

Pipeline

Recap of the 2009 Legislature

by Dave Leland

The 2009 Legislature adjourned on June 29, concluding a very active session on the state budget and public health initiatives, including drinking water.

The state budget occupied center stage, as successive revenue forecasts showed a declining General Fund and a record-breaking projected shortfall of \$4.2 billion. State agencies were asked to identify program reduction options of up to 30 percent. In the end, the 2009-11 budget was balanced by reducing programs, increasing taxes and tapping the rainy day fund. The Legislature is

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Best management practices for service outages

In an effort to better identify and agree on best management practices to protect public health during water service outages or interruptions, the Drinking Water Advisory Committee (DWAC) formed a subcommittee in 2008. The committee's charge was to prepare guidelines describing best practices to consider, and to reach out to water suppliers and encourage them to incorporate best practices into their regular operations. Members of the subcommittee include Todd Heidgerken (large water systems); Mike Kurtz (Special Districts Assoc. of Oregon); Steve Weaver (League of Oregon Cities); Ed Butts (Oregon Assoc. of Water Utilities); Bob Fuller (American Council of Engineering Companies); Brian Stahl (Pacific NW Section, American Water Works Assoc.); and Dave Leland (DHS Drinking Water Program).

The subcommittee identified three categories of service outages that would benefit from the development of best practices guidelines:

- Cutting Into or Repairing Existing Water Mains
- Service Outages due to Reduced Pressure Events
- Disinfection or Filtration Treatment Interruption

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scheduled to meet in special session in February 2010 to rebalance the budget as needed.

The 2009 Legislature considered and acted on a broad range of public health issues. The Public Health Division (PHD) tracked 633 bills and testified on 85, representing the highest level of activity and success in years. The Governor introduced eight bills on behalf of the Division, seven passed. In addition, legislators introduced five bills on behalf of the Division, and four passed. Most notable for drinking water was SB 739, which added arsenic testing of individual domestic wells to the current testing for bacteria and nitrate, required upon the sale of a property. The bill also requires that the seller notify the buyer of test results in 90 days, and authorizes the Division to require testing for additional contaminants in areas of public health concern. We will be working with our Drinking Water Advisory Committee in the summer and fall to develop and adopt rules to implement this bill. Several bills passed on billing of tenants for water and utility services (HB 2613 and SB 929), and we will need to clarify our drinking water rules as they relate to submetering of individual dwellings within manufactured housing developments.

On the budget front, the Public Health Division General Fund budget was reduced about \$5 million from what was needed to continue all services. Note that the state General Fund makes up a comparatively small part, about 10 percent, of the PHD budget. Most of the PHD budget is supported by Federal Funds. Relatively few public health programs are supported by the General Fund, so any reductions in the General Fund affect those programs. The Drinking Water Program General Fund budget was reduced by \$500,000, as originally proposed in the Governor's Recommended Budget back in December, and we will have to scale back our new efforts to oversee the very small public water systems subject to state law (4-14 connections, 10-24 people). The other Drinking Water Program capacity increases achieved in the 2007 Legislature remain intact, and we will be able to continue those expanded efforts. We have submitted primacy applications



Gail Shibley, administrator of the Office of Environmental Public Health, recognizes two Drinking Water Advisory Committee members who testified in the 2009 Legislature in support of public health and safe drinking water: Beth Myers of Waterlab, and Brian Stahl of the City of Gresham.

to the U.S. Environmental Protection Agency for the remaining federal rules, and we expect to receive primary enforcement responsibility from U.S. EPA in early fall. We are on track conducting on-site water system surveys and expanding our statewide work to bring water systems into compliance with standards.

Continued on next page

Last, and certainly not least, the 2009 Legislature created a new department-level agency called the Oregon Health Authority (HB 2009). The Authority will be responsible for overseeing and coordinating all state health care services and implementing health care reform. The Authority will be overseen by a nine-member board appointed by the Governor and confirmed by the Senate. Ultimately, three divisions of the Department of Human Services (DHS) will fall under the Oregon Health Authority – Public Health, Medical Assistance Programs, and Addictions and Mental Health. These will be joined by the Office of Private Health Partnerships, the high-risk insurance pool, and the Public Employees Benefit Board. During the next two years, Bruce Goldberg, M.D., will head the transition to the new agency while continuing as DHS director.

We will keep you informed as the transition to our new organizational home moves forward in the months ahead!

