outage, power outage, flood, fire, earthquake or other emergency situation], the California Department of Health Services in conjunction with the [County Name] County Health Department, and [Water System name] Water System are advising residents of [City, Town, System] 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 one (1) minute**, and let it cool before using, or use bottled water. Boiled or bottled water should be used for drinking and food preparation **until further notice**. *Boiling kills bacteria and other organisms in the water. [or This is the preferred method to assure that the water is safe to drink.]*

Optional alternative to include for prolonged situations where it fits.

- 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.
- **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 no bacteria and you no longer need to boil your water. We anticipate resolving the problem within [estimated time frame].

For more information call:

Water Utility contact: [Name, title, phone & address of responsible utility representative].

California Department of Health Services – Drinking Water Field Operations Branch- District Office at [(XXX) XXX-XXXX].

Local Environmental Health Jurisdiction: [XXXXX County at (XXX) XXX-XXXX].

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.

Date:

UNSAFE WATER ALERT

[Insert one-liner language for non-English speakers here, 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 California Department of Health Services, [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.*

OPTIONS

- **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].

California Department of Health Services 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 # [XXXXXXXX]. 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:

UNSAFE WATER ALERT

[Insert one-liner language for non-English speakers 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 California Department of Health Services, [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.

OPTIONS

- **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].

California Department of Health Services 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 # [XXXXXXXX]. 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.