

Water Tap

Washington's Drinking Water Newsletter

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Winter 2018

No Infrastructure, No Water

IN THE 2011 NATIONAL NEEDS SURVEY, EPA estimated an infrastructure replacement need of \$384 billion between 2011 and 2030. The estimated need in Washington State alone is \$9.52 billion. Our infrastructure—the pipes, pumps, facilities, treatment plants, sources and storage—are nearing the end of their useful life and must be replaced.

Washington's small water systems will need about \$2.1 billion over the next 20 years. That means on average each of Washington's small community water systems needs about \$1 million for infrastructure repair and replacement over the next 20 years. These infrastructure costs equal nearly \$500 per connection each year, or about \$40 per month for every household a small community Group A water system serves. The estimated cost to repair and replace aging infrastructure based on national averages suggests that small water systems may have to triple rates just to cover operational costs and maintain infrastructure.

Many medium and small water systems historically charged low rates that only covered the cost of personnel, system operation, and testing. This practice will leave systems without reserves for rehabilitating or replacing vital infrastructure. Charging customers for the actual cost of water service will guarantee the revenue needed to cover the costs of operation, treatment, storage, distribution, debt service, and funding future repair and replacement.

Recovering the costs of running a utility through user charges is called "full-cost pricing." Evaluating system costs annually, planning for future costs and adjusting rates

to cover the costs takes time and effort, but pays off in the end. Full-cost pricing will ensure financial stability for the water utility and help customers understand the value of their water service. It may even help customers use water more wisely.

An asset management program can help a utility plan for rehabilitation and replacement costs. Asset management involves making a list of existing assets, determining the useful remaining life of each component, and then deciding how critical they are to the system. After a utility knows what it has and when it will need to repair or replace each asset, it can make a plan for those costs and ensure its rates are adequate to cover them.

Finding a rate structure that works well for you may require some research into various types of rate structures and a review of historic costs and water use patterns at your specific utility. EPA's *Setting Small Drinking Water System Rates for a Sustainable Future – STEP Guide Series* (816-R-05-006)* is a great place to start. Another great reference is *Formulate Great Rates: The guide to conducting a rate study for a water system*,* published by the Rural Community Assistance Partnership.

While the footwork needed to ensure adequate financial capacity for your utility might seem scary, it's well worth the journey. There are many asset management tools, programs and trainings available to help you. Staff at our regional office can help you find the right resources for your water system. ♦

*Available in our publications database at <https://fortress.wa.gov/doh/eh/dw/publications>.

Subscribe to H₂Ops online newsletter!

WE HOPE YOU ENJOY this issue of *Water Tap*! Did you know we also publish a quarterly newsletter called *H₂Ops* for water system owners and operators? Each issue focuses on a topic relevant to drinking water operations, such as drought, sanitary surveys, metering, cross-connection control and sampling. The March 2018 edition will cover wellhead protection.

These newsletters are a wealth of technical information and a great resource. You can access past issues of *H₂Ops* at www.doh.wa.gov/H2Ops. While you're there, you can also subscribe to receive new issues in your email inbox.

Water system owners and operators will continue to receive mailed, hardcopy newsletters. ♦



The Value of Water Campaign

WE WANT TO HELP make your customers aware that water is essential to all areas of their lives by building on the Value of Water campaign. We are also looking for partners interested in helping us spread the message.

Last year's campaign featured billboards, bus ads, and bill stuffers highlighting the need to invest in water system infrastructure. This year we will expand that effort by using marketing tools such as radio or TV ads, social media campaigns, school outreach, and others.

This campaign serves a tremendous need. We recently surveyed water systems about their outreach needs. The results show the biggest struggle is educating customers about what's involved in providing safe and reliable drinking water. In our survey, Dan

Welty, field operations manager for Seven Lakes Water Association, said this:

The community doesn't understand the cost of infrastructure, pumping, maintenance, labor, training, and many other expenses. Many people don't have a clue as to the costs of getting clean water to their home or business. Until recently, we hadn't raised rates in a long time, so many of our customers think we unjustifiably raised their rates. In actuality, we have been operating on a shoestring budget without the tools, equipment, and staffing that I believe is essential to the proper operation of any water system.

I also believe that in the long run, the customers will benefit greatly by investing in water system maintenance and upgrades along with replacing aging infrastructure and adding new infrastructure as needed.

