



Top Ten Reasons for Health Advisories

Every public water system must protect public health by providing safe and reliable drinking water to its customers. If you know the water is contaminated, or you don't know the water quality, you may have to issue a health advisory.

A health advisory is issued when your water system, the state Department of Health, or your local health department determines health risks are sufficient to advise customers to take action. A health advisory tells customers how to protect their health when their drinking water could be unsafe. You should not be fearful when issuing a health advisory, because it is a way to protect your customers' health when their drinking water could be unsafe.

Health advisory project

We searched for common causes in the files of 86 water systems that issued health advisories between July 1, 2009, and June 30, 2010. We looked at records of field visits, memorandums of conversation, e-mails, and other documentation. We also looked at ways to prevent future incidents that would require a health advisory.

In addition to learning common causes, we determined that when water systems responded immediately to problems, their health advisories usually lasted less than a week. We also found that Group A transient noncommunity water systems issued more health advisories than community water systems. That is interesting because there are fewer transient noncommunity water systems than community water systems.

Ten main reasons for health advisories

We summarize the top 10 reasons we found that led to health advisories on the following pages. You can use this information to help prevent situations that would call for a health advisory at your water system. Included are helpful resources you can access online at <http://www4.doh.wa.gov/dw/publications/publications.cfm>



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1. Coliform

- Acute or nonacute coliform "maximum contaminant level" water quality problems.
- One or more months of not collecting required coliform samples.
- Precautionary or off-normal events, such as not collecting repeat samples within 24 hours or abnormal operating conditions.

Resources*

Coliform Information Advisory Packet (teal folder) (331-258)
Coliform Public Health Advisory Packet (red folder) (331-260)
Coliform Sampling Procedure (331-225)
Emergency Disinfection of Small Systems (331-242)
Follow-up to an Unsatisfactory Coliform Sample (331-187)
Troubleshooting Checklist for Coliform Contamination (331-180)
Water Sampling: What we test for and why (331-262)

2. Inadequate venting

- Unscreened or inadequately screened vents or overflow pipes in storage reservoirs allow entry for insects and other contaminants.
- Missing or inadequately screened vents on wells allow entry of contaminants.

Resources*

Sanitary Protection of Reservoirs - Vents (331-250) - Available in Spanish (331-250s)
Simple Fixes for Wellhead Openings (331-232) - Available in Spanish (331-232s)

3. Low pressure or low water

- Source or reservoir cannot produce enough water to maintain adequate line pressure.
- Broken lines.
- Equipment failure.
- Lack of proper procedures, such as improper flushing or planned replacement of infrastructure.

Resources*

Responding to Pressure-Loss Events (331-338)
Emergency Disinfection of Small Systems (331-242)



4. Well sources

- Casing is located in an undrained pit or vault.
- Water is pooling or flooding around the casing because the top of casing is at ground level or the surrounding area is not properly sloped away from casing.
- Openings in the well cap allow insects and other contaminants to enter the well, such as inadequately sealed electrical wires.
- Well is sealed improperly (well seal is missing or damaged).

- **Resources***

- *Sanitary Protection of Reservoirs - Vents (331-250) - Available in Spanish (331-250s)*
- *Wellhead Protection Requirements (331-106)*
- *Wellhead Protection Program Guidance Document (331-018)*
- *Inventory of Potential Contamination Sources in Washington's Wellhead Protection Areas (331-076)*
- *Nitrate in Drinking Water (331-214) - Available in Spanish (331-214s)*
- *Simple Fixes for Wellhead Openings (331-232) - Available in Spanish (331-232s)*
- Department of Ecology; *chapter 173-160 WA C - Minimum Standards for Construction and Maintenance of Water Wells* (This resource is on Ecology's website at: <http://www.ecy.wa.gov/laws-rules/activity/wac173160.html>)

5. Check valves and cross connections

- Check valve is not functioning properly and water is draining back into well.
- Suspected cross connection.

Resources*

- *Cross-Connection Control for Small Water Systems (331-234)*
- *Cross connections can create health hazards*

6. Leaks

- Loss of water through cracks or failing couplings.
- Potential for allowing outside water into system like cross connection.

Resources*

- *Reduce Leaks: Using water audits and leak detection surveys (331-388)*



7. Certified operator problems

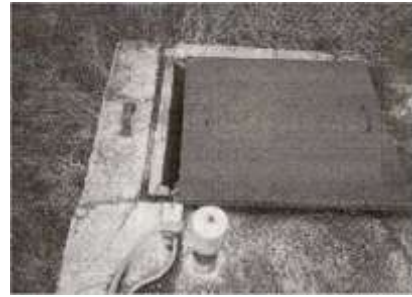
- Frequent change of operator.
- Lack of certified operator, if required.
- Operator does not adequately maintain system.
- Lack of adequate plans and operation and maintenance programs.
- Untimely response to complaints.

Resources*

- *Drinking Water Operating Permits: Chapter 246-294 WAC (331-011)*
- *Planning requirements for public water systems (331-202)*
- *Small Water System Management Program Guide (331-134)*
- *Water System Planning Handbook (331-068)*

8. Reservoir access hatches or vents

- Improperly sealed access hatch that allows water, insects or small animals to enter the reservoir.
- Missing or broken vents that allow insects and small animals to enter the reservoir.



Resources* *Sanitary Protection of Reservoirs - Hatches* (331-249) - Available in Spanish (331-249s)

Sanitary Protection of Reservoirs - Vents (331-250) - Available in Spanish (331-250s) *Pest Control* (331-363)

9. Well caps

Open spaces left in well cap for lines, controls, or probes allow insects and animals to fall into the well.

Resources

See the manufacturer's specifications.

Department of Ecology; *chapter 173-160 WA C - Minimum Standards for Construction and Maintenance of Water Wells* (This resource is on Ecology's website at:

<http://www.ecy.wa.gov/laws-rules/activity/wac173160.html>)

10. Well seals

The annular space around the well casing and ground is open allowing contamination to run down the outside of the well casing to groundwater below.

Resources

Department of Ecology; *chapter 173-160 WAC - Minimum Standards for Construction and Maintenance of Water Wells* (This resource is on Ecology's website at:

<http://www.ecy.wa.gov/laws-rules/activity/wac173160.html>)

What you can do

- If you find a problem, fix it as soon as possible.
- Follow your operations and maintenance plan.
- Mark your calendar with all your sampling dates.
- Review your sanitary survey to help prioritize your corrections.
- Review your system with "another set of eyes."
- It's okay to ask for help.

For more information

*These and other publications are online at

<https://fortress.wa.gov/doh/eh/dw/publications/publications.cfm>

If you need help, call our nearest regional office:

Eastern Region: Spokane Valley (509) 329-2100

Northwest Region: Kent (253) 395-6750

Southwest Region: Tumwater (360) 236-3030

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