*Dave Leland is manager of the Drinking Water Program
971-673-0415 or david.e.leland@state.or.us*



Third Annual ORWARN Conference will take place October 14-16

by Mike Gotterba, Salem Public Works

Mark your calendars and plan to attend the third annual ORWARN Conference Oct. 14-16 in Pendleton at the Pendleton Convention Center. In just a little more than two years, ORWARN (the Oregon Water/Wastewater Agency Response Network) has grown to 77 members statewide. ORWARN is a free resource dedicated to help members better prepare for emergencies and make it easier to ask for and receive mutual aid when an unplanned event exceeds a member's normal capability. The ORWARN agreement is available statewide to all water, wastewater and stormwater management providers, public and private. There is no cost to join or obligation to respond. The program is designed to function with or without any disaster declaration.

Member utilities, prospective members and other interested parties are invited to attend a variety of presentations by local, state and nationally known presenters. The conference will also include training and exercises intended to better prepare for emergencies, respond when an emergency occurs, assist other utilities in need of help and better manage help when it is received. A variety of vendors and organizations will be on hand with equipment displays, demonstrations and information.

Registration information on the conference will be available soon at www.orwarn.org or call Mike Gotterba, Salem Public Works, at 503-588-6347.

The subcommittee started work on best practices for cutting into or repairing existing water mains because this is the most common service interruption that occurs and was of most interest to water suppliers. The completed guideline was approved by the Drinking Water Advisory Committee and published in the fall 2008 Pipeline.

The Service Outage due to Reduced Pressure Events guideline was approved by the DWAC at its July 2009 meeting and is published below.

The subcommittee is now focusing on the last guideline, "Disinfection or Filtration Treatment Interruption," to be considered by DWAC at its October meeting. Those interested in this guideline are encouraged to contact one of the subcommittee members or the Drinking Water Program.

BEST MANAGEMENT PRACTICES FOR SERVICE OUTAGES DUE TO REDUCED PRESSURE EVENTS FINAL 7/15/09

Example Service Outage Scenarios:

- Pump Station Failure
- Water Storage Outage
- Source Water Outage
- Main transmission pipeline or intertie failure (see water main BMPs)
- Electrical Malfunction

Service Interruption thresholds:

- 1) Maintain normal service pressure
- 2) Maintain positive pressure throughout affected service area
- 3) Loss of positive pressure

Management Scenarios:

- 1) Prevent service outages with backup facilities and power, maintain normal operating pressure (best)
- 2) Recognize service outage and correct as soon as possible, maintaining positive service (desirable)
- 3) Shut off customer services before positive pressure lost, make corrective actions and restore service, flush, verify pressure and chlorine residuals (less desirable-applicable mainly to service outages affecting few users)
- 4) Complete loss of service pressure, notify users to take personal protective action, re-establish pressure and verify water safety (least desirable)

1) Prevent service outages with backup facilities and power

- Recognize service interruption immediately, either directly or through auto monitoring/alarms
- Engage standby facilities/power or activate interties to restore service
- Verify service pressure, and chlorine residuals if applicable

BEST MANAGEMENT PRACTICES FOR SERVICE OUTAGES DUE TO REDUCED PRESSURE EVENTS FINAL 7/15/09

2) Recognize service outage and correct as soon as possible, maintain positive pressure

- Recognize service interruption, either directly or through auto monitoring/alarms
- Advise affected users to conserve water to maintain positive pressure, if applicable
- Make temporary or permanent corrective actions to restore service
- Verify service pressure, and chlorine residuals if applicable
- Advise users to resume normal water use
- Inform state drinking water program

3) Loss of service pressure, chlorinated systems

- a) Shut off service meters before complete loss of service pressure, and re-establish pressure
- Recognize loss of service pressure
 - Shut off customer services before positive pressure is lost
 - Notify affected water users of service outage, if practical
 - Make temporary or permanent corrective actions to restore service
 - Flush affected area to remove any infiltrated water and restore chlorine residuals
 - Restore service, verify service pressure and chlorine residuals
 - Collect a coliform bacteria sample to provide a record of corrective action effectiveness. Mark as a "special sample" and retain in utility records for 2 years.
 - If the post-corrective action coliform sample result shows the presence of coliforms, resample per coliform sampling procedures. If second sample results show presence of coliforms, contact state drinking water program to consult on corrective action.
- b) Complete loss of service pressure, notify users to take personal protective action, and re-establish pressure (least desirable)
- Recognize loss of service pressure
 - Notify affected users to take personal protective action (do not use water, boil water, or use bottled water). Unless all affected users can be quickly notified, conduct additional wider notification by media or other means
 - Notify and consult with state drinking water program
 - Make temporary or permanent corrective actions to restore service
 - Flush affected area to remove any infiltrated water and restore chlorine residuals
 - Restore service, verify service pressure and chlorine residuals
 - Collect coliform samples to demonstrate water safety, obtain coliform-absent results before proceeding
 - Consult with state drinking water program
 - Notify users that water is safe to use after they flush their household plumbing

