Oregon Drinking Water News
PIPELINE
Drinking Water Program, Oregon Health Division
Protecting Public Health by Assuring Safe Drinking Water

Vol.16, Issue 2 • Spring 2001 www.ohd.hr.state.or.us/dwp

DRINKING WATER ADVISORY COMMITTEE

Doug Wise, Chair of the Drinking Water Advisory Committee, recognizes Roger Jordan (on right) for his lengthy and valuable service. Mr. Jordan, City Manager of Dallas, represented the League of Oregon Cities on the Committee since 1986. He was instrumental in assisting and advising the Drinking Water Program in many key areas, including Primacy, program funding, the Safe Drinking Water Revolving Fund, and program priorities. We wish him well as he moves on to some key assignments for the League on the national level!

CITY OF TALENT

Construction of the Talent-Ashland-Phoenix (TAP) waterline intertie is well underway, assisted through the Safe Drinking Water Revolving Loan Fund. The project consists of the installation of over 8 miles of pipeline, mostly 24" and 16", to connect the city of Talent to the Medford Water Commission. A redundant connection to Phoenix and a possible future extension to Ashland are provided for. Also included are three pump stations, a 1.0 MG reservoir in Phoenix, and a 1.0 MG reservoir in Talent. The project will allow Talent to discontinue its reliance on Bear Creek as a water supply, which was implicated in the cryptosporidiosis outbreak that occurred in 1992.

MONITORING SCHEDULES

by George Waun and Kurt Putnam

In the last issue of the PIPELINE, we focused on the monitoring requirements for coliform bacteria. In this issue, we present two charts that summarize chemical testing requirements. The first chart (page 3) summarizes routine chemical monitoring requirements for community water systems and nontransient noncommunity water systems. The second chart (page 4) summarizes all monitoring for transient noncommunity water systems and for the very small "state-regulated" water systems.

Use these charts along with our website (www.ohd.hr.state.or.us/dwp, then go to "Data Online!") to compare what you need to do (the charts) with the record of what you have done (the website). We hope these two tools will help you to keep your water system in compliance with the testing and reporting requirements!

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DRINKING WATER PROGRAM UPDATE

by Dave Leland

The start of a new year gives us an opportunity to update you on the drinking water program. Here we review the Year 2000 accomplishments, the budget and legislative session outlook, results of outside reviews of the Primacy program and the revolving loan fund, and our projection for 2001.

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INSIDE THIS ISSUE:

STATE SURVEY SHOWS LITTLE MTBE IMPACT ON OREGON PUBLIC WATER SYSTEMS

A statewide survey conducted by the Oregon Department of Environmental Quality (DEQ) and the Oregon Health Division shows the state's public water systems are largely unaffected by the gasoline additive Methyl Tertiary Butyl Ether (MTBE), according to public health officials at the state Department of Human Services.

"The news is good. Out of 50 public water systems tested, only one showed any detectable level of MTBE, and it was well below the drinking water advisory level set by the U.S. Environmental Protection Agency," says Dave Leland, drinking water program manager at the Health Division. The Washington Street well in Vale (Malheur County) showed a MTBE level of 7 micrograms per liter, Leland says. The EPA advisory level is 20 to 40 micrograms per liter, which the EPA considers protective of health.

The survey was triggered by DEQ's past findings of MTBE in the drinking water of two other Oregon communities and in groundwater near leaking underground fuel tanks statewide. The source of MTBE in the two community water systems was nearby underground gasoline storage tanks that have since been removed or upgraded. The DEQ installed treatment equipment on the drinking water systems and levels are now substantially below the health advisory level.

"The EPA has determined that MTBE causes cancer in animals, and possibly could cause cancer in people. The findings of MTBE in our environment raised our concern about possible risks to human health. Because of this, we sampled selected public water systems throughout the state in September." Leland says.

Working together on the survey, the Health Division and DEQ chose 45 public water systems serving communities and schools that use wells located within 1/4 mile of underground fuel tanks. Five additional water systems were selected with lake sources that are used for motorized watercraft recreation. These selections represented a worst-case scenario and provide a good geographical representation throughout Oregon. Health Division staff collected water samples and the DEQ laboratory analyzed them.

MTBE is not currently tested by public drinking water systems. Beginning Jan. 2001, EPA regulations will require large water systems and randomly selected small water systems to begin testing in order to determine the occurrence of MTBE nationally.

The list of water systems tested in the September MTBE sampling survey and a fact sheet on MTBE are attached to this news release. More information on Oregon drinking water can be found on the web at www.ohd.hr.state.or.us/dwp/. General information about MTBE, its use, and occurrence in Oregon can be found on the web at www.deq.state.or.us/wmc/cleanup/mtbefctsht.htm.

