

WHAT IS COVERED

- * Typical Emergencies
- * Resolving the Emergency
- * When do you contact your Local Primacy Agency (LPA)?
- * Resources

WATER OUTAGES

- * Any failure of the water system to reliably deliver water to its customers
- * Potential Causes:
 - * Power failure outside of system's control
 - * Equipment/facility malfunction
 - * Well goes dry
- * Fires
- * Drought
- * Earthquakes
- * Terrorism

RESOLVING THE OUTAGE

- * Call the LPA
- * Is a Boil Water Notice (BWN) necessary?
- * Restore pressure to the system
- * Increase chlorine residual (~1.0 mg/L) or activate Emergency Disinfection Plan
- * Flush the system to spread the residual
- * Verification samples to ensure water quality

AFTERMATH

- System may need to provide bottled or hauled water for Do Not Drink Tier 1 Notices, i.e. Nitrate
- * Coordinate with the LPA on lifting the BWN
- * NSF Standard 60 disinfection supplies
 - List of local vendors
 - * Larger utilities in the area with supplies

BACTERIOLOGICAL EMERGENCY

- * A routine sample has come back positive for total coliform
- * Contact your LPA proactively or when MCL is exceeded
- * Raise the chlorine residual and flush the system or EDP
- Follow your BSSP (Bacteriological Sample Siting Plan) including Ground Water Rule (GWR) source sampling requirements
 Repeat samples, correct number and location
- * Identify and fix the source of the problem (well, tank, distribution?)
- * Continually take repeats until problem is resolved
- * E. coli samples are more serious

EXAMPLE

- * Water system loses power to the system including SCADA
- * Loss of power eventually causes a water outage
- * BWN issued by DDW
- * BWN cleared after all six samples came back absent

AFTERMATH

- * Determine if the MCL has been exceeded and notify the LPA within 24 hours
- * Issue a Tier 1 (BWN) or Tier 2 notice if MCL is exceeded
- * BWN also for significant rise in bacterial count
- * RTCR (Revised Total Coliform Rule) Level 1 or Level 2 Assessment requirement
- * Don't forget to take 5 samples the following month!

EXAMPLE

- * CWS Water System has a well sample E.coli positive
- Resampling reveals more E.coli positives
- * Had to implement continuous chlorination
- * Inspection of the water system

PLANNING

- Develop a bacteriological sample siting plan with **GWR** requirements
- Include triggered source sampling

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- Include repeat sample locations
- Identify sample schedule and rotation plan
- Collect routine and repeat samples as listed in plan
- Otherwise a RTCR Level 1 assessment is triggered
- Have all samples analyzed by laboratories approved by ELAP to perform those analyses and report results as required
- Include the notification requirements to the LPA * and sample notices to the customers

SIERRA TWAIN HARTE MHP BACTERIOLOGICAL SAMPLE SITING PLAN



BACTERIOLOGICAL SAMPLE SITING PLAN System No. Monti No. Store an Harto MHP Daily Users: Water Sources: 2 Welts 20.0 PWS Classification: No. Pressure Zones: 1 No. Active Service Conne Tanks: tions: 50 eency: Monthly Analyzing Lab: Aqua Lab CHLORINATION: Yes On Tank Influent Line Day/Evening Phone No.: (200) 532-1137 cel(209) 743-0995 ne of Tra red Sampler: Aqua ling: Mor bla !-Priy if well is Vell Head San erson responsi MS: Brenda Se

Date Revised 1-27-11

Sample ID	Routine Sample Addresses	Frequency	Sample Point	Repeat Sample Addresses All sites are hose bibs
1	16145 Big Hill Rd. Searce #4	Murthly	Hone hib	16145 Big Hill Rd. Space 94
				16145 Big Hill Rd, Space 91
				16145 Big Hill Rd. Space 932
				16145 Big Hill Rd. Space 98
			-	Storage Tanks
				Well Head

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16145 Big Hill Rd. Space #4 16145 Big Hill Rd. Space #1 16145 Big Hill Rd. Space #1 16145 Big Hill Rd. Space #3

Brenda

If any of these five routine samples collected has one or more total collform. Seldon will contact the Department of Health Services for further guidance.