BEST MANAGEMENT PRACTICES FOR SERVICE OUTAGES DUE TO REDUCED PRESSURE EVENTS FINAL 7/15/09

4) Loss of service pressure, non-chlorinated systems

a) Shut off service meters before complete loss of service pressure, re-establish pressure and apply temporary chlorination

- Recognize loss of service pressure
- Shut off customer services before positive pressure is lost
- Notify affected water users of service outage, if practical
- Make temporary or permanent corrective actions to restore service
- Flush affected area to remove any infiltrated water, apply temporary chlorination
- Restore service, verify service pressure and chlorine residuals
- Collect a coliform bacteria sample after chlorine residual returns to zero to provide a record of corrective action effectiveness. Mark as a "special sample" and retain in utility records for 2 years.
- If the post-corrective action coliform sample result shows the presence of coliforms, resample per coliform sampling procedures. If second sample results show presence of coliforms, contact state drinking water program to consult on corrective action.

b) Complete loss of service pressure, notify users to take personal protective action, and re-establish pressure (least desirable)

- Recognize loss of service pressure
- Notify affected users to take personal protective action (do not use water, boil water, or use bottled water). Unless all affected users can be quickly notified, conduct additional wider notification by media or other means
- Notify and consult with state drinking water program
- Make temporary or permanent corrective actions to restore service
- Flush affected area to remove any infiltrated water
- Restore service, verify service pressure
- Collect coliform samples to demonstrate water safety, obtain coliform-absent results before proceeding
- If coliform samples are coliform-present, apply temporary chlorination
- Consult with state drinking water program
- Notify users that water is safe to use after they flush their household plumbing

Updates to the coliform sampling plan template for small systems:

Incorporating the provisions of the Ground Water Rule

by James Nusrala

The Drinking Water Program (DWP) has developed an update to the coliform sampling plan (CSP) template, which includes specific new requirements for ground water systems. These changes incorporate the requirements of the Ground Water Rule (GWR). The DWP will take primacy for the GWR after the current rule adoption package is complete. Provisions of the GWR will take effect **Dec. 1, 2009**. A template CSP, which you can use to fill out for your system in order to be ready for the GWR, is available on the DWP Web site at <http://oregon.gov/DHS/ph/dwp/docs/fact/colisamp.pdf>, on the Forms/Tools/Fact Sheets page, under the Coliform heading.

The purpose of routine coliform sampling is to ensure that all users receive water that meets microbial standards. All public water systems are required to have a written CSP that represents the entire distribution system, and includes a description of sampling technique, a rotation of routine sampling locations, and identifies required repeat sampling locations for each routine sample site.

Which systems do these required updates to the CSP apply to?

The updates, which are required by the GWR, apply to:

- Systems relying 100 percent on ground water (GW);
- Consecutive (or purchasing) systems receiving GW from wholesalers;
- Mixed surface and GW systems, except where all GW goes through treatment equivalent to surface water or ground water under the direct influence of surface water.

The updated coliform sampling plan template is designed for all systems serving up to 1,000 persons

to use. However, both ground water systems providing 4-log viral disinfection (99.99 percent removal or inactivation of viruses) and surface water systems may continue to use their existing coliform sampling plan, as described below.

Background on the GWR and the triggered source monitoring requirement

The purpose of the GWR is to protect public health by reducing the risk caused by microbial contamination in public GW systems. *E.coli* will be used as an indicator of fecal contamination. A major provision of the GWR is triggered source water monitoring. In addition to the required repeat samples, a source sample will need to be collected from the raw water sample tap at the wellhead or springbox, within 24 hours following a routine total coliform positive (TC+) sample in the distribution system.

What are the updates to the coliform sampling plan?

