

Pipeline

Program update

by Dave Leland

Adding vital capacity

The 2007 Legislature added vital capacity that the county and state Drinking Water Program needs to carry out its responsibility to ensure safe drinking water in Oregon. During 2008, we began putting this capacity in place, and we look forward to completing capacity building in 2009.

The program capacity improvements authorized by the 2007 Legislature include:

- An additional \$2.5 million in General Fund moneys, including 11 new DHS positions and increased support for contracts with our county health department and Department of Agriculture partners;

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Best management practices for water main repairs

In an effort to better identify and agree on best management practices to protect public health during water service outages, 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); John McEvoy (Conference of Local Environmental Health Supervisors); 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 DWAC 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

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- Approval of a new fee for water system survey inspections;
- Approval of adjustments to existing fees for service (plan review, operator certification, backflow); and
- Statutory authorization of our Drinking Water Advisory Committee and broadening of its membership.

This increased capacity will enable the program to:

- Adopt and implement all EPA rules;
- Conduct effective, timely oversight of all public water systems;
- Address and prevent significant noncompliance;
- Perform timely water system inspections and ensure that deficiencies are corrected; and
- Generate timely, accurate and complete water system compliance data.

Adding staff and expanding county contracts

We completed recruitment and selection of 11 new positions within the Drinking Water Program. See the updated organization chart on page 3, showing the four work units and assigned staff. See also information under “Staff updates” on page 9. We created an additional work unit based in Springfield to cover the southwest part of the state, as shown in the regional map on page 6.

County and Department of Agriculture contracts were expanded to provide additional oversight and assistance to the many small water systems in those counties. Three additional counties — Harney, Grant and Lane — have executed contracts with DHS and assumed the drinking water duties. This brings the total number of local partners to 29, as shown on the regional map. The remaining counties are covered by state staff.

Implementing the water system survey inspection fee

During 2008, we adopted rules to implement the water system survey inspection fee. Early in 2008, we notified those water suppliers due for a survey during the year, and have now sent invoices for the completed surveys. The rules include “outstanding

performer” criteria for water suppliers based on the results of the most recent inspection. Water suppliers who meet the criteria are eligible for reduced inspection frequency from once every three years to once every five years.

Adopting new EPA rules

We currently are adopting the three most recent EPA drinking water regulations: the Long-term 2 Enhanced Surface Water Treatment Rule; the Stage 2 Disinfection By-products Rule; and the Ground Water Rule. The draft state rules will be filed with the Oregon Secretary of State and be announced March 1, 2009. You can review the draft rules on our Web site at oregon.gov/dhs/ph/dwp, along with a summary document describing the areas of the EPA rules that allow for state discretion and how we propose to exercise that discretion.

The public comment period will be open until Tuesday, March 31, 2009. We have scheduled public hearings in:

- Roseburg, March 24,
- Bend, March 25, and
- Portland, March 26.

After final adoption in May, we will apply to EPA for Primacy for these rules. Following EPA’s approval of Oregon Primacy, we will take over the responsibility for administering these rules in Oregon from EPA Region X, likely by fall 2009.

Increasing the Drinking Water Advisory Committee to 15 members

The committee has advised the program since the early 1980s, and was authorized in statute in 2007. The committee has expanded to 15 members, with four new positions to represent watershed councils, backflow testers and plumbers, environmental groups, and water users. Two of the new positions are filled as shown on the current committee roster on page 4. The committee has been actively engaged in the adoption of state rules to adopt the new EPA rules, the development of best management practices for water system operations during emergencies (see article on page 1), and oversight of the drinking water revolving fund.

We value and appreciate the committee's ongoing advice and counsel as we continue to implement the statewide drinking water program.

What's ahead?

Now that the expanded program capacity is in place, we are well-positioned to meet the challenges ahead. Explaining and implementing the new EPA rules will require substantial effort, both by the statewide program and water suppliers. Many water suppliers will be conducting new work to monitor and characterize their drinking water quality, and some will need to modify or add water treatment, modify operations, or improve drinking water sources to meet the new standards.

