

the Pipeline

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Oregon Drinking Water News

Salem cyanotoxin crisis: Lessons learned

by David Emme

The Salem cyanotoxin incident was an unprecedented event that presented unique challenges. Cyanotoxins are unregulated contaminants with no primary drinking water standard. The EPA had set nonregulatory health advisory levels for two of the cyanotoxins in 2015. The EPA health advisories provide guidance and are based on concentrations for vulnerable and adult populations and a 10-day duration of exposure such that no adverse health effects are expected for exposures below these thresholds. Applying the EPA health advisory guidance and communicating it to the public proved challenging. Public notification was initially delayed while city staff, in consultation with the Drinking Water

Continued on page 2

Drinking Water Program fee update

by David Emme

The Drinking Water program has lost 35% of its staff over the last several years due to rising costs and flat revenue sources. This erosion of the program is clearly unsustainable, so we're proposing program fee restructuring. The goal is to generate enough new revenue to restore 6 positions and adequately fund our partners at local public health agencies and the Department of Agriculture. Specifically, we will propose in the 2019 Legislative session to revise our statutory authority for fees by eliminating the sanitary survey fee and replacing it with authority for an annual regulatory fee. A schedule of fees would then be adopted in regulation, replacing the current sanitary survey fee.

Continued on page 3

This is the last printed Pipeline!

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What's in the Pipeline

Salem cyanotoxin crisis: Lessons learned	1	Low-cost funding for eligible drinking water system improvements.....	6
Drinking Water Program fee update.....	1	Congratulations to our outstanding performers!.....	7
This is the last printed Pipeline!	1	Meeting calendar.....	8
The Eastern Oregon field office has moved.....	2	Training calendar	8
A reminder: Setbacks to contaminants for wells	4		
Plan review required for major additions or modifications	5		

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Program, worked through operational changes well within the 10-day window, as the EPA guidance advises. This delayed notification spurred public outrage.

Once the “do not drink” advisory was issued, there was a degree of public panic. Although the “do not drink” advisory was limited to the vulnerable population and issued solely as a precaution — since it was within the 10-day duration — many thought the water was unsafe and wouldn’t drink it. Bottled water quickly disappeared from the shelves. Eventually, bulk water distribution sites were set up around the city. The problem then became identifying and serving vulnerable people who couldn’t get to the distribution sites. The City of Salem and Marion County Emergency Management responded to all requests for home delivery of water and ultimately worked with social service agencies and nonprofits to identify people in need of service. Establishing these contacts and sharing information quickly was a challenge for local responders.

Health care facilities faced a range of tough questions. Which patients were vulnerable? Could tap water be safely used for cleaning instruments, patient care, washing, laundry, etc.? OHA provided guidance during the crisis and facilities then made their own choices. Most facilities chose to treat all patients as vulnerable and provided bottled water. Businesses also faced tough choices. Again, OHA suggested retail food and beverage businesses post a notice to consumers about the advisory so customers could make their own informed choices. Some businesses chose to close. Starbucks chose to discontinue preparing coffee drinks and only served ready to eat items. Food processors were advised by OHA guidance to suspend operation if water was a principal ingredient in their product. The societal impacts of the crisis were significant.

So, what can we learn from this extraordinary event? I think the key lesson is the critical importance of timely notification in upholding public trust. In the Drinking Water Program, we tend to think of public notification only when we’re advising the public to do something like boil or not drink the water. But we’ve also learned the value of simply telling the public what you know about a problem and what you’re doing about it, even if you’re not advising any action. That level of communication is critical to building trust.

Another important lesson is the importance of emergency preparedness at every level. Our capacity for emergency planning in the Drinking Water Program has been severely eroded due to reduced staffing. It’s clear we need to devote staff and resources to this work and to build a stronger network with state and local emergency management personnel. Most public water systems have emergency response plans, but the Salem incident also highlights the need to not just dust off those plans, but to refresh and exercise them, and to network with other systems.

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The Eastern Oregon field office has moved

Their new address is 750 SE Emigrant Ave, Suite 150, Pendleton Oregon 97801. Their phone number and fax numbers remain the same.