The updated template incorporates the required triggered source water monitoring requirements in the following manner:

- System distinction based on the type of GW treatment. The first major update to the existing CSP template is a distinction between GW systems that provide continuous 4-log viral disinfection (99.99 percent removal or inactivation of viruses), and those systems that do not. The three major types of groundwater systems, distinguished by disinfection status, are outlined below and identified in the check boxes in section 4 of the updated template. Please check the box that most closely represents your system.

The three major types of GW systems identified in section 4 of the updated CSP template:

- First check box: Refers to continuous 4-log disinfection, which is chlorine addition with adequate contact time between the point of addition and the first user, to ensure treatment of contaminated sources.
- Third check box: Refers to GW systems that are providing treatment, but **not** continuous

4-log disinfection, such as systems practicing chlorine residual maintenance or systems with ultraviolet treatment only. Residual maintenance is chlorination for the purpose of ensuring the absence of coliform in the distribution system rather than targeting source contamination and typically does not provide adequate contact time to ensure 4-log viral disinfection. Ultraviolet treatment alone currently does not provide 4-log disinfection of viruses.

- Fourth check box: Refers to GW systems not providing any treatment.

NOTE: If you do not know, or are not sure, if your system provides continuous 4-log viral disinfection, check the third box.

- What are the required updates for GW systems with continuous disinfection? If a GW system provides continuous 4-log disinfection, the system will take all repeat samples from the distribution system, and is not required to collect a source sample along with the repeats. For these systems, compliance monitoring in the form of chlorine residual monitoring at the entry point, will be required to replace the triggered source monitoring requirement. GW systems with continuous 4-log disinfection will need to submit a request to the DWP by Dec. 1, 2009, that includes engineering calculations to document 4-log treatment of viruses before the first user. The DWP will then set minimum chlorine residual to be maintained at the entry point. The CSP for these systems will remain the same, with only repeat samples from the distribution system required.
- What are the required updates for GW systems practicing chlorine residual maintenance, or with ultraviolet treatment only? GW systems that are treating but not providing continuous 4-log disinfection with chlorine, must collect a source sample along with the required repeat samples after a routine TC+. Source samples must be collected from each source providing water at the time the routine sample was collected. These systems need to indicate on their CSP the source or sources providing water to each routine

coliform sample location. For GW systems practicing chlorine residual maintenance or with ultraviolet treatment only, the system should identify four repeats in addition to a source sample. Representative source sampling may be allowed for larger systems with multiple GW sources or distribution pressure zones if DWP approves their sampling plan. Contact the DWP if you are interested in this option.

For GW systems serving 1,000 persons or fewer, the system has the option to use the required source sample to satisfy one of the four repeats, taking three repeats and a source sample. However, if the source sample is used as the fourth repeat, the source sample could cause a total coliform rule violation if total coliform positive. For this reason, it is recommended that only systems serving up to 1,000 persons, and not disinfecting use the source as the fourth repeat sample, as outlined below.

- What are the required updates for GW systems with no treatment? GW systems with no treatment must take a source sample. These systems shall use the required source sample as the fourth repeat.

What about surface water systems?

Systems using surface water only, or a mixture of GW and surface water where all water goes through the surface water treatment, will take all repeat samples from the distribution and are not required to collect source samples after a routine total coliform positive. The CSP for these systems will remain the same, with only repeat samples from the distribution system required.

Updating your coliform sampling plan by Dec. 1, 2009, will greatly assist GW systems to be prepared for the source sampling provisions of the GWR. Please contact your respective DHS Drinking Water Program contact, or local county Environmental Health Program office for any questions about your coliform sampling plan.

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COLIFORM SAMPLING PLAN
For small public water systems serving populations up to 1,000 persons

1. **System:** _____ **PWS ID#: 41** _____

2. **System Operator:** _____ **()** _____ **Date:** _____
 (Phone Number)

3. This water system must collect _____ routine coliform samples every _____.
 (Number) (Month/Quarter)

4. **Ground water with 4-log viral disinfection** (chlorination with adequate contact time) and conducting compliance chlorine residual monitoring—all 4 repeats must be taken from distribution system, no source sample required
- Surface water**—all 4 repeats must be from distribution system, no source sample required
- Ground water with ultraviolet treatment only, or practicing chlorine residual maintenance**—a source water sample* is required in addition to the 4 repeats
- Ground water with no treatment**—a source water sample* is required and serves as the fourth repeat

