

Program update

by Dave Leland

As we start the new year, multiple issues occupy center stage along with our regular collective effort to ensure safe drinking water. These include recent successes in awarding and disbursing revolving loan funds for safe drinking water construction projects and engaging the 2011 Legislative session and the budget for 2011–13. Add to that the recent national and local drinking water events in the news including hexavalent chromium, proposed fluoridation practice change recommendations, and recent flooding events here at home.

Revolving Loan Fund

2010 was a record year in Oregon for safe drinking water construction project awards. Almost \$75 million was awarded to 28 communities! We appreciate both the communities that are utilizing the fund, and

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2011 Drinking water infrastructure needs survey

by Anthony J. Fields

The Drinking Water Program will be participating in the 2011 Drinking Water Infrastructure Needs Survey. This survey is a tool used by EPA to determine financial need across the United States, and includes all water systems serving more than 100,000 people, as well as approximately 50 medium-sized systems serving 50,000 people or less. Additionally, only those water systems eligible for State Revolving Fund (SRF) grants are asked to participate. As the EPA survey website states at water.epa.gov/infrastructure/drinkingwater/dwns/index.cfm: *“Local water utilities must make significant investments to install, upgrade, or replace equipment in order to deliver safe drinking water and protect public health. Every four years, EPA conducts a survey of the anticipated costs of these investments and reports the results to Congress. The results are also used to help determine the amount of funding each state receives for its Drinking Water State Revolving Fund program, which funds the types of projects identified in the survey.”*

The survey is comprised of a questionnaire to determine eligible capital investment projects the water system anticipates completing during the next 20 years, and include activities ranging from standard pipe replacement through the addition of new water sources and installation of new water treatment plants. Water systems selected to participate will receive a survey, and will be asked to participate in an interview, during which supporting documentation will be collected to support identified needs.

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the hard work by our partners at the Oregon Business Development Department to administer the loan fund. Last year's awards include those under the American Recovery and Reinvestment Act, which both deserved and required an unprecedented degree of transparency and public reporting of results and benefits by both community recipients and state staff. Good work to you all!

2011 Legislature

As we go to press, the 2011 Legislature convened and read about 1,600 bills into the record. Our agency did not put forward any bills on drinking water for this session, but we are reviewing water-related bills introduced by the Governor on behalf of other state agencies, and water-related bills introduced by legislators.

Hexavalent chromium

In December, the Environmental Working Group, a national advocacy group, released a report of hexavalent chromium levels in tap water from 31 U.S. cities, including Bend, generating both national and local media coverage. Interestingly, the sample from Bend turned out to be from an area served by the Avion Water Company.

The current drinking water standard is for total chromium. There is no national standard for hexavalent chromium in drinking water, although California is in the process of establishing a state standard. EPA recently published guidance for communities who want to conduct their own monitoring for hexavalent chromium, and you can access that publication through our website at www.public.health.oregon.gov/HealthyEnvironments/DrinkingWater/Pages/Whatsnew.aspx under "News About Hexavalent Chromium (i.e., Chromium-6), EPA Recommendations for Enhanced Monitoring." EPA is providing technical assistance to the 31 water suppliers

sampled by the environmental group and is also working with laboratories that want to start analyzing drinking water for hexavalent chromium. EPA may prescribe monitoring for water suppliers by rule later in the year.

Fluoridation

In January, the U.S. Department of Health and Human Services proposed changing the recommended fluoride level in drinking water from the current range of 0.7-1.2 mg/L to a single number of 0.7 mg/L for those water suppliers that add fluoride. The purpose of the proposed change is to account for fluoride in toothpaste and supplements and prevent streaking or spots on children's teeth from too much total fluoride intake. Final decision and action by HHS is expected in the next few months.

In conjunction with the HHS effort, EPA announced it is beginning a reassessment of the MCL for fluoride, set in 1986 at 4 mg/L.

Flooding

In mid-January heavy rains and warm temperatures led to localized flooding in the Mt. Hood area. Portland shut down the Bull Run watershed due to high turbidity associated with 8 inches of rain added to another 6-inch equivalent from snowmelt, and switched to the south shore well field. Severe local flooding in the Sandy River drainage damaged some homes, but public water supplies weathered the storm.

