DHS: PUBLIC HEALTH DIVISION

DRINKING WATER PROGRAM

Pipeline

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Program update

by Dave Leland

Opportunities and challenges lie ahead, including primacy for the newer Environmental Protection Agency drinking water rules, joining a newly created state agency, and dealing with continuing statewide General Fund revenue shortfalls.

Primacy transfer approved

The Drinking Water Program and EPA Region X have been diligently working to transfer implementation work to the state for the Long-Term 2 Enhanced Surface Water Treatment Rule (LT2) and the Stage 2 Disinfection Byproducts Rule (DBP2). You will recall that Oregon requested and was granted an extension by EPA from the required date to apply for primacy for these two rules back in December 2007 because the state did not yet have the program capacity in place to effectively implement these new rules. After implementing

Continued on page 2

Contents

Is your system an Outstanding Performer?

by Kari Salis

The Drinking Water Program has identified criteria for determining whether a public water system should be considered to have outstanding performance. This designation is given at the completion of a water system survey, formerly referred to as a sanitary survey. A water system survey is an on-site review of a system's sources, treatment, storage facilities, distribution system, operation and maintenance procedures, monitoring, and management, for the purpose of evaluating the system's capability of providing safe water to the public. Systems that are designated outstanding performers will have their water system survey frequency reduced from every three years to every five years. With the new fees in place, this also means having to pay the fee less frequently.

The criteria for outstanding performance are:

1. No maximum contaminant level (MCL) or treatment technique violations in the last five years;
2. No more than one monitoring and reporting violation in the last three years. The one violation must be resolved (results submitted);
3. No significant deficiencies identified during the current water system survey; and
4. Has not had a waterborne disease outbreak attributable to the water system in the last five years.

Continued on page 5

Program update — continued from page 1

the new program capacity authorized by the 2007 Legislature, Oregon submitted its primacy applications for LT2 and DBP2 in July 2009 and, therefore, has had interim primacy since then pending final approval by EPA. In March of this year, Oregon and EPA completed the transfer of implementation work to the state program.

We appreciate the work on these rules completed to date, both by Oregon water suppliers who had to report directly to EPA during this interim period, and by EPA Region X staff who carried out the early implementation work.

Outstanding performers

State and county staff completed the second year of on-site water system survey inspections under the fee system adopted in 2008. A number of water suppliers were designated as "Outstanding Performers" because they were free of significant deficiencies, and exhibited a high level of compliance with drinking water standards and monitoring requirements. In this issue of *Pipeline* we begin to regularly list those water systems that met the outstanding performer criteria (see article on page 1).

New compliance scoring system

Also this year, EPA and state programs are moving to a new national approach for characterizing compliance with drinking water regulations by individual public water suppliers. EPA, in concert with the states, developed a scoring system that assigns points to individual violations of drinking water standards, monitoring, and reporting requirements based on potential impact on health. The scoring system looks at the most recent five-year history, and water system scores are posted on our website under "Data Online, information by county." EPA and the states use the point system to focus compliance and enforcement efforts on those water suppliers with the highest number of points and therefore health risk. We believe that this approach will be more focused on public health, understandable, and transparent than the current approach, which is based on definitions of "significant noncompliance" established rule by rule.

Revisions to the Total Coliform Rule

In June, EPA proposed revisions to the Total Coliform Rule (See Fact Sheet on page 8). These revisions are intended to improve public health protection, improve rule effectiveness, and reduce rule implementation burden. The revised rule is to be finalized by mid-2012, and new requirements will likely become effective three years later, in mid-2015.

A new state agency

We are now at a pivotal point in building the new Oregon Health Authority, created by the 2009 Legislature. By the beginning of the next two-year budget cycle beginning July 2011, OHA and DHS will be two separate but connected agencies. Toward that end, work is now under way to specify OHA's organization. Public Health, including the Drinking Water Program, will be part of the new Oregon Health Authority. You can get the latest information on the transition to OHA at www.oregon.gov/OHA/.