5. Sampling Technique (attach sampling technique):

6. Sample Collection Site Rotation:

Routine	Repeat and Source Samples	Address/Location
Routine Site #1	Repeat Site A	
	Repeat Site B	
	Repeat Site C	
	Repeat Site D	
	*Source	
Routine Site #2	Repeat Site A	
	Repeat Site B	
	Repeat Site C	
	Repeat Site D	
	*Source	
Routine Site #3	Repeat Site A	
	Repeat Site B	
	Repeat Site C	
	Repeat Site D	
	*Source	

7. Attach a map of the distribution system showing the water source(s), treatment rooms, and sampling site locations.

Why Clorox®?

by Fred Kalish

The Drinking Water Program (DWP) has encountered many small public water systems that have historically disinfected with household liquid bleach (e.g., Clorox®), widely and inexpensively available as a 5.25% sodium hypochlorite solution.

According to State of Oregon Public Water System Regulations 333-061-0087(6) Product Acceptability Criteria:

Products added to public water systems for treatment, purposes including but not limited to disinfection, oxidation, filtration, scale control, corrosion control, pH adjustment, softening, precipitation, sequestering, fluoridation, coagulation, flocculation, and water well treatment, shall meet the requirements of **National Sanitation Foundation Standard 60 – Drinking Water Treatment Chemicals – Health Effects (Revised, October 1988)** or equivalent.

Does Clorox® meet these criteria?

In reviewing product standards and certifications it turns out that the National Sanitation Foundation (NSF) is not the only organization that certifies (or approves) products to NSF Standard 60. In accordance with the International Organization for Standardization (ISO) guidelines, the American National Standards Institute (ANSI) has developed a program that provides accreditation to other “bodies” which provide testing of a variety of codes, products and chemicals to different

standards. Included in the list of organizations that qualify as “ANSI-accredited bodies” and that test for water quality chemicals and other water quality products are NSF International, Underwriters Laboratories (UL), Water Quality Association (WQA), International Association of Plumbing Officials Evaluation Service (IAPMO ES), as well as others.

Evaluating the acceptability of household bleach requires reviewing each of the potential organizations’ Web sites and searching to find which (if any) household bleach products have received NSF Standard 60 approval. As it turns out, the Water Quality Association has approved both “Clorox® Regular Bleach,” and “Clorox® Ultra Bleach” to NSF Standard 60. Therefore, at this time either of these products are acceptable for use as disinfectants in Oregon public water systems. The Clorox® product should be used within 90 days of purchase, since the concentration of the available chlorine decreases over time.

It is important to note that other household bleach solutions, *including other Clorox® products*, **are not** acceptable for use in drinking water unless and until the specific bleach product has received approval by at least one of the accredited bodies listed in this article. Also, in no case should any *scented* bleach be used in a public water system.

Stay clean!

*Fred Kalish is a civil engineer in the Technical Services Unit of the Drinking Water Program
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Operator certification corner:

OESAC Web site look is NEW

by Dottie Reynolds

The look and layout of the Oregon Educational Services Advisory Council Web page has been updated! OESAC hopes the new page is easier and faster to maneuver, easier to find information regarding approved training classes, workshops, and conferences for continuing education requirements, sponsor training applications and

forms, questions and answers about OESAC, training resources, and more. Improvements and additions include new navigation links, OESAC mission statement, history, bylaws, board members, training resources, the appeal process, and the yearly OESAC meeting schedule. Please take time to look at the OESAC Web site today at www.oesac.org!

Dottie Reynolds is the Operator Certification Program coordinator in the Drinking Water Program 971-673-0426 or dottie.e.reynolds@state.or.us

The Oregon Environmental Services Advisory Council (OESAC) evaluates non-credit educational programs and assigns CEUs



OESAC CEU Committee

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OESAC Mission Statement

To further technology education in the State of Oregon, particularly in known environmental arenas such a water supply operators, wastewater operators, hazardous wastes technicians and other environmental media technicians as needs arise. To accomplish this mission through cooperative efforts among community colleges, professional organizations, adjacent States, public entities and private training units.

Next OESAC Meeting

The meeting of the Oregon Environmental Services Advisory Council will be held September 10, 2009, in Oregon City, Oregon at the Clackamas Community College. The full Committee will convene at 10:30 a.m. and the CEU Committee will convene immediately following. The meeting room is to be determined and will be posted once that is known.