Without water, there is nothing.

As long as the water comes out of the faucet, most people don't think about where their water comes from or how it gets to their homes. Only when an emergency occurs, such as a water main break, power outage, pump failure, or other interruptive event, do customers realize the enormous effort it takes to keep the water flowing.

The Value of Water campaign is an opportunity for you to help your customers understand the work that goes into their drinking water. Your participation could be as simple as sharing our social media messages (see article on page 4) or the resources at www.doh.wa.gov/ODWMarketing.

If you're interested in doing more, please contact Outreach Coordinator Elizabeth Hyde at elizabeth.hyde@doh.wa.gov. ♦

Consolidation Benefits Shelton, WSP Academy

The Washington State Patrol Academy near Shelton recently completed a years-long goal to consolidate its water system with the City of Shelton's.

The State Patrol paid for a water main extension, but ran into pressure problems at the academy. To fix the issue, a 400,000-gallon water storage tank was built and a new pres-

sure zone created using a \$4.5 million loan from the Drinking Water State Revolving Fund.

Another issue arose while the water storage tank project was in the works—the WSP Academy's water system had elevated lead and copper levels. Since the problem would be fixed by connecting to Shelton water, the Office of Drinking Water issued a waiver

until the project was finished.

Consolidation with the city allowed WSP to inactivate its troubled system. In addition, the city is eligible for up to 50 percent loan forgiveness. The extended water main was built to handle future connections along the route, including a number of small public systems and private wells. ♦

Investment Goes Hand-in-hand with Trust

ASK ALMOST ANYONE in our industry and they'll say the biggest challenge we face is renewing and replacing our aging drinking water infrastructure. Years of neglect and deferred maintenance have left many systems with a seemingly insurmountable backlog of projects and no reserves to pay for them.

If we are to succeed in building a sustainable effort to renew our infrastructure, we must also rebuild the public's trust in the safety of our tap water. A 2016 poll showed that just less than half of Americans were very confident about the safety of their drinking water. Only about a third of those polled said they drink water straight from the tap versus choosing bottled or filtered tap water. Not surprisingly, poll results showed that distrust of tap water was more common among poor and minority communities,

where our infrastructure investment needs are often most acute. As a result, communities that can least afford it are more likely to turn to bottled water despite its drastically higher cost and environmental impact—and they are more likely to miss out on the health benefits associated with fluoridation.

The events in Flint, Michigan, together with a steady stream of reports from nongovernmental advocacy groups and the media on the occurrence of lead and emerging contaminants in our drinking water have shaken the public's confidence.

We have the public's attention. Now it's up to all of us to do the hard work of rebuilding trust. We must do better to educate the public about what we do every day to keep our water safe. We need to help our customers understand the linkage between infrastructure and the safety of our water

on a local scale—and why their utility's drinking water projects should matter to them.

We also need to help our customers put the tangle of information on health risks they get from social media and the internet into context, so they can make informed choices about protecting their health. And we must not let increasing skepticism about government translate to reduced confidence in the safety of our public water systems.

Safe water runs on sustainable infrastructure. Sustainable infrastructure depends on the public's belief in the safety of our tap water. We can't have one without the other. ♦



ODW Director Garin Schriever

Waterworks Renewals Now Online

FOR THE FIRST TIME, our waterworks operators or their employers can renew certifications online. The payment process is quick and easy. More than 50 percent of eligible certified operators completed online renewal in November, when it became available.

It's not too late to submit online payments for 2017 renewals. Just go to www.wacertservices.org/WaterRenewal, login to the secure site, select "Proceed to Payment," and follow the prompts.

Almost 300 operators still haven't submitted a valid email address. Operators with valid email addresses received a renewal notification with a direct link to the online renewal page. Operators without an email address received notification by mail this year, but may not receive any notification in the future. To

ensure that you receive important certification information in the future, send your updated email address to dwopcet@doh.wa.gov.

Is a renewal notice required in order to pay? No. You will no longer receive a paper first renewal notice. After November 1 each year, eligible operators or their employers can login with just a last name and a certification number to pay. Operators can use the link in the emailed reminder.

What is the deadline to pay? The deadline to avoid a late fee was January 22, 2018. Operators who didn't pay the \$42 renewal fee by then incurred a \$35 late fee. If an operator's renewal fee isn't paid by the final February 28, 2018, deadline, certification is inactivated.