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

DWINSA — continued from page 1

This year, the Drinking Water Program is approaching the survey in a new way by hiring a contractor to perform the fieldwork associated with the survey. Early in 2010, a Request for Proposal (RFP) was developed and published, calling for environmental and engineering consulting firms to bid on performing the fieldwork associated with the survey instrument. Of the four companies that bid on the project, HBH Consulting Engineers was awarded the contract to perform the survey work, and will

be contacting those water systems selected to participate in the very near future.

Additional information can be found on the EPA Drinking Water Infrastructure Needs Survey website at water.epa.gov/infrastructure/drinkingwater/dwns/basicinformation.cfm, or by calling the Drinking Water Program at 971-673-0405.

The following water systems have been selected by EPA to participate in the survey;

PWS ID number	System name	Population served
OR4100012	ALBANY, CITY OF	48,000
OR4100055	ASTORIA, CITY OF	9,813
OR4100091	AVION WATER CO - AVION	22,000
OR4100073	BAKER CITY	10,105
OR4100081	BEAVERTON, CITY OF	67,000
OR4100100	BEND WATER DEPARTMENT	52,320
OR4100178	CENTRAL POINT, CITY OF	17,025
OR4100187	CLACKAMAS RIVER WATER - CLACKAMAS	36,900
OR4100594	CLACKAMAS RIVER WATER - CLAIRMONT	14,355
OR4100205	COOS BAY NORTH BEND WTR BRD	38,000
OR4100213	COQUILLE, CITY OF	4,205
OR4100218	CORNELIUS, CITY OF	10,685
OR4100225	CORVALLIS, CITY OF	54,800
OR4100236	COTTAGE GROVE, CITY OF	9,485
OR4100252	DAYTON, CITY OF	2,235
OR4100287	EUGENE WATER & ELECTRIC BOARD	169,962
OR4100296	FAIRVIEW, CITY OF	9,695
OR4100297	FALLS CITY, CITY OF	970
OR4100321	GLADSTONE, CITY OF	12,215
OR4100342	GRANTS PASS, CITY OF	30,930
OR4100372	HERMISTON, CITY OF	15,410
OR4101513	HILLSBORO, CITY OF	66,964
OR4100399	INDEPENDENCE WATER SYSTEM	7,715

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PWS ID number	System name	Population served
OR4100379	JOINT WATER COMMISSION	0
OR4100443	KLAMATH FALLS WATER DEPT	40,065
OR4100452	LAFAYETTE, CITY OF	3,790
OR4100457	LAKE OSWEGO MUNICIPAL WATER	36,093
OR4100473	LEBANON, CITY OF	14,355
OR4100497	MCMINNVILLE WATER & LIGHT	30,189
OR4100513	MEDFORD WATER COMMISSION	89,495
OR4100528	MILWAUKIE, CITY OF	20,050
OR4100534	MOLALLA, CITY OF	7,603
OR4100550	MYRTLE CREEK, CITY OF	3,460
OR4100557	NEWBERG, CITY OF	22,500
OR4100566	NEWPORT, CITY OF	9,900
OR4100580	NORTH CLACKAMAS COUNTY WC	0
OR4101511	OREGON CITY	29,540
OR4100613	PENDLETON, CITY OF	17,310
OR4100624	PHILOMATH PUBLIC WORKS	4,610
OR4100657	PORTLAND WATER BUREAU	539,200
OR4100668	ROCKWOOD PUD	54,700
OR4100720	ROSEBURG, CITY OF	28,800
OR4100731	SALEM PUBLIC WORKS	183,000
OR4100823	SILVERTON, CITY OF	9,540
OR4100837	SPRINGFIELD UTILITY BOARD	56,000
OR4100635	SUNRISE WATER AUTHORITY	40,000
OR4100847	SUTHERLIN, CITY OF	7,795
OR4100878	TIGARD, CITY OF	55,990
OR4100549	TRI-CITY JW&SA	3,500
OR4100665	TUALATIN VALLEY WATER DISTRICT	197,200
OR4100906	TUALATIN, CITY OF	25,464
OR4100920	VENETA, CITY OF	4,840
OR4100932	WARRENTON, CITY OF	9,080
OR4100957	WINSTON-DILLARD WATER DISTRICT	8,000