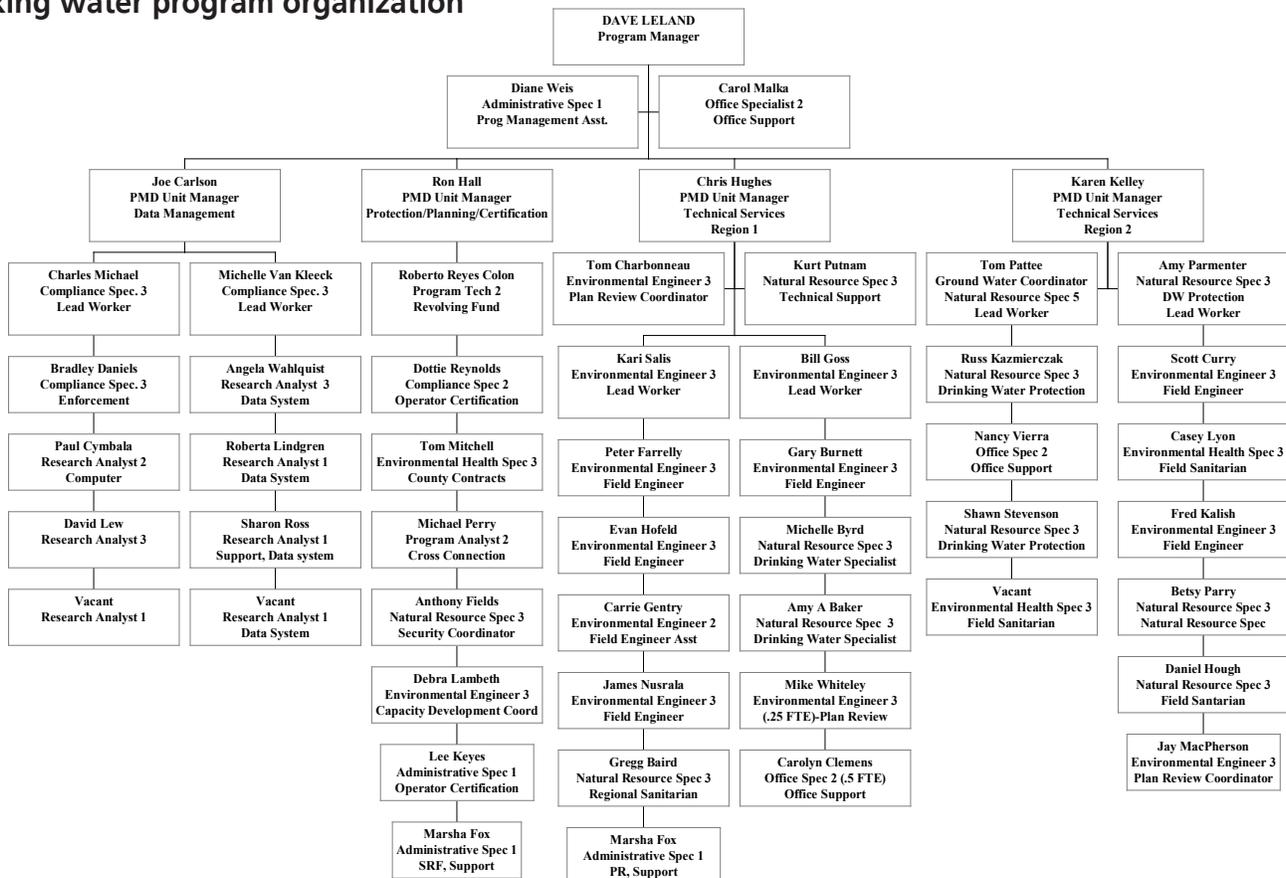
The large number of smaller water suppliers will need particular attention and assistance. Beginning active oversight of the very small non-EPA public water systems (four–14 connections, 10–24 people) is a significant challenge for state and county program staff. We look forward to progress on drinking water safety in all of these areas.

All this takes place in our current extraordinary economic times. The downturn is placing significant pressure on the state General Fund, and will occupy the attention of the 2009 Legislature. The Governor's Recommended Budget released in December 2008 included a proposed \$500,000 reduction in General Fund Moneys for the Drinking Water Program that would limit the extent to which the program could address the very small non-EPA public water systems. Discussion of a federal stimulus package is well under way, including directing a portion of the stimulus funding to drinking water infrastructure projects through the drinking water revolving fund. We are actively preparing for this possibility, including soliciting "shovel ready" projects from Oregon water suppliers.

Through it all, we will all do our very best to ensure that Oregonians have safe drinking water. Stay tuned!

