

PIPELINE

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Drinking Water Program wins \$3 million boost from Legislature

by Dave Leland and Gail Shibley

More Oregonians will have safer water to drink with the 2007 state Legislature’s passage of a trio of initiatives designed to improve and expand the state’s Drinking Water Program.

“There is nothing more fundamental to our health than safe drinking water,” Dr. Susan Allan, Public Health Division director, said. “Now more people throughout the state can be assured that their drinking water meets all state and federal standards for safety.”

With the June approval of a \$3 million boost to the Drinking Water Program, Oregon can now proceed with full implementation of all current U.S. Environmental Protection Agency (EPA) health protection standards and move toward adopting new, more comprehensive standards.

The provision also will eliminate disparities in safety between large and small drinking water systems,

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Looking at 10 years of the Drinking Water State Revolving Fund

by Roberto Reyes-Colón

Over the past 10 years, 75 Oregon communities used the fund to support \$131 million in safe drinking water projects. We can all celebrate this important achievement to protect public health.

The Federal Safe Drinking Water Act (SDWA) amendments of 1996 established the Drinking Water State Revolving Fund (DWSRF) program. The DWSRF was designed to assist public water systems with financing the infrastructure costs of achieving or maintaining compliance with SDWA requirements, and to promote public health objectives of the SDWA as amended.

The DWSRF is patterned after the highly successful Clean Water State Revolving Fund program, which under the Clean Water Act, has provided more than \$59 billion in financing nationwide since 1988 for wastewater infrastructure needs.

The DWSRF program differs dramatically from its clean water counterpart in that it allows up to 31 percent of each year’s federal allocation, known as the capitalization grant to be set aside for state drinking water programs, including Public Water Systems Supervision (PWSS), source water protection, capacity development, operator certification and small system technical assistance. The remainder of each yearly grant (as much as 96 percent or as little as 69 percent) is used for drinking water infrastructure loans. Since the program’s inception in 1997, the DWSRF has provided more than \$11.5 billion nationwide in loans for drinking water infrastructure.

Congress intended that the State Revolving Loan Fund program be fundamentally a program of the states. Therefore, there is great flexibility in state program design, and to direct funding toward states’ most important public health needs. In Oregon a partnership of

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Umpqua Basin Water Association installs membrane filtration

by Brad Johnson, general manager, UBWA, & Bob Ward, Black & Veatch

ROSEBURG – Umpqua Basin Water Association (UBWA) became the first large water supplier in Southern Oregon to install membranes to replace its conventional filtration system. UBWA serves about 9500 customers through 280 miles of distribution pipelines in a 100 square mile service area west and north of the city of Roseburg.

The new 6 million gallons-per-day system went into service in December 2006. The new system replaced the aging pressure filter system. Primary drivers for the move to membranes as compared to a new conventional treatment system were:

- Reliability to produce a high-quality finished water
- Meeting current and anticipated regulations
- Ability to easily expand the system from 4 to 6 to 8 million gallons per day (MGD)

Major components of the upgrades included:

- Upgrades to the water intake, including new fish screens
- Enhanced flocculation/sedimentation facilities
- New membrane filtration system provided by GE Zenon
- Onsite generation of Sodium Hypochlorite provided by Miox Corporation
- Additional 200,000 gallon finished-water clearwell
- Updated finished-water pumping facilities pump controls with adjustable frequency drives (AFD)
- A new SCADA system for the plant

The plant consistently produces 0.02 nephelometric turbidity units (NTU) finished water regardless of the raw-water turbidities, which have been as high as 170 NTU. The focus of the treatment process has changed to maintaining capacity as quality is assured, compared with the prior focus on maintaining quality in the conventional plant. UBWA also installed an On Site Sodium Hypochlorite Generation system to replace its chlorine-gas cylinder system. This was for safety reasons and some customers have reported the water has an improved taste with the new system.

Black & Veatch prepared specifications for early procurement of membrane filtration equipment. The membrane system selection evaluated all life-cycle costs of the systems, including initial cost; clean-in-place chemicals and waste disposal; pumping energy; membrane repair and replacement; operator staff time; and maintenance costs. The plant was planned to be a 4 MGD plant with expansion capacity to 8 MGD. The membrane costs from GE Zenon were competitive enough that UBWA could afford to upgrade to 6 MGD as part of the project.