General Fund shortfall

The state budget occupied center stage when the June Revenue Forecast projected a $577 million General Fund shortfall in the current biennium, now half over. In response to this new forecast, the Governor ordered all executive branch agencies to submit 9 percent across-the-board cuts in General Fund expenditures. The Department of Human Services' share of this statewide reduction is $158 million, which will significantly affect agency staffing and services provided.

The Drinking Water Program budget is made up of Federal Funds (74 percent), state General Fund money (20 percent) and fees (6 percent). General Fund revenue and fee revenue satisfy the minimum state match required to access Federal Funds.

Continued on page 3

It's coming: the fall 2010 Letter of Interest (LOI)!

Mark your calendars for the mid-September release of the LOI

by Betsy Parry and Cedric White

Who is eligible for a State Revolving Fund (SRF) loan?

Public water systems that are classified as community or non-transient non-community (NTNCs only if nonprofit) are eligible to receive funding for projects necessary to comply with public drinking water standards. A portion of the SRF funds target systems serving fewer than 10,000 individuals.

What is offered?

- Loan rates from 1 percent to 4 percent depending on water system type and status; repayment terms from 20 to 30 years.
- Principal forgiveness of not less than 30 percent of the loan amount (new this year!), with an emphasis on "disadvantaged communities," consolidating small or adjacent water systems, and implementing green infrastructure or energy efficiency.
- Loan servicing by the Oregon Business Development Department (OBDD) — specifically, their newly re-organized section called the Infrastructure Finance Authority.
- Loans tailored to meet the specific funding and repayment requirements of the water system.

What to do?

Submit a Letter of Interest (LOI) this fall. Here's how:

- Go to the Drinking Water SRF website at www.oregon.gov/DHS/ph/dwp/srlf.shtml.
- When available, a direct link to the fall 2010 LOI materials will appear there (anticipated in mid-September).
- Complete and return an LOI, which is the preliminary data collection tool for the SRF program. The LOI packet is designed for easy use and will walk you through the necessary information (mostly check-off boxes and short narrative answers). The LOI can cover any one phase or a combination of phases for a project (e.g., planning, engineering, construction).
- DWP circuit riders can assist eligible water systems with LOIs and other funding applications. Please contact Robert Henry of HBH Consulting Engineers, Inc., at 503-625-8065 or 1-866-669-6603, or by e-mail at rhenry@hbh-consulting.com.

Need more information?

It's as easy as:

1. **Visiting** the Drinking Water Program website at www.oregon.gov/DHS/ph/dwp/srlf.shtml;
2. **Calling** our new State Revolving Fund Program Coordinator, Cedric White, at 971-673-0422, or e-mailing him at cedric.g.white@state.or.us; *or*
3. **Contacting** OBDD at 503-986-0123, 1-800-233-3306 or online at www.orinfrastructure.org/Learn-About-Infrastructure-Programs/Interested-in-a-Water-or-Wastewater-Improvement-Project.

Continued on page 4

Program update — continued from page 2

At this time, no specific reduction is proposed in Drinking Water Program General Fund money, but it is clear that there will continue to be pressure on the state General Fund for the foreseeable future.

A look forward

Through these opportunities and challenges, we look forward to continuing to work closely with all of you to assure safe drinking water in Oregon!

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

Letter of Interest continued from page 3

Final note: There are two state agencies involved in the Oregon SRF process. DWP staff review and rank the incoming LOIs against standard criteria for SRF funding. The OBDD handles "loan servicing." In other words, OBDD acts as the "bank" for these loan funds. You may contact either agency using the information listed above.

SRF may finance corrective actions under the Ground Water Rule

The Ground Water Rule is intended to increase public health protection from microbial contamination in groundwater sources. Under this rule, groundwater systems will be required to take *corrective action* to address either: a) confirmed fecal contamination in a groundwater source (well or spring), or b) any significant deficiencies identified through a water system survey. Common corrective actions to address fecal contamination include reconstructing or rehabilitating a well or spring, providing an alternate source, adding continuous disinfection, or changing the current disinfection components to reliably achieve 4-log inactivation of viruses. Many systems required to take such measures may be eligible for financial assistance through the DWP's State Revolving Loan Fund.