How do I get a receipt? The bank payment site provides two receipt options. You can print a paper receipt and the site will email a receipt.

When will I get my validation card? Washington Certification Services will mail validation cards for 2018 after the renewal payment processes, usually within 10 business days. Waterworks validation cards issued for 2017 do not expire until March 1, 2018.

What contact information should I enter on the payment screen? Enter the contact information for the person or company paying the fee. If an employer is paying the fee, enter the contact information for the company making the payment, not the operator. If an operator is paying with a personal credit card, then enter the operator's contact information.

Washington Certification Services administers the online renewal program for Department of Health. Visit www.wacertservices.org or call 253-288-3357 if you have questions. ♦

3 Washington Projects Win EPA WATERS Awards

THE U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA) REGION 10 recently named 11 winners of its annual WATERS Awards, including three Washington projects.

Funding for each project came from the Drinking Water State Revolving Fund (DWSRF). Since 1997, Washington's DWSRF provided more than \$871 million in loans to water systems to make improvements.

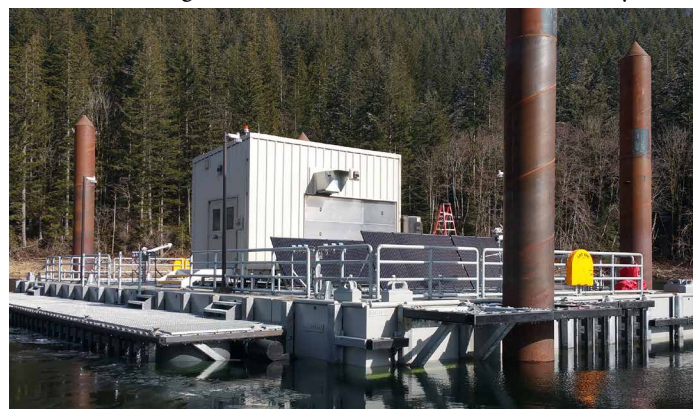
LIBERTY LAKE SEWER AND WATER DISTRICT: Using a \$905,465 DWSRF loan,

Nominated projects must be:

- Well-planned
- Address affordability issues
- Transferable to other communities
- Provide water or energy efficiency
- Add resiliency and/or sustainability

the district consolidated the East Side Liberty Lake Improvement Club. Built in 1945, the improvement club's system serves about 300 residents. The loan funded upgrades to consolidate the system with the Liberty Lake Sewer and Water District, including upgrading an existing intertie, replacing old and undersized distribution lines, and abandoning two wells.

In addition, the project included 50 percent principal forgiveness, bringing base water rates down by nearly two-thirds.



City of Seattle's new pump station barge on Chester Morse Lake, made possible with DWSRF loans.

SEATTLE PUBLIC UTILITIES: Using \$18 million in DWSRF loans, Seattle Public Utilities built a new floating pump station in the Chester Morse Lake reservoir on the Cedar River. The pump station lets the utility pump water and deliver 240 million gallons



Bilay Adams (left), general manager of Liberty Lake Sewer and Water District; and Lucy Edmondson, Washington Operations Office director at EPA Region 10.

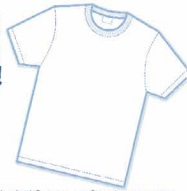
a day to its 1.4 million customers, regardless of seasonal water level variations. The project improves SPU's resiliency during drought and maintains instream flows for fisheries in the Cedar River.

CITY OF PORT TOWNSEND: Receiving its water from the Big and Little Quilcene rivers via 30 miles of transmission line, the utility struggled to meet requirements that would enable it to avoid filtration under the Surface Water Treatment Rule. New federal regulations required the utility to install either UV disinfection or filtration. Receiving more than \$8 million in DWSRF loans for treatment plant upgrades, the city designed and built a membrane treatment plant capable of producing 3 million gallons a day. ♦

Did you know? It takes **650 gallons** of water to create **one** cotton shirt!

That's something to know!

Water. Essential for life.



Source: United States Geological Survey, 2016. water.usgs.gov

DOH.WA.GOV/DrinkingWater

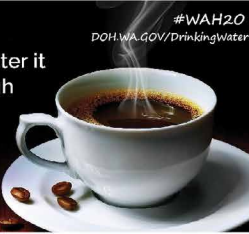
#WAH2O

37 gallons.

