



Washington's newsletter for waterworks operators.

Sanitary surveys, it's your turn



We took steps in the 1990s to ensure that all public water systems get routine sanitary surveys. Now, after several rounds of routine sanitary surveys, we all have a better understanding of best management practices for water system operation and maintenance, system management, and financial viability. We still find some obvious significant deficiencies, but less frequently in subsequent visits. Through sanitary surveys and technical assistance we have worked together to improve the safety and reliability of drinking water statewide.

Now, it's time for operators to apply lessons learned from the survey process by doing self-surveys. You can use the last sanitary survey report as a guide to perform self-surveys and stay ahead of the curve. Fix any deficiencies you find now, before they become a problem.

Scheduling self-surveys throughout the year, as part of your routine operation and maintenance, will mean fewer deficiencies found during sanitary surveys. You should keep written logs of your self-inspections, any maintenance performed, and photographic records of reservoir roof openings.

By doing these routine self-inspections, you will be doing your part to improve the safety and reliability of your public water system. You'll also be preparing for your next successful sanitary survey.

Revised Total Coliform Rule will require Self-Assessments

The Revised Total Coliform Rule (RTCR) will require water systems to inspect or assess their water systems when they have coliform problems. RTCR goes into effect April 1, 2016. It will increase public health protection by requiring water systems to find and fix defects that could provide a pathway for microbial contaminants to enter the distribution system.



Common Deficiencies

Sources

- Openings in the wellhead
- Potential contaminants in the Sanitary Control Area
- Emergency sources connected
- No raw water sample tap
- No security protection

Reservoirs

- Hatch cover not sealed properly
- Improper vent construction
- Vent screen missing or openings too big
- Overflow screen missing or damaged
- No security protection

Treatment

- Chemicals not NSF or ANSI 60/61 approved
- Not working properly
- Cross connection at chemical solution tank
- No post-treatment sample tap

Pumps

- Unscreened discharge on pump control valve
- Over cycling of pumps

Management

- No Coliform Monitoring Plan
- No Emergency Response Plan
- No O&M Procedures
- No Cross-Connection Control Program
- Not implementing plans

Focus: Water storage tanks

Improperly sealed storage tanks are common deficiencies found during sanitary surveys. These deficiencies are a significant cause of microbial contamination in public water supplies that can lead to health advisories. Operators need to inspect the tops of storage tanks at least annually.

Sanitary surveyors aren't allowed to climb many types of storage tanks during site visits. That's why we require photos demonstrating proper seal on all tank roof openings. The photos must be less than a year old.

Photos of the hatch must show a gasket or seal, a lock, and an overlapping cover. Photos of the vent must show how it's constructed and screened. Photos of other tank openings must show that they are properly sealed.

Another common problem with storage tanks is stagnant water due to low turnover. This can lead to unsatisfactory coliform samples. You can address this by modifying the inlet-outlet configuration or changing operation procedures to improve water turnover and mixing.

Keep your Operations and Maintenance Manual up to date. We recommend that you document your maintenance activities for your own records. Don't forget to include photos.

With regular operational and preventive maintenance activities, you will extend the life expectancy of the storage tank, save money, and protect public health.



Amanda Worzella, an operator at Cross Valley Water District, gears up for an annual inspection of the standpipe.

Resources

You can find these publications on our website <https://fortress.wa.gov/doh/eh/dw/publications>

- Emergency drinking water sources (331-317)
- Preventive maintenance program: Guide for small public water systems using groundwater (331-351)
- Sanitary Control Area Protection (331-453)
- Sanitary Protection of Reservoirs – Hatches (331-249)
- Sanitary Protection of Reservoirs – Vents (331-250)
- Simple fixes for Wellhead Openings (331-232)
- Small Water System Management Program (331-134)
- Troubleshooting Bladder Pressure Tanks (331-342)

You can get help from a circuit rider at Evergreen Rural Water of Washington.

Old storage tank vents

Some old reservoir vents don't provide adequate sanitary protection to prevent the entry of birds, animals, insects, excessive dust, and other potential sources of contamination. If your vent looks like these, replace them as soon as possible. You can retrofit with more durable, more secure modern vents that provide better sanitary protection.

 = Significant Deficiencies



Common but not a good design.



45-Day Corrective Action Plan



A Significant Deficiency is:

Something that is allowing, or could allow, contamination into the water delivered to consumers. Deficiencies include, but aren't limited to:

- Defects in design, operation, or maintenance.
- A failure or malfunction of the sources, treatment, storage, or distribution system.