Betsy Parry is a natural resource specialist with the Drinking Water Program / 541-726-2587, ext. 30 or betsy.l.parry@state.or.us

Cedric White is the loan fund coordinator for the Drinking Water Program / 971-673-0422 or cedric.g.white@state.or.us

Staff updates

Congratulations go to **Amy Baker**, drinking water specialist in the Technical Services Unit - Region 1 working out of the Pendleton Office. She has successfully passed the professional exam and is now a registered professional Environmental Health Specialist. She has worked in the Drinking Water Program and studied for two years to obtain this professional registration.

Please welcome **Cedric White** to the SRF coordinator position with the Drinking Water Program. Cedric joined the program in May, and brings to the position an extraordinary wealth of knowledge and experience having worked for the Portland Development Commission, the City of Vancouver, and, most recently, at Oregon Health & Science University in their Financial Management Division. In each of these positions, he has managed many millions of dollars for these organizations, and coordinated their disbursement according to internal policy, partner organizations, and state and federal law. He is fully qualified for our SRF coordinator position, and brings a tremendous amount of professional experience to the program.

Outstanding Performer — continued from page 1

If your system is due for a survey soon, you can review the list of significant deficiencies and data online (www.oregon.gov/dhs/ph/dwp) to do everything you can to qualify.

Congratulations to the following systems for successfully meeting these criteria as designated between May 2008 and July 1, 2010:

County Served	PWS	PWS Name
Jackson	OR4101483	ANGLERS COVE/SCHWC
Curry	OR4101365	ANGLERS TRAILER VILLAGE
Tillamook	OR4100199	BEAVER WATER DISTRICT
Washington	OR4100081	BEAVERTON, CITY OF
Clatsop	OR4100054	BURNSIDE WATER ASSOCIATION
Grant	OR4100165	CANYON CITY WATER DEPARTMENT
Lane	OR4100200	COBURG, CITY OF
Benton	OR4100225	CORVALLIS, CITY OF
Douglas	OR4100276	ELKTON, CITY OF
Washington	OR4101513	HILLSBORO, CITY OF
Benton	OR4100174	KNOLL TERRACE PARK
Lane	OR4100492	LOWELL, CITY OF
Lane	OR4100507	MAPLETON WATER DISTRICT
Lane	OR4100923	MCKENZIE PALISADES WATER BOARD
Yamhill	OR4100497	MCMINNVILLE WATER & LIGHT
Jackson	OR4100513	MEDFORD WATER COMMISSION
Lane	OR4100291	MOBILIFE WATER COMPANY INC
Clackamas	OR4100547	MULINO WATER DISTRICT
Lincoln	OR4100608	OTTER ROCK WATER DISTRICT
Yamhill	OR4105308	OXBERG WATER SYSTEM #1
Deschutes	OR4100106	PONDEROSA PINES WATER COMPANY
Josephine	OR4195017	REDWOOD TERRACE ASSISTED LIVING
Douglas	OR4100720	ROSEBURG, CITY OF
Linn	OR4100795	SCIO, CITY OF
Clackamas	OR4100638	SOUTHWOOD PARK WATER DISTRICT
Douglas	OR4100847	SUTHERLIN, CITY OF
Jackson	OR4100857	TALENT, CITY OF WATER DEPT
Washington	OR4100906	TUALATIN, CITY OF
Douglas	OR4100719	UMPQUA BASIN WATER ASSOC
Union	OR4100915	UNION, CITY OF
Multnomah	OR4100661	VALLEY VIEW WATER DISTRICT
Lane	OR4101004	VIDA-LEA MOBILE LODGE
Benton	OR4100231	VINEYARD MOUNTAIN WATER
Douglas	OR4100957	WINSTON-DILLARD WATER DISTRICT
Yamhill	OR4100968	YAMHILL, CITY OF