That's how much water it takes to grow enough coffee beans for **ONE** cup of coffee.

Water. Essential for life.

TheValueOfWater.org



#WAH2O

DOH.WA.GOV/DrinkingWater

At about a **penny a gallon**, tap water is a great value.

Your drinking water bill pays for:

- ◆ Testing and treatment.
- ◆ Pumps and miles of pipe.
- ◆ People working around the clock.



Tap water: **value** for your **money!**

DOH.WA.GOV/DrinkingWater

#WAH2O

The human body is **60% water.**

Give yours the good stuff!
We work hard to ensure your tap water is convenient, tested, tasty, & portable.



DOH.WA.GOV/DrinkingWater

#WAH2O

400,000 house fires each year.

We support those who keep the water flowing.

DOH.WA.GOV/DrinkingWater

#WAH2O

19 GALLONS OF WATER TO GROW ONE APPLE

Source: Science Media Center 2009



#ValueWater

#WAH2O

Value of Water COALITION

DOH.wa.gov/DrinkingWater
TheValueOfWater.org

Be Social with Us!

Follow us on Twitter at @WADeptHealth or like us on Facebook at Washington State Department of Health! Please search for #WAH2O and share our posts! For quick access to our tweets and Facebook messages, visit www.doh.wa.gov and scroll down to the social media section.

In our posts, we're creating awareness about the need for infrastructure investment and the many little-known ways that water touches our lives. Some posts feature our DWSRF Program and ways it helps water systems maintain, repair, update, and consolidate their infrastructure.

Got ideas for social media? Send us your suggestions at dwinfo@doh.wa.gov. 💧

We're looking for water systems and operators that do an outstanding job providing safe and reliable drinking water to their customers. Send your nominations to us by February 16. For information, visit our Drinking Water Week webpage at doh.wa.gov/DWWeek.

Resilient Washington Report Examines Emergency Preparedness

GOVERNOR JAY INSLEE CONVENED the Resilient Washington Subcabinet in 2016, and directed it to assess the state's resiliency to natural disasters and increase preparedness (**Directive 16-19**). The directive asked the subcabinet to:

- ◆ Identify data and information gaps that hinder preparedness and response plans.
- ◆ Identify data and information to help guide a strategic public education campaign centered on personal preparedness.
- ◆ Develop potential actions that can be coordinated across state agencies, local jurisdictions and federal partners to reduce risk and improve response in the event of an earthquake or tsunami.
- ◆ Identify, prioritize and estimate costs for state actions that will improve public safety and earthquake preparedness and response.

The subcabinet's final report, released in August 2017, found that while there's been a lot of work on earthquake and tsunami resiliency,

there is much more to do. The report named nine recommendations, three directives, and a number of requests to the legislature.

One recommendation is directed to drinking water operators: Require that utility providers (domestic water supply, wastewater, electricity, natural gas, petroleum, and information and communication technology) identify the vulnerabilities in their systems and mitigate the deficiencies. The recommendation included four actions to take place within the next five years:

- ◆ Create a public information campaign tailored for a catastrophic event. The campaign should cover topics such as making water safe to drink and how to dispose of human waste safely.
- ◆ Outline agency emergency powers and those in the governor's state of emergency proclamation, and recommend possible policy changes to clarify any gaps.
- ◆ Conduct a jurisdictional/regulatory gap assessment between multiple agencies.

- ◆ Update the Infrastructure Systems Target Capability Assessment in the State Preparedness Report. The update should include a strategy to coordinate the "lifeline sector" (energy, transportation, communication, water/wastewater).

To carry out the recommendation, we are updating the 2010 Water Sector Specific Plan, which provides a framework for responding to catastrophic events. In 2018, we also will roll out a training plan for water system operators and managers to communicate to customers during an emergency.

In addition, we will reestablish the Water Sector Security Council, which will evaluate the survivability of Washington's water systems and develop a decision matrix. The council will include perspectives from both larger and smaller water systems.