- Phone: 541-276-8006
- Fax: 541-276-4778

I've reviewed our proposal with various stakeholders and the Drinking Water Advisory Committee. Here are a few of the common questions we received and my responses:

Why not pursue more general fund revenue instead of raising fees?

Stakeholders support the needs of the program, but most have a strong preference for seeking more funds from the state general fund rather than restructuring fees. I would argue that it was our dependence on federal funds and the state general fund that got us into trouble during the great recession. The general fund is subject to economic ups and downs in a way that fees are not. A bigger proportion of fee revenue would help stabilize our revenue portfolio. As the main recipients of drinking water regulatory services, it seems reasonable that public water systems and their customers should bear a fair share of the costs. To be clear, our intention is to achieve a balance of fees, general fund and federal funds. We are not seeking to replace existing general fund revenue with fees.

What service will I receive in exchange for higher fees?

I would urge anyone who has this question to access Data Online [yourwater.oregon.gov] on our website, search for your system and review the full scope of information that is publicly available about your system. Then recognize that someone on our staff has touched each of those pieces of data. Most of the data are lab analyses. The Drinking Water program processes over 180,000 lab analyses per year, but revenue has not kept pace with the cost of this and other work. The proposed fees are an effort to fund base program needs. However, with additional staff we also hope to improve service by eliminating data entry and compliance backlogs, improving capacity for technical reviews, and assisting and adequately regulating small systems.

Why should large water systems subsidize small systems?

The short answer is they're not. Under the fee schedule we're proposing, water systems serving more than 10,000 people would be paying 48% of the total fee revenue while systems serving less than 10,000 people would pay 52%. This is more equitable than the existing survey fee where larger systems serving more than 10,000 people pay only 17% of total fees and small systems pay 83%. The proposed fee schedule is designed to recover the cost of sanitary surveys and some of the cost of processing lab data. Excluding Portland, there is a linear relationship between water system size and the number of samples required each year. While the smallest systems are only required to submit quarterly coliform and an annual nitrate result, larger systems like Tualatin Valley Water District or Eugene (EWEB) submit over 2,000 sample results a year. More frequent sampling also yields more contaminant detections that require a response. In 2017, the frequency of contaminant alerts at community water systems was 66%, compared with non-transient non-community systems at 40%, transient systems at 31% and state regulated systems at 26%.

Ensuring the safety of our drinking water requires a partnership between public water system owners/operators and state and local regulators. We are making every effort to be good partners and to be reasonable and fair with proposed fees. We look forward to continued dialogue.

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A reminder: Setbacks to contaminants for wells

by Carrie Gentry

State or county technical staff inspect ground water wells during periodic water system surveys. One possible significant deficiency for wells is not meeting setbacks from hazards. The list of setback requirements is extensive and can be found in OAR 333-061-0050(2)(a)(E). All potential hazards must be 100 feet from a well except gravity sewers, which may be no closer than 50 feet. The setback rules exist to keep anything that may pose a risk to the aquifer and drinking water source away from wells.

Plan review is required prior to drilling a new well. Setbacks to existing hazards are reviewed during the plan review process and a 100-foot radius of control is required. Even if a well was originally approved during plan review, setback deficiencies are found each year during surveys. Avoiding this deficiency is easy enough –periodically check that you are maintaining the 100-foot setback by not allowing any potential contaminant sources within 100 feet.

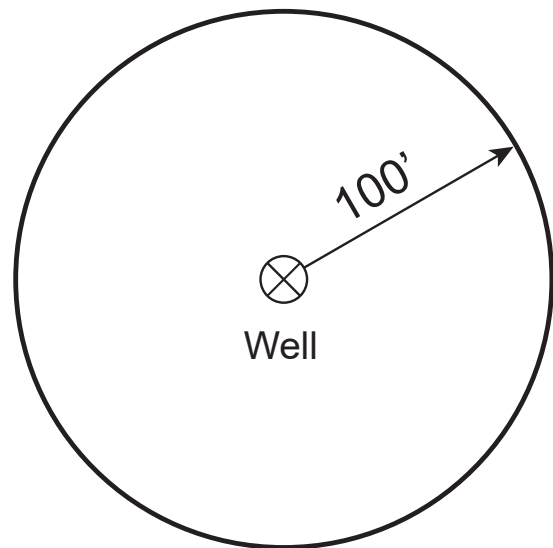
Common setback deficiencies found during surveys include:

- Animal yards
- Chemical storage, use or application
- Fuel storage
- Vehicle or machinery maintenance or long-term storage.