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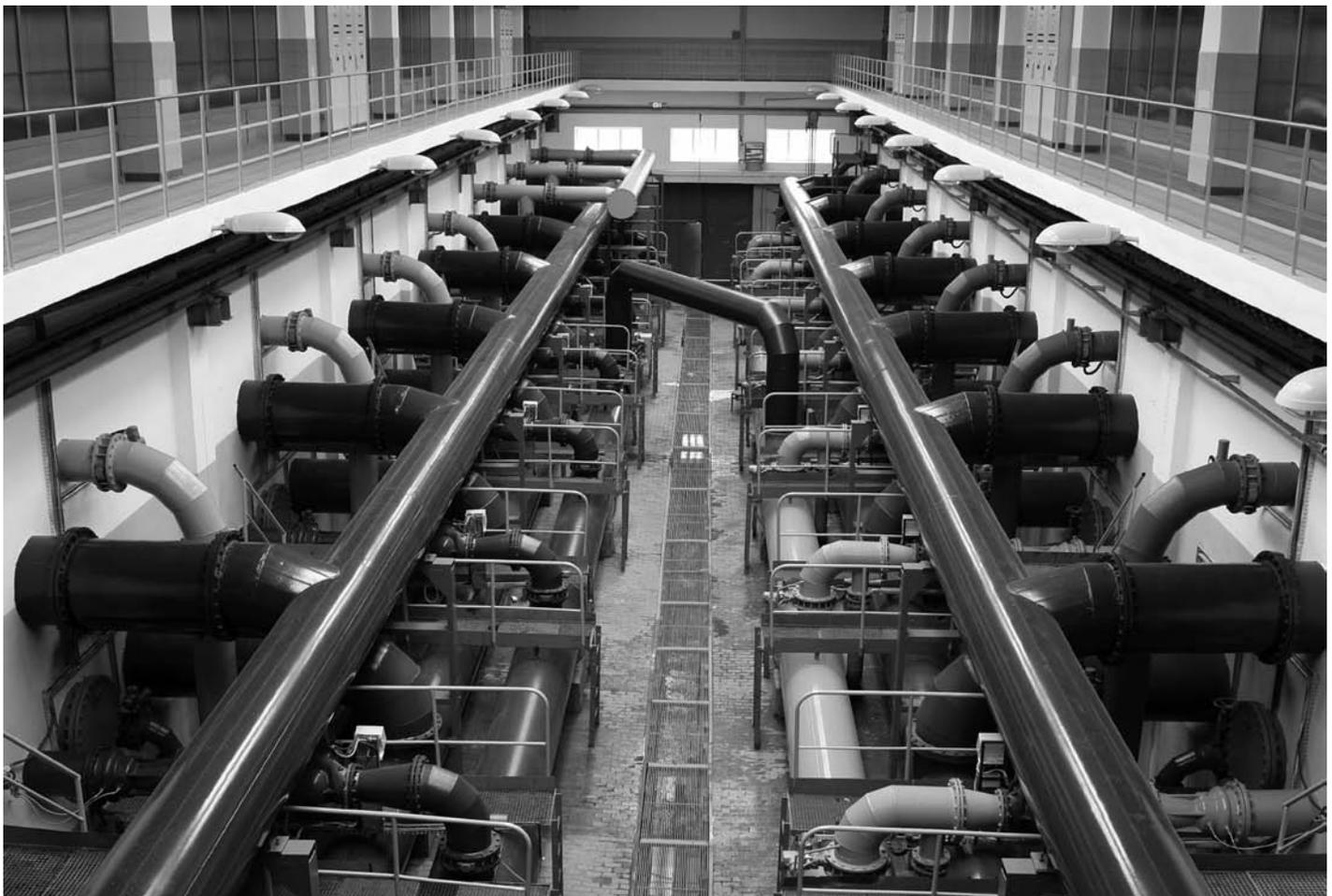
Congratulations to our “Outstanding Performers”!

In each issue, we plan to list the public water systems that have successfully met the established criteria for outstanding performance. These are systems with no significant deficiencies identified, as well as no unresolved violations. Systems are

evaluated after their routine Water System Survey, and have their survey frequency (and fee!) reduced from every three years to every five years. To find out how to qualify, visit public.health.oregon.gov/HealthyEnvironments/DrinkingWater/Documents/wss/osp-criteria.pdf.