The project was constructed using a design build process called EPC (Engineer – Procure – Construct). Black & Veatch served as the design engineer and the general contractor. Black & Veatch was at risk for meeting a Guaranteed Maximum Price (GMP) for the work, meeting a schedule, and plant performance guarantees. The total cost of the project was \$9.2 million for 6 MGD of treatment capacity and system designed to be expanded to 8 MGD by adding one more 2 MGD treatment train. The project took 25 months from notice-to-proceed until the plant was operational. The project was operational four months ahead of schedule and completed under budget.

The new plant was dedicated on March 24, 2007. The Umpqua Basin board of directors honored retiring General Manager Noel Groshong by naming the plant in his honor. The latest in membrane technology can now be seen at the Noel Groshong Water Treatment Plant. Please contact Brad Johnson at 541-672-5559 or bjohnson@ubwa.org and Bob Ward at 503-699-2330 or wardrb@bv.com with questions or to arrange a tour of the facility.



Finished water pumps and plant piping. Membranes located in basin in background.

2007 Drinking Water Infrastructure Needs Survey now underway

by Ron Hall

EPA's Drinking Water Infrastructure Needs Survey and Assessment is currently underway. This survey documents the total national and state specific infrastructure needs of public water suppliers over the next twenty years (1/1/07 to 12/31/2026). The needs are reported to Congress and used in determining the amount of Drinking Water State Revolving Fund (DWSRF) monies awarded to each state for fiscal years 2010 through 2013.

Approximately 3,500 of the 55,000 community water systems across the country have been selected to participate in the survey. The survey divides water systems into two classifications — those serving greater and lesser than 3,300 population. The needs of each system are extrapolated to represent the total need for each state. State needs are totaled to produce an estimate of the national need. The Drinking Water Program is conducting the large system survey while the small system survey is being conducted by an Environmental Protection Agency (EPA) contractor with the assistance

of the state. Some systems were also surveyed during the 2003 update and will be able to provide the needed information based on that assessment and subsequent updates to their capital improvement and master plans.

Each state is allocated a pro-rated portion of the funding to support the documented needs. Full participation and complete documentation of needs can increase the state share to above the minimum level of 1 percent of the DWSRF. Oregon's participation in the 2003 survey resulted in a funding allocation of 1.46 percent. Last year, that generated an extra \$4 million for our loan fund. This is a fund that has provided more than \$100 million in low interest financing for public water supply infrastructure in Oregon.

Systems serving less than 3,300 population are being contacted directly by the EPA contractor, Dan Fraser of Southwind Consulting, for assistance in completing the survey.

We appreciate these efforts that will represent Oregon's needs and benefit of all our public water systems.

Ron Hall is the unit manager for the Protection, Planning and Certification Unit of the Drinking Water Program, 971-673-0409 or ronald.a.hall@state.or.us

The following systems have been selected to represent the infrastructure needs of large systems:

City of Ashland	City of Hood River	Philomath Public Works
City of Albany	Ice Fountain Water District	City of Phoenix
City of Beaverton	Independence Water System	Portland Bureau of Water Works
Avion Water Company-Avion	City of LaGrande	Tualatin Valley Water District
Bend Water Dept	Lake Oswego Municipal Water	Rockwood Public Utility District
City of Boardman	Lincoln City Water District	Redmond Water Department
City of Brookings	McMinnville Water and Light	City of Reedsport
City of Central Point	Deschutes Valley Water District	Salem Public Works
Clackamas River Water	Medford Water Commission	City of Keizer
Coos Bay North Bend Water Board	City of Milton-Freewater	Suburban East Salem Water District
City of Corvallis	City of Milwaukie	City of Sherwood
Eugene Water and Electric Board	Tri-City Joint Water and Sewer Administration	Springfield Utility Board
Kernville-Gleneden-Lincoln Beach Water District	City of Newberg	Crooked River Ranch Water Company
City of Grants Pass	North Clackamas County Water Company Oak Lodge	City of Tigard
Gresham PWO-Water Section	City of Ontario	City of Tualatin
Hillsboro and Joint Water Commission Plant	Oregon City-South Fork Water Board	City of Woodburn

DWP gets \$3 million boost — continued from cover

extending safeguards to consumers whose supplies come from small and very small public systems. This is a key development as roughly 90 percent of Oregon's public water systems are small and serve 500 or fewer residents. "For the more than 3.7 million Oregonians and visitors to our state who depend on community drinking water supplies every day, the changes will help assure that drinking water provided by all public water systems statewide is safe and reliable," Dr. Allan said.