NOTICE

by Chris Hughes

The following minor changes to the Oregon Administrative Rules for Public Water Systems will be incorporated into the next rule adoption process which will occur this year. These three changes are all found in the Oregon Administrative Rules Chapter 333-061-0043: Consumer Confidence Reports, and are as follows:

1. The following bolded words will be added to paragraph (3)(n)(B): "For systems which have failed to install adequate filtration or disinfection equipment or processes, **or have had a failure of such equipment or processes** which constitutes a violation...".
2. The health effects language for beryllium (#11 - Table 29) will be changed to match the health effects language in paragraph (6)(c)(E). The term "internal" will be changed to "intestinal".
3. The health effects language for chromium (#13 - Table 29) will be changed to match the health effects language in paragraph (6)(c)(G). The term "drink" will be changed to "use".

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CROSS CONNECTION UPDATE

By Bonnie Waybright

The current list of approved backflow assemblies is dated March 20, 2001. The list will be updated annually with addendums added quarterly. Call (503)731-4317 to request a copy.

Certification Renewal Time is Coming

Cross Connection Inspector and Backflow Assembly Tester certificates expire on **June 30, 2001**. If you haven't obtained the required training for your renewal, now is the time to sign up for a class. Classes are listed on the back page of this issue.

Scholarship Money Available for Cross Connection Training

The AWWA-PNWS Cross Connection Control Committee has scholarship money available for water systems serving 2,500 service connections or less. If you qualify and desire more information, contact: Hank Sims, Public Works Operations, 1410 20th St. SE, Bldg. 2, Salem, OR 97302-1212, ph. (503) 361-2223, FAX (503) 589-2178.

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Community & Non-Transient Water Systems Routine Chemical Monitoring*

Department of Human Services
Oregon Health Division
Drinking Water Program
Phone: (503) 731-4381
Fax: (503) 731-4077

January 1999 - December 2001 Compliance Period

Chemicals	Surface Water	Ground Water
Inorganics	Yearly	One
Arsenic	Yearly	One
Nitrate	Quarterly[1]	Yearly
Nitrite	One	
Asbestos	None[2]	
Synthetic Organics	One[3]	
Volatile Organics	One[3]	
Trihalomethanes (>10,000 population only)	Quarterly	
Radiologicals (Community PWS's only)	Every 4 years	
Lead and Copper	Yearly	

*This table describes base line monitoring only. Waivers, reductions, detections, and/or action level violations will affect the sampling requirements. You will find details on number, location and timing of samples in the Rules (see web page **@www.ohd.hr.state.or.us/dwp**). Send all sample results to: Oregon Health Division, Drinking Water Program, PO Box 14350, Portland, OR 97293-0350.

Inorganics: Testing may be reduced to one sample every 9 years if three rounds of sampling are completed and there are no Maximum Contaminant Level (MCL) violations.

Nitrate: Goes to quarterly sampling whenever a sample exceeds 5.0 mg/l.

Synthetic and Volatile Organics: Testing may be reduced to one sample every 6 years if the system has a state approved wellhead protection program or once every 9 years with a Use and Susceptibility Waiver. Note: EPA requires two samples during the compliance period for systems serving more than 3,300 people.

Trihalomethanes: Trihalomethanes are currently monitored either quarterly or annually by systems with a population of 10,000 or greater. Additional monitoring for Disinfection Byproducts is required CY 2002, etc.

Lead and Copper: Testing may be reduced to once every 3 years given that 3 annual rounds are done.

[1] Nitrate: Testing for surface systems can be reduced to annually after 4 quarters of sampling and a reduction is requested in writing.

[2] Asbestos: Routine monitoring is one sample every nine years if the system has asbestos-cement (A/C) pipe, or is located in an identified geographic area. Waivers may eliminate this testing. Monitoring will go to one sample every 3 years if the system exceeds Lead and/or Copper action levels.

[3] Synthetic and Volatile Organics: Systems with population of greater than 3,300 must do two quarterly samples during one year of the compliance period.

This table supersedes previous editions. Revised March 21, 2001

Transient Non-Community & State Regulated Water Systems Routine Monitoring*

Department of Human Services
Oregon Health Division
Drinking Water Program
Phone: (503) 731-4381
Fax: (503) 731-4077

Chemicals	Sample
Inorganics (Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cyanide, Fluoride, Mercury, Nickel, Nitrite, Selenium, and Thallium)	Once
Nitrate	Yearly

Turbidity *(for Surface Water only)*	1 Reading Every 4 Hours[1]

	Source of Water		
Coliform Bacteria	Ground Water (well)		Surface Water (stream, lake, etc)
	Average Daily Population Served		
	≤1000 Quarterly Sampling	> 1000 Monthly Sampling[2]	Monthly Sampling

Quarterly Coliform Bacteria Sampling

Quarter	Collect Sample Between[3]
1st Quarter	January 1 and March 31
2nd Quarter	April 1 and June 30
3rd Quarter	July 1 and September 30
4th Quarter	October 1 and December 31

*These tables describe base line monitoring only. Waivers, reductions, and/or detections will affect sampling requirements. You will find details on number, location and timing of samples in the Rules (see web page **@www.ohd.hr.state.or.us/dwp**). Send all sample results to: Oregon Health Division, Drinking Water Program, PO Box 14350, Portland, OR 97293-0350.