Jobs well done by the operators of these systems:

Water system name	County served
Arrowhead Mobile Home Park	Marion
Wallowa Lake Co. Service Dist.	Wallowa
Eugene Water & Electric Board	Lane



ITT publishes findings from value of water survey

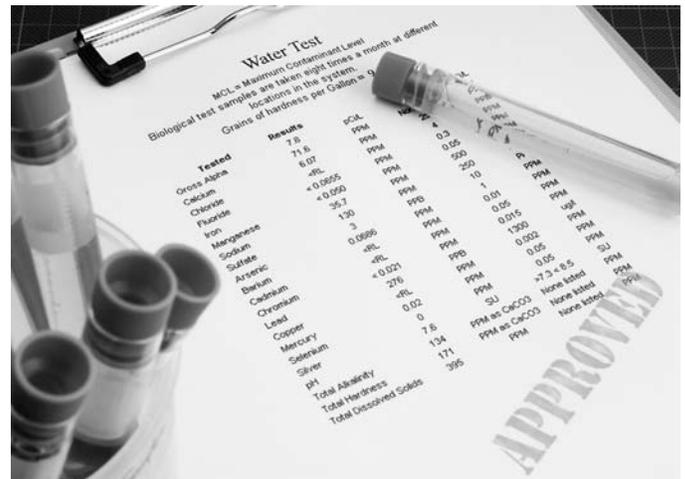
Reprinted by permission from Association of State Drinking Water Administrators November 5, 2010 Weekly Update

ITT Corporation has published a Report entitled "Value of Water Survey: Americans on the U.S. Water Crisis." This nationwide survey on the value of water details what U.S. voters and industrial and agricultural businesses think should be done about this crisis -- and who should pay for it. Here are the key findings among the ITT survey respondents:

- **95% of American voters** value water over any other service they receive, including heat and electricity;
- **Our nation's industrial** and agricultural businesses -- among the heaviest water users -- rank it second, after only electricity;
- **About three out of four** American voters and businesses say disruptions in their water system would have direct and personal consequences;
- **Too many** take clean water for granted: 69% of voters, 72% of businesses;
- **When asked**, U.S. voters and businesses do express concern about our nation's water including:
 - Nearly one in four American voters is "very concerned" about the state of the nation's water infrastructure;
 - 29% percent of voters agree that water pipes and systems in America are crumbling and approaching a state of crisis; and
 - 80% of voters say water infrastructure needs reform; about 40% say major reform.
- **People understand that** fixing our nation's water infrastructure problems is a shared responsibility:
 - 85% of voters, 83% of businesses agree federal, state and local governments should invest money in upgrading our water pipes and systems;

- 79% of voters, 75% of businesses agree and think government officials need to spend more time addressing water issues;
- Both citizens and businesses understand and accept responsibility; and
- 63% of American voters and 57% of businesses say they are willing to pay a little more each month to upgrade our water system; and
- Voters are willing to pay on average \$6.20 more per month.

State drinking water programs may want to share the findings of this report with their water utilities as a means for promoting the value of water and considering rate increases to pay for needed infrastructure improvements. For more information and to view the full report, visit the ITT website at www.itt.com/valueofwater/water_survey.htm.



O&M manuals – What’s in it for me?

by Doug Wise

You have good reasons to develop and maintain an effective Operations and Maintenance (O&M) manual. A successful manual will:

- Ensure continuity of operations and preventive maintenance programs.
- Help everyone do the same work the same way.
- Retain the knowledge of departing staff and help existing staff share their expertise.
- Help new staff learn their work by providing a basis for training and retraining.
- Meet Oregon Drinking Water Program requirements.

How to build an O&M manual

Developing an O&M Manual from the ground up may seem intimidating. It’s a lot of work. But any large project can be broken down into easier pieces, which can be accomplished over time. For example, the Washington Monument in our nation’s capital was built block by block ... 36,491 of them ... and has been a landmark for 122 years. So let’s look at “building blocks” you can use to get started on an effective O&M Manual.

Decide the format for your information.

Simple pictures are best. If you can use the same form or “template” for your entire manual the pages will look similar, be easier to use, and the document will be more helpful in locating needed information in the shortest time.

The type of manual you select should fit your operating needs. There are three common types in current use.

Paper manuals, which are usually kept in three-ring binders, are common and can be effective. Three main problems with these

types of manuals exist: (1) they aren’t always located where you need to use them; (2) they are frequently out of date, and (3) because they get scattered throughout a plant or distribution system facilities, it’s hard to keep all the versions current.