If not addressed, a significant deficiency creates a significant public health risk.

A Significant Finding is:

- Lack of access or information that interferes with the surveyor's ability to assess whether a significant deficiency, defect, or problem actually exists.
- A defect or problem which, if not addressed, creates a significant risk to the physical safety, security, or reliability of the public drinking water supply.

After the sanitary survey, the surveyor will write a letter to the primary contact and the water system owner. The letter will summarize any deficiencies, due dates for fixing them, and recommendations for improvement.

There are two ways to address significant deficiencies or significant findings:

-  Correct the deficiency and submit documentation by the due date.
-  Submit a Corrective Action Plan. You must submit the plan by the due date assigned and include a timeline for correcting the deficiency.

Depending on the type of deficiency, you may need to submit photos or receipts that show you completed the work needed to fix the problem. Make sure the email, letter, photo or other documentation submitted includes your water system's name and ID number.

It is important to follow the instructions in your letter to know what you need to submit, whom you need to send it to, and where you need to send it. If you have any questions, call our regional office.

Eastern Region:	Danielle Russell, 509-329-2136 danielle.russell@doh.wa.gov
Northwest Region:	Brian Boye, 253-395-6778 brian.boy@doh.wa.gov
Southwest Region:	Denise Miles, 360-236-3028 denise.miles@doh.wa.gov

How to submit documentation

It is important to submit clear documentation of corrected deficiencies. It allows us to verify that problems were fixed and facilitates the systems to return to compliance. Make sure your photos provide a clear view of the correction. You may need to take multiple pictures from different angles.

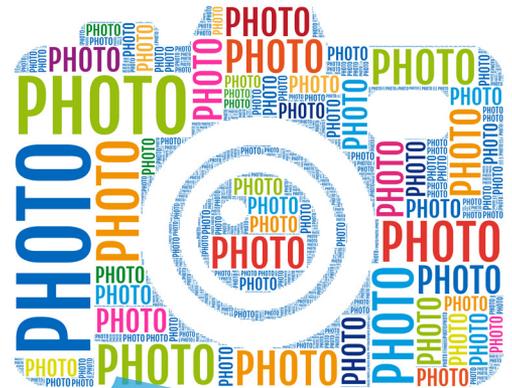
You must label your photographs

It is important to include your water system name and ID number. It is equally important to identify the particular deficiency you addressed. For example, if the surveyor identified deficiencies at more than one well, and you send us photos of two wells without describing each one, there may be delays as we try to determine exactly what you corrected.

If you send electronic documentation of correction, include your water system

name and ID number in the subject line of the email. In the body of the email:

- Describe how you fixed the deficiency or include your Corrective Action Plan with timeline.
- Describe other documentation, such as receipts.
- Include a list of photos with a description of each photo. You can also describe the deficiency in the file name. For example:
 - ID#12345_Well #1 vent screen installed.jpg
 - Attached photo: IMG_0123-Well #1 vent screen installed
 - IMG_0124-Well #2 vent screen installed



Take advantage of these last days of warm weather to take the next sanitary survey. You will need to photograph parts of the water system inaccessible to the surveyor, such as the top of the reservoir and confined spaces.

How to prepare for your next sanitary survey

- **Inventory structures and material located within 100 feet of your wells and 200 feet of your springs.** Identify all microbial and chemical contaminant threats, and be prepared to discuss your plan to eliminate or mitigate them during the survey. For guidance, see “Resources” on page 2.
- **Inspect your well, spring, and storage tank facilities.** Verify the integrity of seals or screens over any possible pathway for contaminants to enter the well casing, spring box, or tank interior. For guidance, see “Resources” on page 2.
- **Physically disconnect any treatment process or source not listed on your water facilities inventory.** We will let you know when you may reconnect it.
- **Photograph the condition of any part of your water system we may not be able to access, and make the pictures available during the survey.** For example, photograph the finished water tank roof. Pictures should verify that all seals and screens on the roof vents, access hatches (open and closed), overflows, and access points where the level gauge wire enters each tank are in excellent condition.

Make sure your water system has:

- Reasonable security measures to protect your well house, pump station, and storage tank from unauthorized access and vandalism.
- An air gap and screen on your finished water tank overflow pipe outlet.
- A raw source water sample tap is on each source of supply.

Check the pump and well house to ensure:

- No openings could allow animals or insects to enter.
- Pumps and pump controls operate and are adequate to prevent chronic water outages or premature pump failure.
- A raw source water sample tap on each source of supply.