The Clackamas Community College main campus is located at 19600 South Molalla Avenue and the contact phone number is 503/657-6958. See directions at:

See map info [here](#)

New small system vulnerability assessment and emergency response plan tool available

by Anthony Fields, BS, REHS, CP-FS

As many of you already know, for the last year members of the Drinking Water Program have been working on a streamlined tool to assist small water systems in completing their vulnerability assessments and emergency response plans. This new tool, specifically for water systems serving 150 or fewer people, combines several vulnerability assessment protocols and emergency response plan tools into one, easier to use format.

This tool was developed to assist the small system operators in meeting the vulnerability assessment and emergency response plan requirements found in OAR 333-061-0064, which was formally adopted Oct. 25, 2002. This rule stipulates that all public water systems are required to perform a vulnerability assessment of their facilities, and then create an emergency response plan based on the results of that assessment. Further, this rule stipulates that the assessment and response plan was to have been completed no later than June 30, 2005. Since many of the smaller

systems have had issues with completing their assessments and emergency response plans utilizing existing documents, the new small system tool was developed both to assist these systems in completing their plans, and also to avoid the necessity of additional enforcement actions for noncompliance with statutory requirements.

Finally, hands-on workshops are being planned throughout the state to support the new tool. These workshops will be conducted to assist small system operators in completing their vulnerability assessments and emergency response plans. Space is limited for the initial courses, and attendance will be limited to the first 100 small systems that register for the class.

An electronic version of the new small system tool, as well as class information for the upcoming workshops, can be found at the Drinking Water Program's water security Web site, located at www.oregon.gov/DHS/ph/dwp/security.shtml. You may also contact Tony Fields directly for more information at 971-673-2269, or by e-mail at anthony.j.fields@state.or.us.

*Anthony Fields is the security coordinator for the Drinking Water Program
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Meeting calendar

Drinking Water Advisory Committee

Department of Human Services
Diane Weis, 971-673-0427

October 21, 2009

All meetings are held at the Public Utility Commission Office, 550 Capitol St. N.E., Salem, OR 97310

Cross Connection Advisory Board

Go to:
www.oregon.gov/DHS/ph/crossconnection/docs/AdvisoryBoardSchedule.pdf

Oregon Environmental Services Advisory Council

Go to: www.oesac.org/meeting_schedule.

Training calendar

CEUs for Water System Operators

Check www.oesac.com for new offerings approved for drinking water

OAWU

503-873-8353

Oct. 13	Control Valves by GC Systems
Oct. 22	Control Valves by GC Systems
Nov. 2-4	Small System Operator's Conference
Dec. 15-17	11th Annual End of Year Operator's Conference

Oregon APWA Training Program

541-994-3201

Oct. 7-9	Oregon Chapter 2009 Fall Conference
Nov. 17-20	Public Works Leadership
Dec. 8-11	Public Works Essentials

OCT Academy

1-866-266-0028

Oct. 5-6	Two-Day Mathematics for Water Treatment Operators
Oct. 7	Water Treatment Filtration
Oct. 8	Disinfection of Public Water Supplies
Oct. 9	Water Sources / Quality Parameters
Oct. 10-11	Two-Day Mathematics for Water Distribution Operators

Cross Connection/Backflow Courses

Backflow Management Inc. (B)

503-255-1619

Clackamas Community College (C)

503-657-6958, Ext. 2388

Eugene Water & Electric Board (E)

541-984-4747

Backflow Assembly Tester Course

Oct. 5-9 Portland (B)

Nov. 9-13 Eugene (E)

Dec. 7-11 Eugene (E)

Backflow Assembly Tester Recertification

Oct. 16	Portland (C)
Oct. 22-23	Portland (C)
Nov. 6	Portland (C)
Nov. 16-17	Portland (B)
Nov. 19-20	Portland (C)

Cross Connection Inspector Course

Nov. 2-5	Portland (C)
Dec. 14-17	Portland (B)

Cross Connection Inspector Recertification

Oct. 30	Portland (C)
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Backflow Management Inc.

503-255-1619

Nov. 18	Confined Space Entry
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Water System Training Course

OAWU

503-873-8353

October *	Eugene/Springfield, Dallas, Tillamook, Baker City
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November *	St. Helens, Salem, Portland area
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* Dates to be announced

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Drinking Water Program
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