To resolve these issues, fence out animals such as cows and horses, don't store chemicals in the well house, don't apply pesticides in the surrounding area and don't create a parking lot or otherwise store vehicles within 100 feet of the well. Some changes may take time, so start now to resolve these by the next survey.

Above ground fuel storage tanks that provide for emergency water pumping equipment may be exempt if there is secondary containment that holds at least 110 percent of the fuel tank's capacity. Check your emergency generators to make sure they meet this requirement.

Your state or county technical staff contact can answer questions regarding setbacks for your water system.



Maintain 100' setback from hazards

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Plan review required for major additions or modifications

by Carrie Gentry

Plan review approval through Drinking Water Services (DWS) is required before construction begins on major additions or major modifications of water systems.

Major additions may include, but are not limited to, new wells, reservoirs, water lines, pump stations and chemical treatment. Major modifications may include expanding existing pump station capacity or expanding (or changing) existing chemical treatment processes.

Expanding water main lines or adding additional water lines to an existing distribution system is considered a major modification. Water line replacement within the same trench with the same size pipe is not considered a major modification. Remember that if your water system has a current approved master plan and an engineer on staff (or under contract), your system may be able to apply for plan review exemption for water main extensions. See DWS' plan review section on our website for details.

Deepening an existing well may or may not be considered a major modification that requires plan review — generally, if the casing seal will be replaced or the well will tap into a different aquifer, plan review is required. In these cases, it's best to reach out to a DWS engineer for confirmation that the project requires plan review. Replacement of an existing well with a new well is considered a major modification.

Replacing a pump within a pump station is considered routine maintenance; expanding the pumping capacity of the pump station may be considered a major modification. Completely replacing an existing pump

station is considered a major modification that requires plan review. Installation of a new pump station is considered a major addition.

Adding a new chemical treatment process is considered a major addition. Altering an existing chemical process, such as changing from liquid chlorine to chlorine gas, is a major modification and requires plan review.

When in doubt, call your DWS engineer or one of the plan review coordinators and ask.

Carrie Gentry is a regional engineer and plan review coordinator in the Technical Services Unit of Drinking Water Services / 971-673-0191 or Carrie.L.Gentry@state.or.us

Low-cost funding for eligible drinking water system improvements

by Adam DeSempole

The Drinking Water State Revolving Fund (DWSRF) provides low-cost loans to community and nonprofit, non-community public water systems for planning, design and construction of drinking water infrastructure improvements. In Oregon, the DWSRF is often called the Safe Drinking Water Revolving Loan Fund (SDWRLF).

Help with funding

In addition to low-cost financing and favorable repayment terms, all projects receive part of the loan as principal forgiveness.

Projects we can fund

- Water sources, treatment, finished water reservoirs, pumping and transmission/distribution mains;
- Aquifer, Storage and Recovery (ASR) projects;
- Instrumentation, telemetry, water meter, AMR/AMI, backflow device and pressure reducing valve projects;
- Safety, seismic and security improvements;
- Projects that increase redundancy and reliability of critical assets;
- Water system restructuring and/or consolidation to resolve noncompliance or technical, managerial and financial problems;
- Planning and design in support of an eligible project, such as feasibility studies, master plans, design and environmental documents.

We also fund service line replacements

Funding assistance is available for complete service line replacements, regardless of pipe material or ownership of the property where the service line is located. Funding assistance can be used for service line replacement from the public water main to the point it connects with premise plumbing.