PC-based manuals are also common. Basically these follow the format of paper manuals. They are easier to revise than paper manuals because changes reside in the PC files. This feature makes it important to have security passwords in place to keep a manual from getting changed without approval because keeping the best practices in place is crucial to utility operations.

Electronic manuals have emerged as effective tools because they offer easy updates and are protected by security levels. They are often connected to portable field devices for quick access of everything from SOPs to schematics to videos of procedures. They can usually be linked to other databases such as maintenance management systems for integration of several utility functions.

All manuals have associated costs, the greatest of which is the initial effort to enter information. After that, the manual type that best fits your operations will prove its value over time.

Decide on the critical information you need to do your work.

At a minimum, include the following information for each utility function, process and each piece of critical equipment:

- Location and purpose of the system, component, or equipment. Include sources, treatment, storage, and distribution system;
- Safety precautions including protection against personal, community, property or environmental risks;

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- Starting / stopping processes for systems or equipment;
- Standard operating procedures (SOPs) and preventive maintenance tasks;
- Alarms → Problem and responses to alarm conditions → Troubleshooting problems;
- Emergency procedures for controlling a piece of equipment or process step;
- Written protocols for operators certified at less than the DWP-required level. The protocols must be written by the operator in Direct Responsible Charge, and must describe the operational decisions the operator is allowed to make, and when they must consult with the DRC;
- Plans, references, schematics and/or vendor-supplied notebooks.

Make it effective.

The most useful O&M manual is the one that works for you and your system. The key steps to keep a manual current and useful are the same for almost everyone.

1. Develop the manual step by step; for example, process by process. Consider tasks that are performed daily, weekly, monthly, every 6 months, annually, etc.

2. Review and approve each element.
3. Field test the approved document.
4. Revise the document based on the field tests to improve the manual based on experience.
5. Use the manual.
6. Return to Step 2 and repeat as needed.
7. Discuss revisions with all manual users on a *regular* basis.

In summary, O&M Manuals are needed, important, useful, and required by the Oregon Drinking Water Program. Ten minutes a day – every day – will generate a surprising amount of progress ... over 200 pages in a year. The results will give your staff better knowledge about the plant and system, that can be shared more widely than ever before. And that makes for better utility operation.

Take ten minutes today to begin or improve your own O&M Manual. The benefits far exceed the costs.

Doug Wise, M.S., is an operations specialist with Brown and Caldwell Engineers / dwise@BrwnCald.com. He formerly worked for Eugene Water & Electric Board and served on the Drinking Water Advisory Committee.



Update on monthly source assessment sampling under the Ground Water Rule (GWR)

by Betsy Parry

In early 2010, the Oregon Drinking Water Program (DWP) mailed letters to 250 groundwater systems, instructing them to complete 12 months of source assessment monitoring. These systems were designated for monthly sampling under the Ground Water Rule because their sources were identified as being at higher risk of fecal contamination. In addition, these systems use disinfection treatment, which means that the coliform samples taken from their distribution systems do not show the microbial quality of their raw water. (For information on how these sources were identified, see Fall 2009 Pipeline, or the 12-Month Source Assessment section of our GWR website, www.public.health.oregon.gov/HealthyEnvironments/DrinkingWater/Pages/gwr.aspx.)

Here is the status of monthly assessment monitoring for 2011:

- **Systems completing the year of monthly source assessment monitoring:** As results roll in during January and February 2011, many systems are completing their 12-month source monitoring. Those that did not confirm fecal contamination will receive a completion letter from DWP. These systems will only need to submit one raw water sample from each active source per year in the future, the same as other groundwater systems that disinfect. (But they are still subject to **triggered** source monitoring, if routine distribution samples test positive for coliform bacteria.)

- **Systems previously notified that did not complete assessment monitoring:** Of the “high risk” systems notified in January 2010, a large group has not completed any or all of the required monthly source sampling. These systems are being notified again of their obligation early this year, and the letter explains what they need to do to meet the requirement in 2011.
- **Systems newly identified for monthly assessment monitoring:** Since January 2010, more complete information has revealed that several additional groundwater sources meet the high-risk criteria. These systems are being notified now that they must sample the appropriate sources each month starting in 2011.

During the GWR's first year

Approximately **60 percent** of the higher risk systems notified in early 2010 have been complying with monthly source assessment sampling. Violations will be issued to non-reporters, starting in 2011.

Through December 2010, at least **28 distinct groundwater sources have been confirmed as fecally contaminated** in Oregon.