[1] A system using Slow Sand or Cartridge Filtration can reduce monitoring to once per day with Division approval.
[2] Number of routine samples is dependent upon population. See Rules for details.
[3] Sample early in quarter to avoid problems with mail, lost samples, weather, and other difficulites.

This table supersedes previous editions. Revised March 21, 2001

WHAT EVER HAPPENED TO UNREGULATED CONTAMINANT MONITORING?

by Kurt Putnam

Monitoring requirements for unregulated contaminants (those with no MCLs) have changed. In September of 1999, EPA revised the Unregulated Contaminant Monitoring Rule (UCMR) to suspend the old list of contaminants, develop and limit the number of new contaminants and exempt small water systems (<10,000 persons) from monitoring requirements. Eleven small systems in Oregon, however, have been randomly selected and paid for by EPA to monitor and Oregon Health Division (OHD) has volunteered to collect samples for these systems. If you are one of these systems you will be notified by OHD. Large Community and Non-transient Non Community water systems (>10,000 persons) are required to continue monitoring, but will be required to have their lab report directly to EPA through a web based data entry system. You are not required to send results to OHD. Large surface water systems are required to collect four consecutive quarterly samples and large ground water systems two samples (six months apart) in one year of their choice during the 2001-2003 sampling period for List 1(assessment monitoring) contaminants. EPA has established two other lists of contaminants, List 2 (Screening Survey) and List 3 (Pre-Screen Testing) which are in varying states of development. EPA will correspond with you directly, if and when, contaminants from these additional lists are required to be monitored by your system. Remember the UCMR is administered directly by EPA and is no longer a part of Oregon Public Water System regulation (OAR 333-061).

For more information on the UCMR the following resources are available to you: Websites www.epa.gov/safewater/ucmr.html (the "UCMR Update" page is especially helpful) and www.epa.gov/safewater/standard/ucmr/main.html or Gene Taylor, EPA region 10, phone (206) 553-1389 or email taylor.genem@epa.gov or OHD email Kurt.D.Putnam@state.or.us (limited information).

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UCMR MONITORING LIST

List 1	List 2	List 3
Assessment Monitoring of Contaminants with Available Methods	Screening Survey of Contaminants Projected to have Methods by Date of Program Implementation	Pre-Screen Testing of Contaminants Needing Research on Methods
2,4-dinitrotoluene 2,6-dinitrotoluene DCPA mono acid DCPA di acid 4,4-DDE EPTC Molinate MTBE Nitrobenzene Terbacil Acetochlor Perchlorate	Diuron Linuron Prometon 2,4,6-trichloro-phenol 2,4-dichloro-phenol 2,4-dinitrophenol 2-methyl-l-phenol Alachlor ESA 1,2-diphenyl-hydrazine Diazinon Disulfoton Fonofos Terbufos Aeromonas Hydrophila Polonium-210 RDX	Algae and toxins Echoviruses Coxsackieviruses Helicobacter pylori Microsporidia Caliciviruses Adenoviruses Lead-210

Drinking Water Program Update *(Continued from page 1)*

Year 2000 Accomplishments

What a year it was for Oregon public water suppliers and the drinking water program! Here's our "top ten" list:

- The Oregon Drinking Water Benchmark remained at a level of 90% (the percentage of Oregonians served by public water systems that met all health-based standards continuously during the year). No waterborne disease outbreaks were recognized in public water systems.
- 22 Oregon communities, serving a total of over 21,000 people, completed water system improvements in 2000 to meet safe drinking water standards.
- The drinking water program obtained the fourth and fifth Safe Drinking Water Revolving Loan Fund awards from EPA, bringing the total federal funding available to Oregon communities for safe drinking water projects to $64M. To date, $23.5M have been committed to loans to 21 communities. Loan applications are pending or in preparation by 20 additional communities.
- Working with DEQ, the program conducted and publicized a statewide screening survey of community and school water systems located near leaking underground fuel tanks for the presence of the gasoline additive MTBE. (See October 25, 2000, news release at the Health Division website at http://www.ohd.hr.state.or.us/news/2000/1025dwp.htm)
- The program received national recognition of the drinking water program homepage (http://www.ohd.hr.state.or.us/dwp) and the web query feature allowing public viewing of public water system water test results.
- Working with the Drinking Water Advisory Committee and a stakeholder group, the drinking water program developed a proposal to train and certify operators of small public water systems and a legislative bill for the needed authority (HB 2239).
- Working with the Drinking Water Advisory Committee, the program developed an "Oregon Capacity Strategy" to improve the technical, managerial, and financial capacity