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

Drinking water program organization



**DEPARTMENT OF HUMAN SERVICES
DRINKING WATER ADVISORY COMMITTEE**

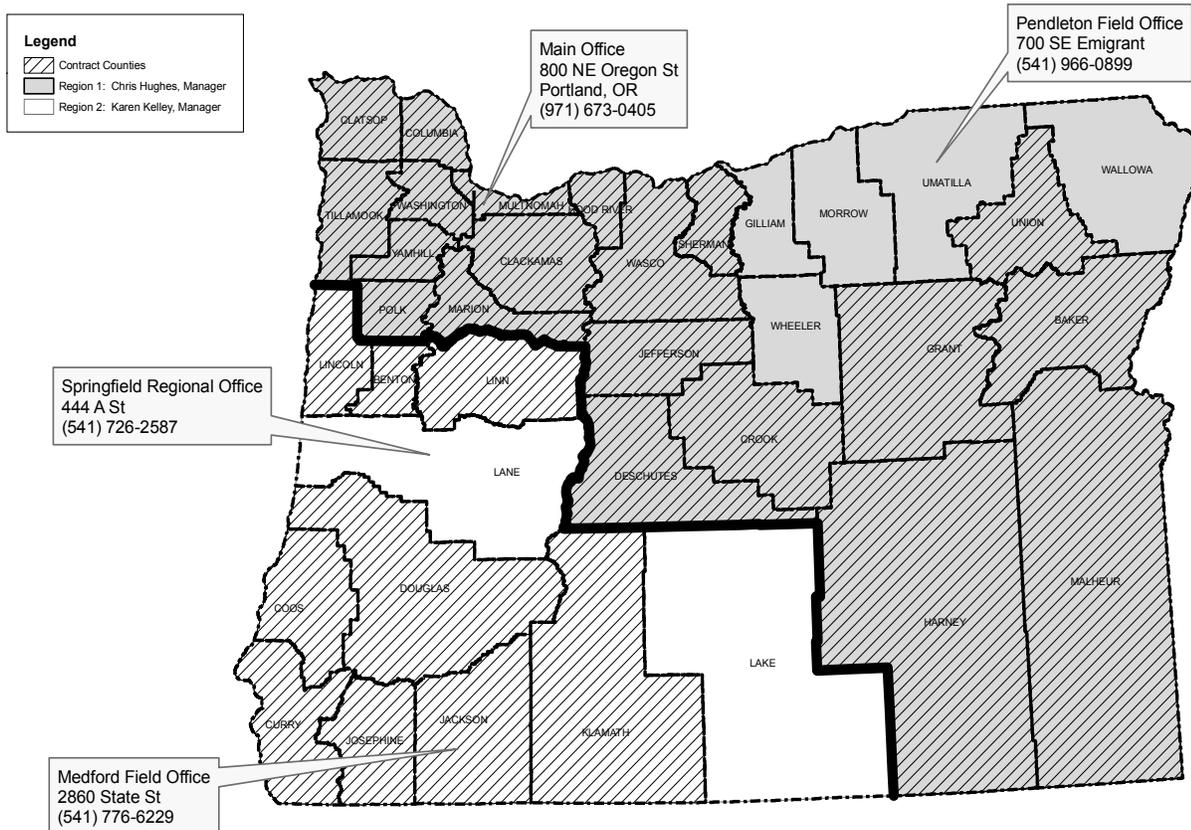
Ed Butts 4B Engineering 3000 Market St. NE, #527 Salem OR 97301	Oregon Association of Water Utilities	503-589-1115 F:589-1118 epbpe@juno.com	6/09
Sarah Chaplen 1290 Andrews Rd. Lake Oswego OR 97034	League of Women Voters of Oregon	503-635-8729 F:635-8729 cascadecarpette@ qwestoffice.net	6/09
Greg DeBlase Marion County Env. Hlth. 3180 Center St. NE #2274 Salem OR 97301	Oregon Environmental Health Association	503-588-5407 F:566-2986 gdeblase@co.marion.or.us	6/10
Bob Fuller CH2M Hill 2020 SW 4th Ave., Suite 300 Portland OR 97201	American Council of Engineering Companies - Oregon	503-872-4463 F:736-2000 bfuller@ch2m.com	6/09
Todd Heidgerken – Chair Tualatin Valley WD 1850 SW 170th Ave. Beaverton OR 97006	Large Water Systems	503-848-3013 F:356-3113 toddh@twwd.org	6/10
Mike Kurtz, Mngr. Suburban East Salem WD 3805 LaBranch St. SE Salem OR 97301	Special Districts Association of Oregon	503-364-1620 F:364-8215 seswd@wvi.com	6/09
Gerry Meyer Douglas Co. Env. Hlth. 621 W Madrone Roseburg OR 97470	Conference of Local Health Officials	541-440-3578 gvmeyer@co.douglas.or.us	6/11
Kathy Miller Public Utility Commission 550 Capitol St. NE, #215 Salem OR 97308	Privately Owned Water Systems	503-373-1003 F:373-7752 kathy.miller@state.or.us	6/09
Beth E. Myers Waterlab Corp. 2603 12th Street SE Salem OR 97302	Oregon Environmental Laboratory Association	503-363-0473 F:363-8900 waterlab@comcast.net	6/10