- Half of these were in the “high risk” group, sampling every month.
- The remainder were detected by triggered or annual source sampling.

Meanwhile, 31 water systems have been approved for the compliance monitoring option under the GWR.

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GWR continued

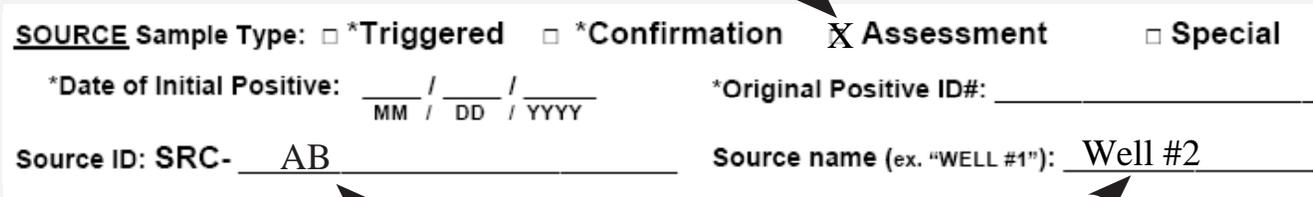
Please note that during 2011, DWP will begin issuing violations to previously notified systems that do not submit a monthly source sample. To avoid such violations and ensure proper credit for source water samples, follow the lab form labeling instructions at our website (public.health.oregon.gov/HealthyEnvironments/DrinkingWater/Documents/lab/LabFormGuidance.pdf) and **be sure to mark the correct sample type!**

One tip is that you will *only* fill in the "Source" section on the form for source assessment samples – do not write in both the "Distribution" and "Source" sections (see example below). The lab results must be received in our Portland office by the 10th of the month after the sample was taken to avoid a reporting violation, just as with routine distribution coliform samples.

In addition, you can check to see what source samples have been recorded for your water system by going to the Drinking Water Program website "Data Online" feature (<http://170.104.63.9/>), then looking up your

public water system by name or by number, and clicking on the "Coliform Results" heading at the bottom of your system page. On the Coliform Results page, the source samples should be shown as "SRC-" under the "Facility" column. (SRC stands for "source" and the letters that follow it correspond to each individual water source listed on the main Web page for your water system: SRC-AA, SRC-AB, etc.) Coliform samples are posted online within two business days of receiving the test results in our offices. If questions remain, call the regulator for your water system (your County Health Department, the Oregon Department of Agriculture, or state staff at DWP).

After the first couple of years of implementing the new Ground Water Rule, the number of systems conducting one year of monthly source assessment monitoring should greatly diminish. However, all groundwater systems that use disinfection treatment will still be required to submit one coliform sample per source each calendar year.



The image shows a portion of a lab form. At the top, it says "SOURCE Sample Type:" followed by four options: *Triggered, *Confirmation, Assessment, and Special. Below this, there are two fields: "*Date of Initial Positive:" with a date format MM / DD / YYYY, and "*Original Positive ID#:" with a blank line. At the bottom, there are two more fields: "Source ID: SRC-" followed by a line containing "AB", and "Source name (ex. 'WELL #1'):" followed by a line containing "Well #2". Two black arrows point to the "Assessment" radio button and the "AB" text in the Source ID field.

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

The three pillars of an asset management program

by Jake Salcone

Water systems that take good care of their assets are more likely to ensure safe, reliable drinking water for their customers at the lowest possible cost. Systems that are neglected are more likely to incur public health violations and cost much more to operate over the long run. The term “asset management program” refers to the method by which a community or district tracks, maintains and plans for the repair and replacement of their assets, to ensure sustainable service at the lowest possible cost. An asset management program can be divided into three components: an asset inventory; a preventive maintenance program; and a capital improvement plan.

Asset inventory

The goal of an asset inventory is to create a base of information that guides the preventive maintenance program and capital improvement plans. Asset inventory should include the age, condition, life expectancy and expected replacement cost of all hard assets, from pipes and pumps to electronics and trucks. Often overlooked is a system’s most important asset – people! Take stock of the skills held by system staff and managers and determine specific ways to maintain and improve those skills, as well as ways to keep qualified staff happy and productive.