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IS YOUR UTILITY READY FOR THE NEW MICROBIAL AND DISINFECTION BYPRODUCT REGULATIONS?

by Mike Grimm

Beginning January 2002, the first of many new regulations for community water systems take effect. With even more federal rule-making activities on the horizon that will create more changes in the regulations, it may be difficult to determine what actions your water utility should take now. These first set of regulations, commonly known as the Interim Enhanced Surface Water Treatment Rule (IESWTR) and the Disinfectant-Disinfection By-product Rule (DBPR), are already written into Oregon's Administrative Rules. These rules can be accessed on the Drinking Water Program's web page at: **http://www.ohd.hr.state.or.us/dwp/pwsrules.htm**

There has been a great deal of confusion among water utility personnel (and many regulatory personnel, too) as to what the requirements are, which ones apply to one's water utility, and when will work need to begin. In addition, some parameters need to be monitored during 2001 prior to the new rule additions becoming effective in 2002.

Why does the water industry need an "interim" surface water rule when the original one seemed to be just fine? Mostly, the answer is ***"Cryptosporidium"***. The original rule was crafted to address treatment for ***Giardia lamblia***. The tightening of the combined filter effluent (CFE) turbidity standards and the introduction of individual filter effluent (IFE) trigger standards for conventional and direct filtration plants are all designed to achieve a minimum 2.0-log removal of Cryptosporidium. At the same time as tighter filtration treatment requirements are in effect, regulations balancing the magnitude of microbial inactivation with the potential formation of disinfection byproducts begin. By the time these rules have been completely implemented, any community water system or non-transient non-community water system that serves water that has a disinfectant other than UV light will be required to monitor for disinfection byproducts in the distribution system.

Here is a quick summary of the compliance dates associated with these rules grouped by water system type:

Systems serving a population of at least 10,000 using surface water or groundwater under direct surface water influence:

- For systems with conventional filtration treatment plants, begin collecting one raw and one filtered sample for total organic carbon each month no later than **April 2001**. Testing will continue for 12 consecutive months.
- Monitor for total trihalomethanes (TTHM) and haloacetic acids (HAA5) four times each (for a combined total of 8) per treatment plant (or well) per quarter beginning in the **first quarter of 2002 (January through March)**.
- Turbidity treatment technique requirements take effect **January 1, 2002**.

Systems serving a population of less than 10,000 using surface water or groundwater under direct surface water influence:

- Turbidity treatment technique requirement changes are not yet established but will be when the EPA releases the final LT1-ESWTR **May 2001**. Most likely, the requirements of the larger systems will be passed on to these smaller systems. It is estimated that implementation would take place **May 2004**.
- Monitor for total trihalomethanes (TTHM) and haloacetic acids (HAA5) one time each per treatment plant (or well) per quarter (and for systems serving a population of less than 500, once per year) beginning in the **first quarter of 2004 (January through March)**.

All water systems using groundwater:

- Monitor for total trihalomethanes (TTHM) and haloacetic acids (HAA5):
  1. One sample each per treatment plant (or well) per quarter and for systems serving a population of at least 10,000 beginning in the **first quarter of 2004 (January through March)**.
  2. One sample each per treatment plant (or well) per year beginning in the **first quarter of 2004 (January through March)**.

Next time, we will talk about sample site selection, compliance calculations, and what is ahead **after** these regulations. If you have any questions about these requirements, feel free to give me a call at (503) 731-4317 or an e-mail at michael.w.grimm@state.or.us

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Turbidity Treatment Technique Requirements

Conventional and Direct Filtration Treatment Plants	• CFE: Less than or equal to 0.3 NTU in 95% of the measurements taken each month. • CFE: Never to exceed 1 NTU. • IFE Triggers: 1. Turbidity greater than 1.0 NTU in 2 consecutive measurements taken 15 minutes apart. 2. Turbidity greater than 0.5 NTU in 2 consecutive measurements taken 15 minutes apart after the first 4 hours that filter has been on-line since start-up. 3. Turbidity greater than 1.0 NTU in 2 consecutive measurements taken 15 minutes apart at any time in each of three consecutive months. 4. Turbidity greater than 2.0 NTU in 2 consecutive measurements taken 15 minutes apart at any time in each of two consecutive months.
Slow Sand Filtration Treatment Plants (No changes)	• CFE: Less than or equal to 1 NTU in 95% of the measurements taken each month. • CFE: Never to exceed 5 NTU.
Diatomaceous Earth Filtration Treatment (No changes)	• CFE: Less than or equal to 1 NTU in 95% of the measurements taken each month. • CFE: Never to exceed 5 NTU.
Alternative Filtration Treatment Technology	• CFE: Less than or equal to 1 NTU in 95% of the measurements taken each month. • CFE: Never to exceed 5 NTU. • 99.9% removal and/or inactivation of Giardia cysts in combination with disinfection. • 99.99% removal and/or inactivation of viruses in combination with disinfection. • 99% removal of Cryptosporidium oocysts
Unfiltered Treatment Plants (No changes)	• Raw water turbidity never to exceed 5 NTU.