Liz Redon Network of Oregon Watershed Councils PO Box 175 Salem OR 97308	Watershed Councils	503-930-8202 liz_redon@msn.com	6/11
Brian Stahl – Vice Chair City of Gresham 1333 NW Eastman Pkwy. Gresham OR 97030	Pacific NW Section, American Water Works Association	503-618-2687 brian.stahl@ci.gresham. or.us	6/10
Steven Weaver City of Carlton 191 E Main St. Carlton OR 97111	League of Oregon Cities	503-852-7575 F:852-7761 sweaver@ci.carlton.or.us	6/10
Steve West Eugene Water & Elect. Bd. 500 E 4th Ave. Eugene OR 97401	Plumbers/Backflow Testers	541-341-3726 steve.west@eweb.eugene. or.us	6/11
New Position	Water Consumers		6/11
New Position	Environmental Advocacy Groups		6/11

Designated Alternates

Name and address	Association	Phone
Ed Campbell Portland Water Bureau 1120 SW 5th Ave., Suite 500 Portland OR 97204	Large Water Systems	ecampbell@water.ci.portland.or.us
Paul Eckley (Alternate) City of Salem 1410 20th St. SE, Bldg. #2 Salem OR 97302	Pacific NW Section, American Water Works Association	503-361-2220 F:588-6480
Mark Snyder (Alternate) Kernville-Gleneden- Lincoln Beach WD PO Box 96 Gleneden Beach OR 97388	Oregon Association of Water Utilities	541-764-2475 F:764-2459 marksnyder@kgblbwater.com

Drinking Water Program Technical Service Regions



Best management practices — continued

- Disinfection or Filtration Treatment Interruption

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 is of most interest to water suppliers. A number of water suppliers provided comments and improvements to the guidelines and some have since used the guide to improve their own procedures. The completed guide is printed on page 7 as approved by the Drinking Water Advisory Committee at its

October 8, 2008, meeting.

The subcommittee has now been focusing on the remaining two guidelines which are anticipated to be considered for adoption during the April 15, 2009, DWAC meeting. Those interested in commenting on either the "Service Outages Due to Reduced Pressure Events" or "Disinfection or Filtration Treatment Interruption" BMP guidelines are encouraged to contact one of the subcommittee members or the Drinking Water Program before March 31, 2009.

BEST MANAGEMENT PRACTICES FOR CUTTING INTO OR REPAIRING EXISTING WATER MAINS FINAL 10/08/08

Repair Scenarios:

- 1) Make repair while maintaining positive pressure (best)
- 2) Make repair without pressure using best management practices (desirable)
- 3) Make repair without pressure without using best management practices (least desirable)

1) Make repair while maintaining positive pressure:

- Leaks or breaks repaired with clamping devices while mains remain full of water under positive pressure present little likelihood of contamination and require no additional precautions or practices.

2) When water mains must be partially or wholly dewatered to make repairs, the following practices apply:

- Water mains that are completely depressurized in order to be cut into or to repair leaks or breaks are susceptible to contamination. Following all of the best management practices listed below provides public health protection when repairs must be made under these conditions:

Preparation for repair:

- Throttle down main line valve(s) to reduce flow yet maintain positive pressure
- Isolate mainline by shutting off customer services at the meters
- Excavate below the main creating a sump and dewater
- Isolate mainline by shutting down mainline valve(s)
- Notify customers of outage when practical
- Notify customer service staff in case of customer calls

Repair process:

- Treat exterior of exposed pipe with hypochlorite solution (account for control of residual chlorine in discharged water)
- Disinfect all repair items, piping and appurtenances per AWWA C651 Standard
- Conduct the repair with disinfected parts

Preparation for cutting into:

- Isolate mainline by shutting off customer services at the meters
- Excavate below the main creating a sump and dewater
- Isolate mainline by shutting down mainline valve(s)
- Notify customers of outage when practical
- Notify customer service staff in case of customer calls

Cut in process:

- Initiate the cut in procedure by removing existing pipe and dewatering the remaining pipe
- Treat exterior of exposed pipe with hypochlorite solution (account for control of residual chlorine in discharged water)
- Disinfect all repair items, piping and appurtenances per AWWA C651 Standard
- Complete the cut in procedure with disinfected parts

Post cutting into and repair activities:

- Repressurize the main by opening mainline valve(s) and check for leaks
- Flush the line through a fire hydrant or blowoff. Flush in a direction to best clear the main of any debris / sediment, and until air is gone and water flows clear.
- For water systems that apply and maintain a chlorine residual, check the chlorine residual at a point downstream of the main break. Residual should be consistent (not lower) with surrounding area.
- Collect a coliform bacteria sample per AWWA C651 Standard to provide a record of repair procedure effectiveness. Mark as a "special sample" and retain in utility records for 2 years.
- Restore all valves to their normal operating positions.
- Open customer services and operate the outdoor hose bib to remove air and turbid water. If no outside bib is accessible, leave instructions for customer on flushing.
- If the post-repair 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.

3) Make repair without pressure without using best management practices:

- Water mains that are completely depressurized in order to be cut into or to repair leaks or breaks are susceptible to contamination. When all the best management practices listed above can not be followed, additional measures to protect the health of affected customers are necessary:
- Notify affected customers to take personal protection action (do not use water, boil water, or use bottled water). Include media notice if affected area is extensive.
- Notify state drinking water program
- Conduct the repair and flush water main.
- Flush customer services to remove air and turbid water.
- Collect a coliform bacteria sample to demonstrate water safety. Obtain coliform-absent result before proceeding.
- Notify users that water is safe to use.

Operator certification corner:

Completing an Affidavit of Employment

by Dottie Reynolds

When an individual applies for an operator certification exam, the application must be accompanied by an Affidavit of Employment. The Affidavit of Employment can be completed by the Direct Responsible in Charge (DRC), the immediate supervisor, manager, owner, mayor,

or other legal representative of the facility. The signer of an Affidavit of Employment is testifying that the person named has had the type and duration of water treatment or distribution experience indicated on the form. We are looking for specific information about the applicant's qualifying experience:

- What were his or her job duties?
- What percentage of time was spent in distribution or treatment?



- What percentage of time was spent in other activities not on the affidavit, and what were those activities?

Experience is one of the prerequisites for certification. We accept the authorized representative's signature as verification that the applicant has in fact had the appropriate experience. We rely on the validity of the affidavit as a third-party check on the applicant's employment claim, underscoring the fact that this is an important document which is fundamental to the integrity of the system.

Internally, your organization may use certification for promotions and pay raises. We use certification to demonstrate to the public and to employers that the operator has a minimum level of knowledge, skills and ability to produce safe drinking water and meet regulations. If an individual takes his or her certification to another job or setting that differs from the previous job, the individual must be able to apply the principles in that new setting. Therefore, very narrow experiences or duties may not be sufficient qualifications for certification.

The organization's senior management must ensure that each individual gets the appropriate experience and continuing education.

Note: The 2009 certification renewal online service is now a reality. If you have not yet renewed your certification, you may still renew online and pay the renewal and late fee. You must use the PIN number, as shown on the renewal form you received in November, and your certification number to register.

Dottie Reynolds is the operator certification program coordinator / 971-673-0426 or dottie.e.reynolds@state.or.us

Staff updates

Dennis Nelson retired from state service in September 2008 after 18 years of extraordinary service with the DHS Drinking Water Program. Dennis began his service in June 1990, first in the Portland office and then pioneered what has grown to be the Springfield regional office.

Dennis was the groundwater coordinator for DWP and, during his tenure, strengthened program policy and rules regarding issues such as Use and Susceptibility Waivers, Groundwater Under the Direct Influence of Surface Water, Source Water Assessments and Drinking Water Protection, to name a few. His vision and much of his past work serve as the backbone for the implementation of the forthcoming Groundwater Rule. Dennis is not only recognized as a leader in groundwater issues statewide but also on a national level, having served on several advisory committees and having received the E. Benjamin Nelson Government Service Award in 2005.

When asked about his fondest memories at DHS, Dennis replied that he was thankful for the great staff he worked with and that he felt his single greatest achievement was the development of the groundwater portion of the Drinking Water Protection Program.

Dennis continues to fulfill his interest in all things groundwater with GSI Water Solutions, an environmental consulting firm with a field office in Springfield. We will miss him dearly and wish him all the best. Perhaps someday he will let us know where his secret goldmine is located.