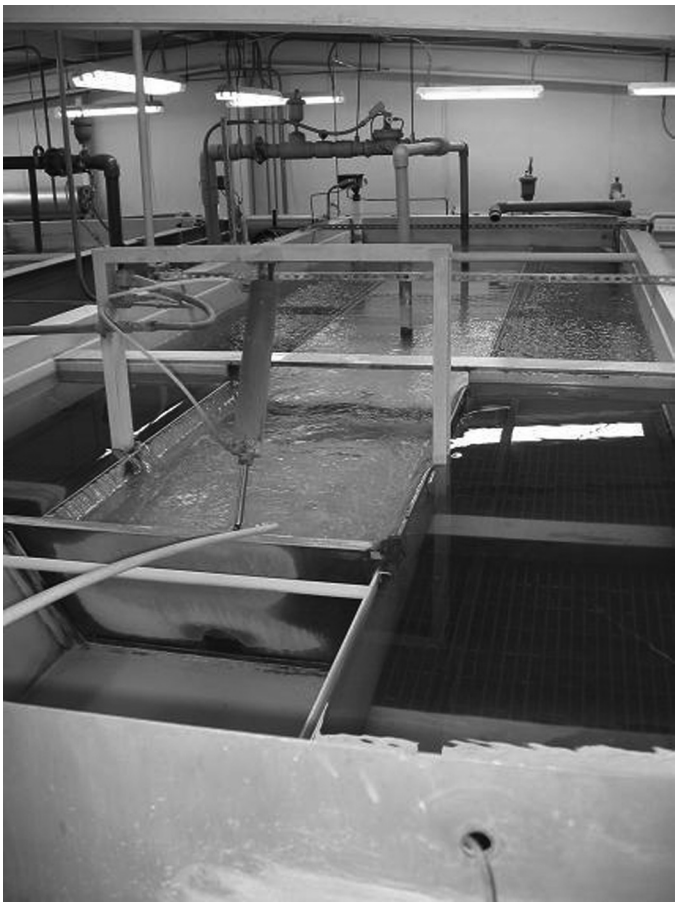
Systems that are designated outstanding performers will have their water system survey frequency reduced from every three years to every five years. With the new fees in place, this also means having to pay the fee less frequently.

Kari Salis is a regional engineer with the Drinking Water Program / 971-673-0423 or karyl.l.salis@state.or.us

The City of Creswell: Meeting the challenges of growth

by Roy Sprout

Historically, the City of Creswell relied on groundwater for its drinking water supply. Original wells around town were supplemented by a river well field in the 1960s, and Garden Lake and Emerald Valley well fields in the 1970s. All of these wells had between 0.010mg/L and 0.035mg/L arsenic, which was under the maximum level of 0.050mg/L set by the Safe Drinking Water Act in 1974.



Creswell's old clarifier and filters.

Due to the growth of the city in the 1980s, the demand for water was nearing the capacity of the well fields. A groundwater study showed little promise for future wells to meet projected need, so the city decided to construct a water treatment plant to treat surface water from the Willamette River. The 1 mgd rapid sand filtration system was dedicated in 1990, and expanded to 2 mgd in 1999. The filtration system was capable of producing 0.04 to 0.05 NTU water in the summertime at high demands. Wintertime production, when raw water was over 15 NTU, was problematic, and we struggled to produce 0.5 NTU finish water to meet demand.

With growth, demand again exceeded our capabilities to produce water in winter, given high turbidity and color, so the wells still had to be used for backup. In 2000, the Safe Drinking Water Act was amended, and the maximum contaminant level for arsenic was lowered from 0.05mg/L to 0.010mg/L. With the amendment going into effect in 2006, we realized well field production would be in violation and started searching for a viable solution.

After much study and research on existing systems, the city decided membrane filtration would best treat the turbidity, color and arsenic issues. The City of Creswell hired CH2MHILL Engineers to design the new water treatment plant. PALL Corporation was selected to supply the pressurized membrane system. With plans submitted to and approved by the Oregon Drinking Water Program, construction began in July 2008. The 3.2 mgd plant, with build out to 3.8 mgd, went on line in September 2009 along with a 3 mg reservoir, also built on site. Total cost of the project, which included bringing the well water approximately one mile to the water treatment plant for arsenic removal, was $8.3 million. Funding was provided through low-interest loans by Business Oregon Infrastructure Authority and City of Creswell Water Reserve Funds.