Disinfection Byproduct Maximum Contaminant Levels

Contaminant	Maximum Contaminant Level in mg/l
Total Trihalomethanes (TTHM): • Bromodichloromethane • Dibromochloromethane • Tribromomethane (Bromoform) • Trichloromethane (Chloroform)	**0.080**
Haloacetic Acids (HAA5): • Monochloroacetic Acid • Dichloroacetic Acid • Trichloroacetic Acid • Monobromoacetic Acid • Dibromoacetic Acid	**0.060**
Bromate: *(For systems using Ozone)*	**0.010**
Chlorite: *(For systems using Chlorine Dioxide)*	**1.0**

REGULATORY UPDATE

by Dave Leland

It is time once again for an update on the federal drinking water rules under the Safe Drinking water Act. Below, we discuss each of the rules briefly, one at a time. Again, it is very important for you to stay informed on regulatory developments so that you can plan ahead. We hope that you are also following regulatory developments on an on-going basis through your drinking water organizations, such as American Water Works Association, National Rural Water Association, and others. Seven new rules are scheduled to be finalized by EPA over the next two years!

(Note: see the EPA website for a detailed and up-to-date timeline chart showing Key Regulatory Dates (2000-2004) at http://www.epa.gov/safewater/pws/imp_milestones.pdf)

Consumer Confidence Reports

Nothing new to report here, other than to remind you that all community systems must prepare an annual report covering each calendar year and distribute it to water users by July 1 of the following year. You must submit the report and certification of its distribution to the Division. The year 2000 report is due by July 1, 2001, and the certification of distribution is due by October 1, 2000.

Operator Certification

We are active in the 2001 Legislative Assembly with House Bill 2239, which eliminates current exemptions from operator certification requirements for certain community and nontransient noncommunity public water systems (see Program Update article, page 1). After passage of HB 2239, we will move ahead with program rule development and adoption, and with preparation and submittal of the Oregon program application for EPA review and approval. After EPA approval in Fall 2001, we will start development of training followed by delivery of training for operators of small water systems, and begin the initial certification process probably in late 2001 or early 2002.

Interim Enhanced Surface Water Treatment Rule

This rule affects public water systems using surface water sources (or groundwater under the direct influence of surface water) and serving 10,000 people or more. The EPA rule was finalized on December 16, 1998, and the Oregon rule was adopted on July 15, 2000. These large systems conducted disinfection by-product initial monitoring for trihalomethanes and haloacetic acids during 1999-2000, and disinfection profiling and benchmarking studies (if necessary) during 2000-2001. These water systems must meet more stringent turbidity performance standards and begin monitoring individual filter performance by January, 2002, in order to better control *Cryptosporidium*. EPA issued a final rule on major and minor revisions to the rule on January 16, 2001.

Stage 1 Disinfection By-products Rule

This rule affects all community and nontransient noncommunity public water systems that apply a disinfectant to the drinking water. The EPA rule was finalized on December 16, 1998, and the Oregon rule was adopted on July 15, 2000. Applicable public water systems must monitor disinfectant residuals and by-product levels in the distribution system. They must meet new MCLs for by-products, including trihalomethanes (0.080 mg/L) and haloacetic acids (0.060 mg/L). They must also meet new maximum residual disinfectant level of 4 mg/L as chlorine. Surface water systems serving 10,000 or more people must comply with the new standards by January, 2002. Surface water systems serving 10,000 or fewer people and all groundwater systems must meet standards by January, 2004. EPA issued a final rule on major and minor revisions to the rule on January 16, 2001.

Unregulated Contaminant Monitoring Rule

EPA published final revisions to this rule on September 17, 1999, and ended all previous requirements for unregulated contaminant monitoring for small systems on January 8, 1999. The new UCMR applies to all community water systems serving more than 10,000 people, plus a random selection of community water systems serving less than 3,300 people. Large systems must engage an EPA-approved lab to run the required tests and report those results to the EPA. Testing for small water systems is at EPA expense. Since this is a direct implementation effort by EPA to support development of future drinking water standards, the states are not required to adopt this rule. Oregon will provide assistance to EPA on a time-available basis.

Lead and Copper Rule Minor Revisions

EPA adopted the revisions on January 12, 2000, and they were adopted in Oregon rules on July 15, 2000. Most of the revisions were already in practice in Oregon.