Tom Pattee in the DHS Drinking Water Program Springfield office has taken over Dennis's duties. You can reach Tom at 541-726-2587, ext. 24, or by e-mail at tom.pattee@state.or.us.

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Michelle Byrd began working in the Data Management, Compliance and Enforcement Unit of the Drinking Water Program, Portland office, Oct. 16, 2008. On Nov. 24, 2008, she moved to a Natural Resource Specialist 3 position with the Technical Services Unit, Region 1, in the Portland office. Her primary duties are working with water systems in the field, mainly in Central Oregon.

She received a bachelor's degree in geology and worked for the Idaho Department of Environmental Quality as a water quality analyst in the Drinking Water Program for seven years prior to coming to Oregon. Michelle can be reached at 971-673-0484 or michelle.p.byrd@state.or.us.

Carolyn Clemons began working for the Technical Services Unit, Region 1, of the Drinking Water Program in the Pendleton office as an Office Specialist 2 on Sept. 1, 2008.

Her primary duties include office support and organization for the Pendleton office. She has extensive experience in this area including secretary senior for the State of Washington, Department of Health, Office of Drinking Water. Carolyn can be reached at 541-966-0902 or carolyn.m.clemons@state.or.us.

Daniel Hough joined Region 2 of the Technical Services Unit in October 2008. Daniel joined us from Jackson County Health and Human Services where he worked in the Drinking Water Program.

He has a B.S. in environmental science and is a registered environmental health specialist. He will be responding to water quality issues and conducting water system surveys throughout Southern Oregon out of the Medford Office. When he isn't testing water, Daniel also enjoys playing in it. Daniel can be reached at 541-776-6229, ext. 407, or daniel.l.hough@state.or.us.

James "Jay" MacPherson started Jan. 14, 2009, as a regional engineer with the Technical Services Unit, Region 2, of the Drinking Water Program in the Springfield office.

Jay relocated from Thousand Oaks, Calif., where he worked with Stantec Consulting Inc. Jay is an Oregon registered engineer with a Ph.D. in environmental science and engineering, an M.S. in environmental chemistry and a B.S. in biology. Jay can be reached at 541-726-2587, ext. 57, or james.r.macpherson@state.or.us.

Shawn Stevenson began work as a natural resource specialist Jan. 26, 2009, for the Technical Services Unit, Region 2. He comes to the Drinking Water Program from the Oregon Association of Water Utilities where he had worked as a source water specialist since 2004. He has a dual B.S. degree in environmental science and geology. Shawn can be reached at 541-726-2587, ext. 32, or shawn.p.stevenson@state.or.us.



Meeting calendar

Drinking Water Advisory Committee

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

April 15, 2009
July 15, 2009

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

Training calendar

Continuing Education Units (CEU) for Water System Operators

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

Oregon Association of Water Utilities (OAWU)

503-873-8353

Apr. 7-9	Small Water System O&M School
Apr. 7	Control Valves by GC Systems
Apr. 21	Utility Management Work Shop
Apr. 21-23	Water Treatment/Distribution Certification Review

Oregon APWA Training Program

541-994-3201

Apr. 8-10	Street Maintenance and Collection Systems
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OCT Academy

1-866-266-0028

Mar. 23-24	2-Day Mathematics for Collections Systems Operators
Mar. 25	Collections Certification Review
Apr. 27	Sampling Procedures
Apr. 28	Water Treatment Technology Review
Apr. 29	Water Treatment Filtration
Apr. 30-May 1	2-Day Mathematics for Water Treatment Operators

Backflow Management Inc.

503-255-1619

Apr. 15	Confined Space Entry
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Cross Connection/Backflow Courses

Backflow Management Inc. (B)

503-255-1619

Clackamas Community College (C)

503-675-6958 ext. 2388

Backflow Assembly Tester Course

Mar. 30-Apr 3 Redmond (B)

Apr. 27-May 1 Portland (B)

Backflow Assembly Tester Recertification

Mar. 27 Portland (B)

Apr. 16 Portland (B)

Apr. 23 Portland (B)

Cross Connection Inspector Course

Apr. 6-9 Portland (B)

Cross Connection Inspector Recertification

Apr. 22 Portland (B)

Water System Training Course

OAWU

503-873-8353

Mar. 25	Eagle Point
Apr. 15	Salem
Apr. 28	Bend
May 13	Clackamas
May 14	Hillsboro
May 20	The Dalles

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

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