Although we have the option of by-passing the filters with the well water and blending it in the reservoir, we have chosen to combine the two sources and treat through the membranes. Even without coagulant addition, all test results from this mode of operation show finished water arsenic to be below analytical detection limits. If we by-pass the filters with the well water, and blend it in the reservoir with the membrane-filtered water, test

Continued on page 7

Meeting the challenges of growth — continued from page 6

results of this operation produce finish water with no more than 0.003mg/L arsenic, well below the maximum contaminant level of 0.010mg/L.

All of the performance testing is not yet complete, but to date, with minimal chemical addition (from 0 to 2 mg/L of aluminum chlorohydrate), and rates at 200gpm to 840gpm per rack, we are producing an average 0.015 NTU water, with no arsenic.

Although we have a guarantee of treating 300-400 NTU water, this year's highest point was 56 NTU. This peak was during our first 30-day performance testing of one rack at 840 gpm. The membranes produced a constant .025 to .035 NTU with no chemical adjustments necessary. Membrane backwash and cleaning procedures do not affect the treatment process/production as did the old filtration flushing and backwashing of the system.

We were able to cut the chlorine dose almost in half with the 3 mg reservoir on site and extended contact time for disinfection, while still maintaining a good residual throughout the system. This also allowed us to cut our soda ash dosage considerably, while maintaining a 7.1 pH and 30 mg/L alkalinity for corrosion control.

Creswell's new membrane filtration plant.

The operating program for the plant's PLC was provided by PALL and, although we still have a few bugs to work out, having remote access and operation of the SCADA system in house has been very operator friendly. With the old rapid sand filtration system, we continually had to monitor and adjust chemicals and were barely able to treat water higher than15 NTU.

To say the least, plant operators are very happy with this production, and the public is assured of very high quality finished water.

Roy Sprout is public works director for the City of Creswell / 541-895-2531 or rsprout@creswell-or.us

United States Environmental Protection Agency

Fact Sheet: Announcement of Proposed Revisions to Total Coliform Rule

The Environmental Protection Agency (EPA) is proposing revisions to the 1989 Total Coliform Rule (TCR), a national primary drinking water regulation (NPDWR). The purpose of the TCR is to protect public health by ensuring the integrity of the drinking water distribution system and monitoring for the presence of microbial contamination. EPA anticipates greater public health protection under the proposed revised requirements, which are based on recommendations by a federal advisory committee. The proposed revisions to the TCR will:

- require public water systems that are vulnerable to microbial contamination to identify and fix problems, and
- establish criteria for systems to qualify for and stay on reduced monitoring, thereby providing incentives for improved water system operation.

Questions and Answers

What are the basic requirements of the TCR?

The current TCR (published in 1989) continues to be the only microbial drinking water regulation that applies to all public water systems. Systems are required to meet legal limits (i.e. Maximum Contaminant Levels (MCL)) for total coliforms, including fecal coliforms, as determined by monthly monitoring. The TCR specifies the frequency and timing of the monthly microbial testing by water systems based on population served. The rule also requires public notification as indicated by monitoring results.

Who will be affected by this proposed rule?

The entities potentially affected by this proposed rule are public water systems that are classified as community water systems (e.g., systems that provide water to year-round residents in places like homes or apartment buildings) or non-community water systems (e.g., systems that provide water to people in locations such as schools, office buildings, restaurants, etc.); state primacy agencies; and local and tribal governments. As with the current TCR, the proposed RTCR will impact approximately 154,000 PWSs. These water systems serve approximately 307 million individuals.

Why did EPA decide to revise the 1989 TCR?

The Safe Drinking Water Act, as amended, requires EPA to review and revise, as appropriate, each NPDWR not less often than every six years. The outcome of the review of the TCR determined that there was an opportunity to reduce implementation burden and to improve rule effectiveness, and that a Revised Total Coliform Rule (RTCR) offers an opportunity for greater public health protection against waterborne pathogens in the public drinking water distribution systems.