Public Notification

The final rule revising the public notification requirements was published by EPA on May 4, 2000. The rule applies to all public water systems. It establishes three Tiers of violations with specific form, manner, and frequency of notice for each Tier. Tier 1 violations are those for which could have serious and immediate health effects, such as fecal coliform/*E. coli.* or nitrate, and immediate notification of users is required. Tier 2 is for less serious violations such as total coliform or other chemical MCLs, and notice is required within 30 days. Tier 3 violations are generally for monitoring or testing requirements, and these can be included in the annual Consumer Confidence Report. The state rule is scheduled for Fall, 2001.

Radionuclides

The final EPA rule was published on December 7, 2000. It applies only to community water systems. The rule includes a

new MCL for uranium of 0.030 mg/L (30 ug/L), and retains existing MCLs for gross alpha (15 pCi/L), combined Radium-226+Radium-228 (5 pCi/L), and beta/photon (4 mrem/yr, vulnerable water systems screened at 50pCi/L). Community water systems must complete their initial monitoring and meet the MCLs by December 31, 2007. The state rule is scheduled for Fall, 2001.

Arsenic

The final rule was published by EPA on January 22, 2001. The new arsenic MCL is 0.01 mg/L, reduced from the current level of 0.05 mg/L, and will apply to community and nontransient noncommunity water systems. Initial monitoring to demonstrate compliance is scheduled for 2005-2007. Water systems have five years to comply with the new MCL. Community water systems must include arsenic data and information in their Consumer Confidence Report beginning with the July 1, 2002, report. As you probably know, this rule was rescinded by the Bush administration on March 20, in order to review the scientific basis for the new MCL. The schedule for a revised final rule is not known at this time.

Long-Term 1 Enhanced Surface Water Treatment Rule

This rule extends the protections of the Interim Enhanced Surface Water Treatment Rule to water systems serving fewer than 10,000 people and using surface water sources or groundwater under the direct influence of surface water. This rule was proposed by EPA on April 10, 2000, and has not yet been finalized. Water systems must comply within 3 years of the date of the final EPA rule.

Filter Backwash Recycling Rule

This rule applies to surface water systems which recycle filter backwash water back into the water treatment plant, and requires modification of such practices as necessary to control *Cryptosporidium.* This rule was proposed by EPA on April 10, 2000, and has not yet been finalized. Water systems must comply within 3 years of the date of the final EPA rule.

Radon

EPA published a proposed rule on November 2, 1999, and has not yet published a final rule. The proposed rule applies to community water systems using groundwater sources in whole or in part. The rule proposes two MCL options; 1) an MCL of 300 pCi/L, or 2) an Alternate MCL of 4,000 pCi/L in conjunction with EPA-approved state or local Multimedia Mitigation (MMM) programs to control radon in indoor air. This approach recognizes that radon from soil gas contributing to indoor air radon levels is a much greater health risk than is radon from drinking water. The rule allows state or local governments to focus efforts more on indoor air than on radon in drinking water, if that is appropriate. The initial monitoring of drinking water begins August, 2003, if no there is no state MMM program, or by February, 2005, if the state prepares an MMM. Initial monitoring is quarterly for one year with subsequent reductions to annual or every three years if radon is low.

The final rule was scheduled for August, 2000, but is delayed. The content of the final rule may be impacted by the many comments that were submitted on the proposed rule, as well as by review by the new administration.

Ground Water Rule

EPA published the proposed rule on May 10, 2000. Many comments were received by EPA on the proposal, and the final rule is delayed. The proposed rule requires disinfection of groundwater sources "as necessary", proposes multiple barriers to protect against viruses and bacteria, and establishes a strategy to identify groundwater sources at high risk for fecal contamination. The proposed rule has five components: 1) periodic on-site sanitary surveys, 2) one-time hydrogeologic assessment to identify wells that are sensitive to fecal contamination, 3) source water monitoring of wells in sensitive aquifers, 4) correction of source water contamination reveled by source monitoring or significant deficiencies revealed in sanitary surveys, and 5) compliance monitoring for systems that disinfect to assure inactivation of viruses. Requirements of this rule would become effective 3 years after the final rule.

MTBE

EPA plans to establish a secondary drinking water standard, based on taste and odor, for the gasoline additive MTBE by March, 2002. It is expected that this secondary standard would be in the range of 0.020-0.040 mg/L.

Long-Term 2 Enhanced Surface Water Treatment Rule and Stage 2 Disinfectants and Disinfection By-products Rules

EPA plans to establish new requirements in May, 2002, to further reduce risks from *Cryptosporidium* in surface water supplies while to limiting exposure to disinfection by-products. These requirements will be based on an "Agreement in Principle" signed in September, 2000, by EPA and an advisory committee consisting of organizations representing public health, public interests, water suppliers, manufacturers and suppliers, and state water programs.