In order for an asset inventory to inform and guide a maintenance program and a capital improvement plan, the inventory must analyze the condition of the assets. When evaluating the condition and expected life of an asset, ask: What is the probability that this asset will fail in the next couple of years? Rank assets from most to least likely to fail. Next, determine the likely

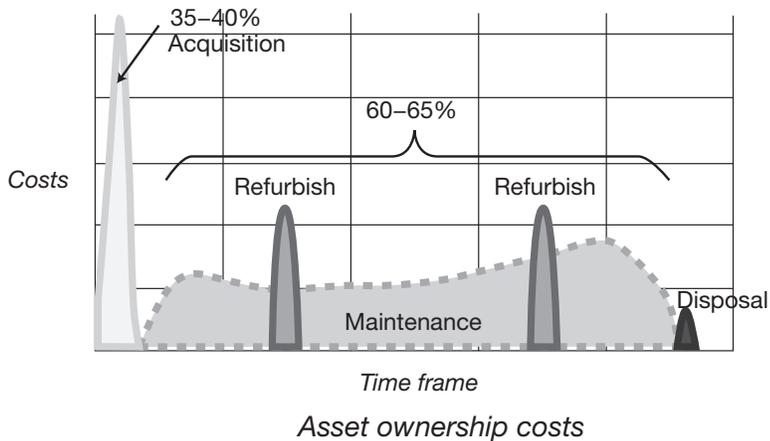
consequences if the asset were to fail. Will there be a serious public health concern if this asset fails? Will there be a sustained loss of service? How many people will be affected? By comparing the responses to these questions between different assets, assets can be ranked according to their consequence of failure. Prioritizing assets for replacement requires weighing the probability of failure *and* the consequence of failure. Many software tools and programs are available to manage an asset inventory program, from the very large and complex systems to the very small. One free program, EPA’s Check Up Program for Small Systems (CUPSS), is designed specifically for small utilities.

Note: A comprehensive, up-to-date system map is an invaluable component of an asset inventory.

Preventive maintenance program

All utilities, no matter what size, should have a preventive maintenance program. Is it clear to staff what assets require the most care to continue to function properly? Is it clear who will perform the care or maintenance and when? Are routine maintenance activities only known by one person? What if he or she leaves? Is it clear to managers that the maintenance is being conducted, and, if not, why? Elements of a preventive maintenance plan may include: a valve exercise program, hydrant testing, pump station checkups, leak inspection, inspecting and cleaning filters and screens, emergency generator testing and maintenance, and meter testing. Again, software programs, including CUPSS, are designed to help staff and managers keep track of these activities.

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The lifecycle cost of an asset includes the capital cost (acquisition) and repair and maintenance costs. This graph shows that the costs to repair and maintain an asset can be 60 – 65% of the total lifecycles costs. From Steve Allbee, US EPA.

Capital improvement plan and budget

An asset begins aging and deteriorating the moment it is installed. Some assets can be expected to last 50 years or more, while others, such as computer software, may need replacement every five years. Unfortunately, planning for an asset's replacement is rarely as simple as subtracting the years since installation from the manufacturer's estimated life expectancy, although this is a good place to start. A multitude of environmental and usage factors can shorten or lengthen an asset's life. Your operational experience is invaluable. This is why it is important to record objective notes about the condition of each system component when conducting or updating the inventory. By evaluating the remaining life expectancy and current working condition of an asset, utility managers can estimate the likelihood that an asset will fail, the 'probability of failure.'

By considering each of these factors: life expectancy, condition, probability of failure, and consequence of failure, utility managers can develop an appropriate schedule for asset replacement. This schedule is often called a 'capital improvement plan'. A capital improvement plan should forecast at least five years of improvements. Current and anticipated regulatory requirements and anticipated changes to customer demand should be considered while creating the plan.

Anticipated changes to regulations or to customer demand could influence whether an asset should be rehabilitated, replaced, or upgraded.

A capital improvement plan is moot unless it is accompanied by a capital improvement budget. Without an associated budget, it is unlikely that the capital improvement plan can or will be followed. This is where system staff need to be comfortable working with the board, council or city managers to analyze costs and revenue. Will rates need to be adjusted to meet the costs in the capital improvement plan? Is the system incurring unnecessary costs? Do the costs of continuously repairing a distribution line exceed the cost of replacing it and offer a higher level of service? Can the system be better managed to reduce operation costs thereby freeing up revenue to use for capital improvements?