How did EPA identify the changes to the TCR?

EPA established a federal advisory committee called the Total Coliform Rule Distribution System Advisory Committee in 2007 to recommend revisions to the TCR. The Committee was comprised of a balanced panel of 15 key stakeholder organizations, including EPA, states and tribal representatives, utility associations, and advocacy groups for environment, public health, epidemiology, and consumers. The Committee signed an Agreement in Principle (AIP) outlining its recommendations in 2008. The draft proposed rule is being developed to be consistent with the AIP.

Continued on page 9

EPA Fact Sheet — continued from page 8

How have monitoring frequencies changed?

The proposed rule links monitoring frequency to water quality and system performance:

- Provides criteria that well-operated small systems must meet to qualify and stay on reduced monitoring
- Requires increased monitoring for high-risk small systems with unacceptable compliance history
- Requires some new monitoring requirements for seasonal systems such as state and national parks

How has the standard for total coliform changed?

The proposed rule establishes a health goal (Maximum Contaminant Level Goal, or MCLG) and an MCL for *E. coli* and eliminates the MCLG and MCL for total coliform, replacing it with a treatment technique for coliform that requires assessment and corrective action.

- The proposed rule is establishing an MCLG and an MCL of 0 for *E. coli,* a more specific indicator of fecal contamination and potential harmful pathogens than total coliform. EPA is proposing to remove the current MCLG and MCL of zero for total coliform. Many of the organisms detected by total coliform methods are not of fecal origin and do not have any direct public health implication.
- Under the proposed treatment technique for coliform, total coliform serves as an indicator of a potential pathway of contamination into the distribution system. A PWS that exceeds a specified frequency of total coliform occurrence must conduct an assessment to determine if any sanitary defects exist and, if found, correct them. In addition, under the proposed treatment technique requirements, a PWS that incurs an *E. coli* MCL violation must conduct an assessment and correct any sanitary defects found.

How has public notification requirement changed?

The proposed rule is eliminating monthly public notification requirements based only on the presence of total coliforms. Total coliforms in the distribution system may indicate a potential pathway for contamination but in and of themselves do not indicate a health threat. Instead, the proposed rule requires public notification when an *E. coli* MCL violation occurs, indicating a potential health threat, or when a PWS fails to conduct the required assessment and corrective action.

How much will the proposed rule cost water suppliers and consumers?

The estimated net incremental cost of the proposal is $14 million annually. This represents total increased costs relative to current TCR provisions. PWSs are estimated to incur approximately 97 percent of the proposed rule's net annualized present value costs. States/primacy agencies incur the remaining costs.

What are the next steps?

The public can provide comments on the proposed rule up until 60 days after it is published. EPA will consider the public comments and/or any new, relevant, peer-reviewed data submitted as it develops a final Revised Total Coliform Rule.

How can I get more information?

For additional information about the rule, contact:

- Sean Conley (phone (202) 564-1781; e-mail: conley.sean@epa.gov), or
- Thomas Grubbs (phone: (202) 564-5262; e-mail: grubbs.thomas@epa.gov).

You may also visit the EPA internet Web site, http://www.epa.gov/safewater/disinfection/tcr/regulation.html.

For general information on drinking water, please visit the EPA Safewater Web site at www.epa.gov/safewater or contact the Safe Drinking Water Hotline at 1-800-426-4791. Local or international calls can reach the Hotline at 703-412-3330. The Safe Drinking Water Hotline is open Monday through Friday, excluding legal holidays, from 10:00 a.m. to 4:00 p.m. Eastern time.

Ground Water Rule sampling, reporting and notification requirements for wholesale groundwater systems and their purchasers

by James Nusrala

The purpose of the Ground Water Rule is to reduce the risk of illness from microbial contamination present in groundwater sources (see Winter 2009 *Pipeline* article). Under the rule, groundwater systems that do not conduct "compliance monitoring" (continuously verifying their 4-log treatment) must collect a sample from their source (well or spring) after one of their routine distribution samples tests positive for total coliform.