Drinking water officials have long recognized standards and testing for quality are crucial in reducing waterborne disease risk and other chronic health problems. Since the 1970s, implementation of more stringent drinking water-quality testing programs throughout the nation has resulted in significant reductions in acute disease outbreaks related to contamination by bacteria, viruses and parasites. But in Oregon, support for such efforts has lagged. In 2001 and then again in 2004, the Oregon Secretary of State and a legislative task force both underscored the need for improvements.

Dr. Allan also noted safe drinking water supplies are crucial to the state's economy, particularly as Oregon grows and continues to be a prime destination for vacationers and people looking to live in an area with a high quality of life. "Safe drinking water is so important that it is recognized by the Centers for Disease Control and Prevention as one of the top 10 achievements of public health in the 20th century."

Lawmakers' support for the expansion and improvements was clear, Dr. Allan said, noting the bulk of the new funding -- \$2.6 million -- was authorized by the legislators to come from the General Fund. The legislation also creates a fee system to charge water suppliers for conducting periodic sanitary-survey inspections of public water systems, a cost estimated to be \$200,000.

Strong leadership and advocacy from state and local public health, local drinking water utilities and other partners are credited for garnering support for the initiatives. Originating the measures were the Public Health Division, the Office of Environmental Public Health and the Drinking Water Program, all part of the state Department of Human Services.

Concerns over safe drinking water in Oregon have centered on filtration implementation, disinfection treatments, and the reduction of lead levels at the tap. Additional issues have focused on the state's ability to implement new EPA standards governing parasitic microorganisms in surface water, disinfection byproducts, arsenic and viruses in groundwater.

The action by the Legislature is considered crucial to Oregon's ability to meet new standards expected to be set by the U.S. EPA related to radon, distribution system protection and emerging contaminants like perchlorate and methyl tertiary butyl ether (MTBE).

The action also created a Drinking Advisory Committee in state statute. That panel will help communicate the importance of insuring safe drinking water.

The following is a very brief summary of the extensive work that lies ahead to implement the actions of the 2007 Legislature by the end of the 2007-09 Biennium:

- Recruit, select, and train new staff: November 2007-March 2008
- Amend intergovernmental agreements with local county health departments: August 2007-January 2008
- Expand participation in the Drinking Water Advisory Committee (SB 156): August 2007-January 2008
- Develop and adopt sanitary survey fee schedule (HB 2187): August 2007-January 2008
- Negotiate 2-yr Primacy extension from EPA for new standards: October 2007-January 2008
- Apply for Primacy for all new EPA standards: September 2008-June 2009
- Adopt variance rule (HB 3469): September 2008-June 2009

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Gail Shibley, Administrator of the Office of Environmental Public Health, recognizes key people for their efforts to improve public health during the 2007 Legislative Session. Pictured (clockwise from upper left): Mike Kurtz, Suburban East Salem Water District; Todd Heidgerken, Tualatin Valley Water District; Dan Bradley, Oak Lodge Water District; Amanda Rich, Special Districts Association of Oregon

Looking back at 10 years of the DWSRF — continued from cover

the DHS Drinking Water Program, the Oregon Economic and Community Development Department, and the Oregon Department of Environmental Quality continues to provide low-interest loans to Oregon’s water systems.

Most Oregon loan recipients are small cities and towns with few or no resources available for major projects. Large cities also benefit.

The types of projects that are eligible for the DWSRF can range from planning and design to water conservation and efficiency. Each project is ranked by established criteria, to determine priority of order of funding. Those projects offering the greatest public health benefit receive the highest ranking.

Status of the Oregon Safe Drinking Water Revolving Fund (June 30, 2007).*

Total amount received:	\$110,112,868
Total Oregon state match:	\$26,605,680
Total interest, repayments, and investment interest:	\$13,885,354
Total available in loan fund all years:	\$153,106,732

Total uncommitted funds:	\$21,408,140
Total principal forgiveness:	\$4,459,000
Total number of projects funded:	75
Total amount loaned:	\$131,035,307

Six loans were for large systems, four loans were for private systems and 40 loans were to disadvantaged communities

Additionally, on July 1, 2007, Oregon received its 2007 allocation of \$12,034,000 that, together with the state match of 20 percent, will be added to the loan fund for future years.