The agreement gives the essential features of these new requirements. Community water systems that disinfect must first conduct a year-long analysis of the distribution system to identify locations that represent the peak levels of disinfection by-products. Within eight years, systems must comply with current MCLs at EACH location identified in the study, based on a running annual average of tests at each sampling point. (Currently, systems must comply with MCLs based on a running annual average of all sampling points taken together). Large surface water systems (10,000 people or more) must

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Regulatory Update *(Continued from page 9)*

conduct a two-year round of source water monitoring for *Cryptosporidium*. The results will be compared to specified trigger levels to determine the level of additional treatment requirements, if any, that the water system must meet. Smaller surface water systems (less than 10,000 people) must conduct one year of source water monitoring for *E. coli* (or a better indicator, if available). If *E. coli* exceeds specified trigger levels, then additional testing for *Cryptosporidium* is required to determine additional treatment requirements. Most surface water systems are expected to meet the source water monitoring trigger levels so that no additional treatment will be needed.

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Drinking Water Program Update *(Continued from page 5)*

needed by public water suppliers to provide safe drinking water now and in the future. The Oregon strategy was one of the first four in the nation approved by EPA.

- Working through the Conference of Local Environmental Health Supervisors and the Conference of Local Health Officials, the drinking water program helped local health departments expand the expertise, capability, and funding of their drinking water programs.
- Drinking water program and DEQ staff completed about 1/3 of a statewide effort to assess the susceptibility to potential contamination of all sources of drinking water used by Oregon public water systems.
- As part of a national review by the National Association of State Public Interest Groups, 23 Oregon communities scored high marks overall on their first annual EPA-required Consumer Confidence Reports on their drinking water systems.

Budget/Legislative Update

The 2001-03 budget process began with anticipation of shortfalls in resources needed to maintain current service levels of state programs. State agencies were required to present options to the Governor for an overall reduction in state General Funds of 10%. As you may know, the drinking water program is supported by one of the largest single amounts of General Fund in the Health Division (almost $1.2M for two years). This General Fund appropriation is also used as match to obtain the annual Primacy program grant from EPA ($2.8M for two years). In the end, the Governor's Recommended Budget for 2001-03 eliminated the drinking water program General Fund, but replaced it with Lottery Funds. This keeps the program in place for 2001-03, contingent on legislative approval.

The Division moved ahead with a legislative proposal to eliminate the exemption from operator certification for operators of water systems serving fewer than 150 connections and using groundwater as a water source (HB 2239). This action is needed for Oregon to conform to EPA guidelines for state operator certification programs, and to avoid a 20% reduction ($2M per year) in the annual EPA State Drinking Water Revolving Loan Fund allocation to Oregon. There will be no fees for the new small water system operator certification effort, and funds to support initial training and certification will be from EPA Training Reimbursement funds available to Oregon upon EPA approval of the certification program. Later on, the continuing program expenses will be funded through a small interest rate surcharge on revolving fund project loans. House Bill 2239 was written with the support of a stakeholder group of operators of small water systems and organizations that represent them, and with the approval of the Drinking Water Advisory Committee. HB 2239 had a successful hearing before the House Water and Environment Committee on January 26, and was referred on to the Ways and Means Committee.

Safe Drinking Water Revolving Loan Fund Review

In May, EPA conducted the first annual review of Oregon's revolving loan fund operations. EPA concluded that we are off to an excellent start, and our program complies generally with program assurances and requirements.

Drinking Water Primacy Program Reviews

During 2000, three separate reviews of the drinking water primacy program were conducted by outside agencies. The reports are available from our office.

The major review was the Oregon Secretary of State Audit, conducted from February to August. The focus of this audit was a bit different from the norm. Oregon was one of 12 states participating in a National State Auditors Association joint audit of water quality that covered both safe drinking water under the federal Safe Drinking Water Act (SWDA), and surface water quality under the federal Clean Water Act. The audit team reviewed the records of 100 Oregon public water systems, selected at random. A separate Oregon audit covered applicable programs at DEQ. The drinking water audit generated some media and legislative interest, and made the following findings:

- Water systems do not always report their test results to the Division. (HB 3470, requiring direct reporting by laboratories of water system test results to the Division was recently introduced by members of the House Water and Environment Committee.)
- The Division does not always use its enforcement powers when water quality violations are found.
- The Division should improve procedures for responding to violations of drinking water regulations.

- Oregon requires water systems to test volatile and synthetic organic chemicals less frequently than mandated by EPA.
- The Division is not conducting sanitary surveys of community water systems as frequently as required.

Concurrently, the EPA conducted a Data Verification Review of the Oregon drinking water program in June. This review concentrated on handling and processing of compliance data, including water system inventory data and water test results. The first objective was to detect any discrepancies between data in Division files and database, and the data reported to the federal Safe Drinking Water Information System. This review included inventory, enforcement, violations, and milestones for the coliform rule, lead and copper rule, Phase II/V inorganic and synthetic organic chemical rules, surface water treatment rule, radiologic contaminants, and trihalomethanes. The second objective was to ensure that the Division determines compliance in accordance with Federal and State Primacy requirements. The review team reviewed the records of 60 Oregon public water systems, selected at random. Results were generally consistent with the findings of the Secretary of State audit discussed above.