For wholesale groundwater systems and their purchasers, additional coordination is required:

- When a **purchaser** has a total coliform-positive routine sample, they must notify the **wholesaler** within 24 hours. If the **purchaser** has their own groundwater source, they must also collect a sample within 24 hours from each of their own sources in service at the time of the positive result.

- Next, within 24 hours of being notified, the **wholesaler** must collect a coliform sample from each active groundwater source serving water to the **purchaser** at the time of the routine positive. Please include the original purchaser's water system ID number and original positive sample ID number on the lab slip. The ID number for the positive sample can be found on the Drinking Water Program's Data Online Web page of coliform results for the purchaser's water system. **Wholesale** systems performing compliance monitoring are exempt from this requirement.

- If any of the **wholesaler's** source samples are *E. coli* positive, the **wholesaler** must notify all water systems served by that groundwater source within 24 hours. If the DWP or County/ Department of Agriculture regulator does ***not*** require corrective action immediately, the **wholesaler** must collect five additional source samples from the *E. coli* positive source, 24 hours after the original *E. coli* positive source sample.

- If any one of the five additional source samples is *E. coli* positive, the **wholesaler** must again notify all **purchasers** of the water, and work with the **purchaser** to provide appropriate public notice to all affected **wholesale** and **purchaser** customers. Corrective action to address the source with the confirmed *E. coli* positive sample (such as replacing or reconstructing the source, or providing continuous disinfection) will be required of the **wholesaler** according to a prescribed schedule.

If you purchase or sell groundwater, please update your coliform sampling plan to include the sampling, reporting and notification requirements required under the Ground Water Rule. Further detailed information on the Ground Water Rule's requirements for wholesalers and their purchasers is outlined in the U.S. Environmental Protection Agency's Consecutive System Guidance at http://www.epa.gov/safewater/disinfection/gwr/pdfs/guide_gwr_consecutive-guidance.pdf. Consult your appropriate DWP technical staff contact with further questions.

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MEETING CALENDAR

Drinking Water Advisory Committee

Department of Human Services
Diane Weis/971-673-0427
October 20, 2010

All meetings are held at the Public Utility Commission Office, 550 Capitol St., N.E., Salem, Oregon, 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. 6-7	Water Treatment/Distribution Certification Review
Oct. 12-13	Water Treatment/Distribution Certification Review
Nov. 2-4	Fall Water Operator's Training Short School
Dec. 7-9	12th Annual End of Year Operator's Conference

Oregon APWA Training Program
541-994-3201

Oct. 12-15	Fall Chapter Conference

Backflow Management Inc.

503-255-1619

Oct. 1	Asbestos Safety for Water Operators
Oct. 11-12	Water Distribution Exam Review
Oct. 14	Oregon Administrative Rules Review
Oct. 15	Basic to Advanced Math for Water Operators
Nov. 5	What Your Chlorine Residual is Telling You
Nov. 19	Injector Pumps: Good, Bad & the Ugly
Dec. 2	Confined Space Entry
Dec. 15	Managing and Owning a Public Water System

Cross Connection/Backflow Courses

Backflow Management Inc. (B)
503-255-1619

Clackamas Community College (C)
503-594-3345

Backflow Assembly Tester Course

Oct. 18-22	Redmond (B)
Dec. 6-10	Oregon City (C)
Dec. 6-12	Portland (B)

Backflow Assembly Tester Recertification

Oct. 15	Oregon City (C)
Oct. 21-22	Oregon City (C)
Oct. 27-28	Portland (B)
Nov. 5	Oregon City (C)
Nov. 18-19	Oregon City (C)

Cross Connection Inspector Course

Oct. 4-7	Portland (B)
Nov. 1-4	Oregon City (C)

Cross Connection Inspector Recertification

Oct. 29	Oregon City (C)

Small Water System Training Course
OAWU
503-873-8353

Oct. 6	Baker City
Oct. 13	Salem
Oct. 20	Tillamook
Nov. 10	Deer Island
Nov. 23	Hillsboro

Department of Human Services
Drinking Water Program
P.O. Box 14450
Portland, OR 97293-0450

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