Remember that the ultimate goal of asset management is to provide safe, reliable drinking water at the lowest possible cost. While it may seem onerous and expensive in the short run, sound asset management averts catastrophic costs for future generations – something citizens should be proud of!

Jake Salcone helps rural Oregon communities care for their infrastructure on behalf of the Rural Community Assistance Corporation (RCAC). jsalcone@rcac.org (503) 228-7869 www.rcac.org

Staff updates

Gary Burnett, PE, regional engineer in the Pendleton Office, retired in September after 26 years of service in the Drinking Water Program.

Tom Charbonneau, PE, plan review coordinator for Region 1 in the Portland Office, retired in November, also after 26 years of service in the Drinking Water Program.

Gary and **Tom** began their service in the early days of the Drinking Water Program shortly after Oregon received primacy from EPA, and have greatly assisted in the growth and the organization of the Drinking Water Program as it is today. Gary acted as a mentor for many of the field staff, teaching them how to conduct surveys and build relationships with water system operators. His experience with small water systems in Eastern Oregon helped to shape many of the Drinking Water Program policies for water systems in place in Oregon today. Tom also had much influence on policies and procedures, especially around the plan review process. His view of issues and way of handling problems produced results and built relationships. Their great experience with water systems and history with the Drinking Water Program will be greatly missed. We wish them well in their future pursuits during their retirement years.

Janet Brock joined the Data Management Compliance and Enforcement unit of the Drinking Water Program as a Research Analyst 1 in December 2010. Janet joins the program from the Acute and Communicable Disease Prevention Program, also in the Public Health Division, where she worked as an Emerging Infection Program Specialist monitoring cases of hepatitis, influenza, and other infectious diseases. Janet has a degree in journalism.

Congratulations to **Michelle Byrd** who successfully passed the sanitarian's registration exam and is now a fully registered Environmental Health Specialist. This is a great achievement for Michelle who worked very hard for two years to accomplish this goal.



MEETING CALENDAR

Drinking Water Advisory Committee

Oregon Health Authority
Diane Weis / 971-673-0427

April 20, 2011
July 20, 2011

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.public.health.oregon.gov/HealthyEnvironments/DrinkingWater/CrossConnection/Documents/advisoryboard/schedule.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

Apr. 12	Water Meters
Apr. 14	Water Meters
Apr. 20	Safe Drinking Water Act Update
Apr. 26	Control Valves by GC Systems
Apr. 26-28	Water Certification Review
May 3-5	Water Certification Review
May 11	Well Performance Issues
May 18	Safe Drinking Water Act Update
June 8	Advanced Control Valve
June 16	Safe Drinking Water Act Update

Backflow Management Inc.

503-255-1619

Apr. 8	Confined Space Entry Safety
Apr. 18-19	Water Distribution Exam Review
May 11	Basic to Advanced Math for Water Operators
May 11	Oregon Administrative Rules Review

Cross Connection/Backflow Courses

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

Clackamas Community College (C)
503-594-3345

Backflow Assembly Tester Course

May 2-6	Portland (B)
June 6-10	Oregon City (C)
June 6-10	Portland (B)

Backflow Assembly Tester Recertification

Apr. 7	Portland (B)
Apr. 8	Oregon City (C)
Apr. 13	Pendleton (B)
Apr. 15	Portland (B)
Apr. 20	Portland (B)
Apr. 21	Portland (B)
Apr. 21-22	Oregon City (C)
May 6	Oregon City (C)
May 12	Redmond (B)
May 16	Redmond (B)
May 17	Portland (B)
May 18-19	Portland (B)
May 19-20	Oregon City (C)
May 26	Portland (B)
May 27	Portland (B)

June 1	Portland (B)
June 2	Portland (B)
June 3	Oregon City (C)
June 16	Portland (B)
June 23-24	Oregon City (C)
June 24	Portland (B)
June 29	Portland (B)
June 30	Portland (B)

Cross Connection Inspector Course

April 11-14	Oregon City (C)
June 20-23	Portland (B)

Cross Connection Inspector Recertification

Apr. 15	Oregon City (C)
May 13	Oregon City (C)
June 3	Portland (B)
June 24	Oregon City (C)

Small Water System Training Course

503-873-8353

April 7	Hillsboro
April 20	The Dalles
May *	Coos Bay & Springfield
June *	Pendleton

*Dates to be announced



PUBLIC HEALTH DIVISION

Drinking Water Program
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