Program staff also participated in a US Government Accounting Office review of barriers encountered by states in their implementation of the SDWA. Program staff provided budget figures and participated in an on-site interview with GAO review team. The GAO review was conducted from November 1999 through August, 2000. GAO found that state programs across the U.S. encounter a variety of barriers to full implementation of the Safe Drinking Water Act, including inadequate funding and staffing level authorizations, hiring freezes preventing filling of authorized positions, and salaries inadequate to attract and retain qualified staff.

Taken as a whole, the findings of these reports confirm the following points with respect to the Oregon program:

- The program is effective in what it does.
- The program sets and follows priorities that are based on reducing the highest risks to public health.
- Available funding is not sufficient to enable the program to fully carry out all regulatory functions for which it is responsible.
- The program lacks significant capacity with respect to the scope of federal Safe Drinking Water Act and associated regulations, and this will get progressively worse as additional provisions of the Act and regulations are implemented through 2005.

None of the above is news to us or to you. The combined personnel in the Division and the county health departments assigned to the regulatory program is now 33.5, compared to the current full workload estimate of 46. The immediate barrier to a more capable Oregon program is a lack of state funds to fully match the 10% state program management set-aside from the revolving fund, which is available to provide the additional resources needed to implement new federal drinking water rules. We are now able to access up to two-thirds of the available state program management set-aside. Our next opportunity to address program funding is in the planning for the 2003-05 biennium budget. That planning process begins after the 2001 Legislature approves the 2001-03 budget and adjourns.

Looking Ahead to 2001

It's been a busy and productive year! 2001 is shaping up to be another challenge. Our immediate focus is the 2001 Legislative Assembly, now underway. We are also getting started on replacing the current drinking water database (Safe Water System 2.0) with the newly available Safe Drinking Water Information System (SDWIS-State), developed by EPA for use by the state programs. SDWIS-State has additional capabilities and automates identification and reporting of 38 different violation types, compared to 9 by our current system. SDWIS-State installation is scheduled to be complete by June, and will address some of the issues identified in the program reviews discussed above. Beginning in the spring, we also hope to be moving ahead with the small water system operator certification program including rule development and adoption, program submittal to and approval by EPA, and training design and delivery to operators of about 900 small water systems statewide. We will be initiating work under the Oregon Capacity Strategy to improve the technical, managerial, and financial capabilities of public water systems to provide safe drinking water. We will also concentrate on continuing to bring current enforcement cases to conclusion.

We will be focusing on an array of federal drinking water rules during 2001(see Regulatory Update article, page 8). We will begin or continue implementation work on the Interim Enhanced Surface Water Treatment Rule, the Stage 1 Disinfection By-products Rule, Lead and Copper Rule Minor Revisions, and the revised public water system definition with respect to irrigation systems. We will begin state rule development and adoption for recently finalized EPA rules (Public Notification Rule, and Radionuclides Rule). Finally, we will be closely tracking those scheduled EPA rules not yet finalized, but expected in the late summer or fall (Long Term 1 Enhanced Surface Water Treatment Rule, Filter Backwash Recycling Rule, Arsenic Rule, Radon Rule, and the Groundwater Rule).

Stay tuned!

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TRAINING CALENDAR

Cross Connection/Backflow Courses
Backflow Management Inc. (B)
(503) 255-1619
Clackamas Community College (C)
(503) 657-6958 ext. 2388

Backflow Assembly Tester Course

May 21-25	Portland (B)
June 11-15	Oregon City (C)
July 9-13	Portland (B)

Backflow Assembly Tester Recertification

May 17-18	Oregon City (C)
May 19	Oregon City (C)
June 1	Oregon City (C)
June 11	Portland (B)
June 12	Portland (B)
June 13	Portland (B)
June 14	Portland (B)
July 6	Portland (B)
July 20	Portland (B)

Cross Connection Inspector Update

May 17	Portland (B)
June 8	Oregon City (C)
June 8	Portland (B)

Water System Training Course
Oregon Health Division
Marsha Fox/(503) 731-4899

June 19	Coos Bay
July	Eugene
August	Klamath Falls

**Dates and exact locations to be announced*

PIPELINE is published quarterly free of charge by the staff of the Oregon Health Division, Drinking Water Section, 800 NE Oregon St., Portland OR 97232, Phone (503) 731-4010. Periodicals postage paid at Portland OR.
POSTMASTER: Send address changes to
PIPELINE, P.O. Box 14450
Portland OR 97293-0450
ISSN: 1072-4028.

PIPELINE is intended to provide useful information on technology, training, and regulatory and policy issues to those involved with the state's public water systems to improve the quality of drinking water in Oregon.

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