Grant and loan funds are also available for:

- Sustainable Infrastructure Planning Projects (SIPP).
 - Includes seismic risk assessment and mitigation plan requirements for eligible public water systems, via OAR 333-061-0060(5)(a)(J).
- Drinking Water Source Protection (DWSP) efforts.

Public notice reminder

You can find all public notices for comments on our DWSRF web page at <http://healthoregon.org/srf>.

- Quarterly (October, January, April, and July) notices: For infrastructure and planning (SIPP) projects.
- Annual (June or July) notice: For DWSP projects and the Intended Use Plan.

For more detailed information:

Visit the DWSRF web page at <http://healthoregon.org/srf>

Or contact:

- Adam DeSempole, Drinking Water State Revolving Fund Program coordinator, at 971-673-0422 or by email at adesempole@state.or.us; or
- Jon Unger, Business Oregon's Safe Drinking Water Program and Policy coordinator, at 503-507-7107 or by email at jon.unger@oregon.gov.

Congratulations to our outstanding performers!

Jobs well done by the operators of these systems:

Water system name	County served
62nd Court Mutual Water Company	Marion
Amigo Villa Water Service Inc	Linn
Applegate Mobile Park	Jackson
Arrowood Community Water Company	Deschutes
Avion WC — South Redmond Heights	Deschutes
Bandon, City of	Coos
Cascadia Mobile Park	Linn
Chaparral Mobile Ranch	Marion
Circle Tree Mobile Park/Ranch	Josephine
Collier Lane HOA	Klamath
Cottage Grove, City of	Lane
Country Squire Estates	Umatilla
Country View Mobile Home Estates	Jackson
Cove Orchard Water Association	Yamhill
Diamond Ridge Subdivision	Lane
Dufur, South Basin	Wasco
Falcon Heights	Klamath
Grandview Mobile Home Park	Lane
Harrisburg, City of	Linn
Harwoods Mobile Manor	Lane
Hidden Valley Mobile Estates Improvement District	Deschutes
High Prairie Villa Water System	Lane
Hiland Water Corporation — Penticton	Marion
Hilltop Improvement District	Lane
Hoodview Mobile Estates	Marion
La Pine, City of	Deschutes
Lakeside Water District	Coos
Latimer Road Water Association	Tillamook

Lawrence Subdivision Water Association	Linn
Leisure Pines Mobile Ranch	Jackson
Ochoco Valley Home Improvement District	Crook
Oregon Water Utilities — Mountain Lakes	Klamath
Parrett Mountain View Estates	Washington
Pioneer Village Water Company	Benton
Riverbend-Riverbank Community	Clackamas
Sand-N-Wood Mobile Villa	Coos
South Yamhill Water District	Yamhill
Southwood Park Water District	Clackamas
Sunny Slope Mobile Ranch	Jackson
Tooley Water District	Wasco
Umpqua Basin Water Association	Douglas
Wasco, City of	Sherman
West Hills Water Company	Tillamook
Willow Dale Water District	Clatsop
Yamhill, City of	Yamhill

These public water systems have most recently met the criteria for outstanding performance (Dec. 27, 2017 – Sept. 6, 2018) though some survey results from that period may still be in the data entry process. Outstanding performers are systems with no significant deficiencies identified, as well as no unresolved violations. All systems are evaluated during their routine Water System Survey and those that meet the outstanding performer criteria have their survey frequency (and fee) reduced from every three years to every five years. To find out how to qualify, visit <https://www.oregon.gov/oha/ph/healthyenvironments/drinkingwater/operations/documents/ospcriteria.pdf>



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The following websites provide links to upcoming meetings and trainings related to drinking water.

Meeting calendar

Drinking Water Advisory Committee

▶ <http://public.health.oregon.gov/HealthyEnvironments/DrinkingWater/Pages/members.aspx>

Cross Connection Advisory Board

▶ <http://public.health.oregon.gov/HealthyEnvironments/DrinkingWater/CrossConnection/Pages/advisoryboard.aspx>

Training calendar

▶ <http://public.health.oregon.gov/HealthyEnvironments/DrinkingWater/OperatorCertification/Pages/training.aspx>