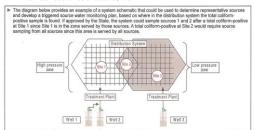
Sildo

GROUND WATER RULE (GWR) TRIGGERED MONITORING

Must monitor sources if positive coliform in the distribution system.

Source sample must be analyzed for the presence of E.coli

Source sample must be analyzed for the presence of E.Coli
 If the triggered source water sample is E.coli-positive, the system must take corrective action as directed by the LPA



AVOID MAN-MADE EMERGENCIES

- Water quality sampling required:
- * After construction or repair of wells (AWWA C654)
- * After main installation or repair (AWWA C651)
- * After construction, repair, or maintenance of storage facilities (AWWA C652)
- After any system pressure loss to less than five psi. Samples collected shall represent the water quality in the affected portions of the system.

AVOID MAN-MADE EMERGENCIES

- * Develop an Emergency Response Plan
- * Identify backup power resources
- * Develop an Emergency Disinfection Plan
- Have adequate supplies on hand for disinfection, backup pumps, hydrants, etc.
- Build redundancy into your system (multiple wells, multiple tanks, looped systems, continuous chlorination)
- * Dedicated sample taps

EMERGENCY DISINFECTION PLAN FOR SIERRA TWAIN HARTE MOBILE HOME PARK

In the event of a need for emergency disinfection at Sierra Twain Harte MHP due to a water quality emergency, the following procedure is to be implemented:

- Notification of the incident to the Certified Water Treatment Operator, Californic Department Public Health, and Owner Lee or Sheryl Moyle is to take place as soon as possible.
- The operator is to evaluate the chlorination feed system; determine the reason for the failure if possible, and take corrective action to restore the chlorination feed system.
- If no chlorine residual is detectable in the clearwell and distribution system bacteriological samples are to be taken from the clearwell and the affected distribution system area and delivered to the laboratory as soon as possible.
- If unable to restore normal disinfection equipment operations, an emergency chlorination system is to be set up (chemical feed pamp, solution tank and related equipment). The chlorine feeder is to be setup and operated in a namer that will allow for a free chlorine residual of 1.0 mg/l at the clearwell effluent line.
- 4. The clearwell is to be sampled for free chlorine residual. If the free chlorine residual is below 0.2 mg/l, sodium hypochlorite is to be added to the clearwell as follows: For very 1,009 gallons in each tank add (1/2 cup) of 1.25% sodium hypochlorite, this should increase the free chlorine residual by at least 1.0 mg/l.
- Once free chlorine residual of 0.6 mg/l or higher is attained in the clearwell flushing of system is to take place, removing the inadequately disinfected water and introducing properly disinfected water to the distribution system.

6. Notification telephone numbers are as follows

 Brenda Seldon, Water Treatment Operator
 (209) 532-1137 or 743-0995

 California Department of Public Health
 (559) 447-3300

 Lee or Sheryl Moyle
 (209) 984-4268 or 984-5700

RESOURCES

- * Local LPA or DDW Office
- * Contract Operators
- * Internet
 - * http://www.waterboards.ca.gov/drinking_water/programs/
 - * http://water.epa.gov/drink/index.cfm
- * At Environmental Protection Agency (EPA's) web site look for Quick Reference Guides which are very helpful



GRANT EMERGENCY FUNDING AVAILABLE

- * What is available to small water agencies
- What is available to small water agencies Must be CWS Up to \$10,000.00 available quickly (Limited funds available) Must get prior approval from District Office Must have an idea of the project cost

- Must have an idea of the project cost
 Can be used to pay for:

 Hauled or bottled water
 Emergency generator
 Pipeline repair

 Drought-related emergency funding available (\$500,000 per project)

QUESTIONS