*OEDD Quarterly Report- June 30, 2007

Roberto Reyes-Colón is the loan fund coordinator for the Drinking Water Program, 971-673-0422 or roberto.reyes-colon@state.or.us

certification corner by Dottie Reynolds

Operator



Don't lose your operator certification.

Have you moved or changed employers?

Every year, several operators lose their certification for failure to provide us with new information. The renewal packet sent out every November comes back to the Department as “undeliverable” or “Moved, left no forwarding address.” We make every effort to keep our records up to date, but it is the responsibility of the certified operator to inform the DWP office of any changes in address, last name, home or work telephone numbers, and employment. If you are reading this and it happens to be YOU, please call Lee Keyes at 971-673-0413 and provide any updates. In the near future you will have the ability to make address and telephone changes online.

Dottie Reynolds is the operator certification program coordinator in the Drinking Water Program, 971-673-0426 or dottie.e.reynolds@state.or.us

STAFF UPDATES

Brad Daniels began working for the Drinking Water Program in July 2007 as a Compliance Specialist 3 in the Portland office. His responsibilities include working with public water system data, determining compliance with regulations and coordinating enforcement actions. His experience includes serving as technician for the Oregon State Police, Forensic Services Division, and as a compliance investigator for the Oregon Department of Transportation, Motor Carrier Division. Brad graduated from the University of Alaska with majors in criminal justice and biological sciences. He can be contacted directly at 971-673-0407.

Chuck Michael began working for the Drinking Water Program in July 2007 as a Compliance Specialist 3 in the Portland office. His responsibilities include working with public water system data, determining compliance with regulations and coordinating enforcement actions. His compliance specialist experience includes performing tax-compliance audits of trucking companies for ODOT and facilitating compliance. Chuck graduated from the University of Oregon with a Bachelor of Science in economics. He can be contacted directly at 971-673-0420.

John Odisio, RS, retired June 30. His career spanned more than 20 years in state service beginning in 1983 with DEQ where he held positions of air quality permit coordinator, environmental compliance specialist,

Superfund clean-up specialist, and pollution prevention specialist. In 1999, he came to DHS and was the training and accreditation program coordinator for the Lead Based Paint Program. He became the Drinking Water Program enforcement coordinator in 2002 and completed his career as a field sanitarian in the Technical Services Unit. He had a long and diverse career, and his skills and experience will be missed.

Diane Stockton resigned as manager of the Data Management and Compliance Assurance Unit. Diane joined the Drinking Water Program in January 2005 and applied her extensive technical background in environmental regulatory compliance and project management to build our program's capacity to manage statewide safe drinking water data.

Dewey Darold resigned his position as program manager for the Cross Connection/Backflow Prevention Program in June to take a position with Yamhill County in the OnSite Waste Management Program. Recruitment for his position is underway.

Joe Auth, PE, regional engineer assigned to Region 1, resigned June 30 to pursue opportunities with ODOT.

Ingrid Tucker, office support for the Springfield office, resigned June 19 to pursue other opportunities.

Training calendar

CEUs for Water System Operators

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

OAWU

503-873-8353

Nov. 6-8 Small System Operator's Conference

Dec. 4-6 End of Year Operator's Conference

Backflow Management Inc.

503-255-1619

Dec. 11-12 Repair Basics for Backflow Assemblies

Water System Training Course

Department of Human Services

Marsha Fox, 971-673-0408

Nov. * Tillamook & St. Helens

* Dates to be announced

Cross Connection/Backflow Courses

Backflow Management Inc. (B)

503-255-1619

Clackamas Community College (C)

503-657-6958 ext. 2388

Backflow Assembly Tester Course

Nov. 5-9 Portland (B)

Nov. 12-16 Redmond (B)

Dec. 3-7 Clackamas (C)

Backflow Assembly Tester Recertification

Nov. 30 Clackamas (C)

Cross Connection Inspector Course

Nov. 5-8 Clackamas (C)

Dec. 3-6 Portland (B)



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