For treatment, ensure:

- Any chemical added to drinking water is NSF-approved for potable water.
- There is an air gap or USC-approved reduced pressure backflow assembly (RPBA) on any hard-piped water supply into the chemical solution tank.

For RV sewage dump stations, make sure:

- There is an approved RPBA on the water supply to the dump station.
- A state-certified backflow assembly tester tested it within the past year.



Sanitary surveys help us understand how water systems deliver water to customers. Here Nancy Feagin, surface water program engineering specialist, and Mike Williams, lead operator, test Sultan Water's combined filter effluent turbidity.

High 5 Award



A big High 5 to Washington Water for innovation and creativity! From left, are Bill Maibauer, Lomi Asaua, Denny Brooks, Aaron Short, Paul Robischon, Carol Schlender, Andrea Holmes, Matt Brown, Kevin O'Neil, and Carol Bair.

Kudos to Washington Water Service Company for the innovative and creative ways they provide utility services to nearly 300 Washington water systems. We call special attention to their website, where they offer detailed information and resources for their utilities and the people their utilities serve.

From hot topics to basic information customers may want about their bills and their payment options, to water conservation, rates and the list of contaminants that we require all Group A systems to monitor, the website provides resources and answers to frequently asked questions.

“We’ve learned the importance of keeping our customers informed,” said Paul Robischon, southwest operations manager at Washington Water. “Even if it’s bad news we have to share, our customers will work with us as long as they know what’s going on.”

One thing that caught our attention was a video depicting how Washington Water uses a shop vacuum to pressure-test concrete reservoirs. Now, that’s innovation!

“Concrete storage tanks and bad coliform samples are not uncommon, but finding the leaks and potential points of entry can be tricky,” wrote one

of our sanitary surveyors. “Washington Water developed a pressure test using a low-cost innovative technique.” The video also clearly explains how to identify leaks to fix them.

On the website, Washington Water says, “Our customers rely on us to provide a reliable supply of high-quality water, timely emergency services, personal response to their calls, convenient payment options, and an information-packed website.”

We salute Washington Water for providing quality information and their focus on innovation.

Records you’ll need during your sanitary survey

A sanitary survey is a comprehensive inspection of your water system and its operation. During the survey you must provide the following records:

- 💧 Backflow assembly test reports (you must test all backflow assemblies annually)
- 💧 Water system layout schematic and service area map
- 💧 Source meter readings
- 💧 Monthly chlorination and nitrate reports (if applicable)
- 💧 Small Water System Management Program (SWSMP) Plan
- 💧 Cross-Connection Control Program (if no SWSMP)
- 💧 Emergency Response Plan (if no SWSMP)
- 💧 Operations & Maintenance Program (if no SWSMP)
- 💧 Coliform Monitoring Plan (if no SWSMP)
- 💧 Complaint records and your system’s process for responding to customer complaints
- 💧 Consumer Confidence Report (Group A community systems only)

For more information on required records and retention schedule, please review WAC 246-290-480 (<http://www.doh.wa.gov/Portals/1/Documents/Pubs/331-010.pdf>).

PO Box 47822
Olympia, WA 98504-7822

H2Ops will *always* be available at
<http://www.doh.wa.gov/H2Ops>

DOH 331-500

For people with disabilities, this document is available on request in other formats. To submit a request, please call 1-800-525-0127 (TDD/TTY call 711).

When is your next sanitary survey?

Community water systems Every 3 years.

Community water systems that use a surface water or groundwater under the influence of surface water source. Every 3 years.

Noncommunity water systems Every 5 years.

Community water systems that meet all outstanding performance criteria: Every 5 years.

- No total coliform MCL violations since the last sanitary survey.
- No more than one total coliform monitoring violation since the last sanitary survey.
- No unresolved significant deficiencies from the current sanitary survey.

We require all Group A public drinking water systems to have a sanitary survey every three to five years. If you would like to know when your next sanitary survey is due, contact our regional office.

ANSI/NSF Standard 60

Any treatment chemicals added to drinking water must comply with ANSI/NSF Standard 60, except for over-the-counter bleach, such as unscented Clorox and Purex. To ensure your drinking water treatment chemical meets NSF Standard 60, look it up at <http://info.nsf.org/certified/pwschemicals/>

Don't harm your customers!

Use only approved start-up procedures for emergency sources

Start-up procedures for emergency sources should be in your emergency response plan. If you don't have clearly identified start-up procedures reviewed by us, contact our regional office before operating your emergency source. You should review emergency source start-up procedures with your operations staff routinely and make sure that you have discussed them with us. For guidance, see "Resources" on page 2.