Water system operators and managers can find a wealth of information in Emergency Publications for Water Systems at www.doh.wa.gov/ODWEmergPubs. 💧

ODW to provide funding for PFAS sampling

In 2018, we'll use set-aside funding to pay for per- and polyfluoralkyl (PFAS) sampling for some Group A community and nontransient noncommunity water systems. Funding will cover about 500 samples total. We'll be contacting water systems with sources near PFAS spill sites and firefighting foam locations. Participation in this project is voluntary.

We're currently working on policy and communications for this sampling program. We'll share more information soon, including details on public

health benefits, what to do if PFAS is detected, potential water system obligations, and more.

There is no national drinking water standard for this unregulated contaminant. However, EPA established lifetime health advisories for two PFAS compounds, PFOA and PFOS, at 70 parts per trillion (ppt). Individual states are beginning to adopt their own advisory or regulatory standards. For example, the State of New Jersey decided to set its own drinking water maximum contaminant level for

PFOA at 14 ppt, expected to go into effect in about a year.

We are in the early stages of developing a PFAS drinking water rule. We anticipate the rule-making process to take about two years to complete.

To learn more about PFAS, visit www.doh.wa.gov/PFAS where you'll find information and links to EPA, CDC and others. If you have questions about our sampling program, please contact Scott Torpie at scott.torpie@doh.wa.gov. ♦

Developing Your Water System Workforce

WATER SYSTEMS need to plan for operator vacancies and help operators plan their career path in the water industry. An Employee Development Plan (EDP) can serve both needs.

An EDP will help utility managers assist operators in defining their career goals and align them with the strategic direction of the utility. Water system management can use the plan to evaluate training the operator might need to achieve their goals, or use it to evaluate existing staff for potential advancement in the wake of the large number of retiring operators.

An EDP can start with the operator completing an Individual Development Plan (IDP) that helps them determine what

goals and objectives they want to achieve in their career. They'll define some immediate goals for their current position, such as learning how to use the SCADA system, gaining a lead position for a project, or taking a class to learn new skills. Next, the IDP moves into short-term career goals, such as gaining a higher distribution or treatment certification, and long-term career goals, such as becoming the mandatory certified distribution or treatment operator at their utility or moving up to a larger utility.

The IDP then breaks these goals into developmental objectives, which are steps the operator needs to take to reach the goals. These could include finishing a 2- or 4-year college degree, taking

specialized training that could lead to a new position at another facility, or doing coursework to help prepare for a treatment project underway at their utility.

The IDP provides a starting point for water system managers to align the operator's goals with the water system's strategic direction so that a "win-win" situation can happen.

Most critical to the success of an EDP are the developmental objectives that include specific assignments and projected completion dates. Signing the completed EDP helps operators and utility managers commit to reaching their goals.

We'll have workforce development resources online soon. ♦

The Gray Tsunami is Coming Your Way

HAVE YOU HEARD of the gray tsunami? It's a euphemism for the large groups of baby boomers heading into retirement during the next 10 years. At a recent conference, we determined that only 12 of 70 people at a presentation on succession planning would remain in the workplace beyond 2024. That's only six years away!

Succession planning is the process an organization uses to ensure that employees are recruited and developed to fill each key role within the company. At that conference, we asked operators about ways utilities and the state can ensure a viable pool of qualified waterworks operators in the future.

Here are their suggestions:

- ♦ Market the water industry in high schools as a career path.
- ♦ Attend military job fairs and career days at high schools and colleges.
- ♦ Look at the level of experience required for entry-level positions.
- ♦ Hire satellite management agencies and contract operators.
- ♦ Implement school programs, such as field trips, work-study, job shadowing and junior achievement internships.
- ♦ Retired operators can mentor, serve as back-up operators, and provide training to other operators.

Do you have a succession plan for your utility? You may consider cross-train-

ing existing staff to fill vacancies, working with internship programs at local colleges, or using an Employee Development Plan to evaluate existing staff for potential advancement in the future (see 'Workforce Development,' above). The advantages of planning include:

- ♦ The ability to retain some institutional knowledge by having a healthy turnover time.
- ♦ More trained people on staff will better protect public health by allowing the system to do more than "just get by" when an operator leaves.
- ♦ If you develop your talent in house, you won't have to search for new employees. ♦



PO Box 47822
Olympia, WA 98504-7822

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♻️ Printed on recycled paper.

Will You Be Ready when the Lights Go Out?

An extended power outage would leave you in the dark and cause your water system to lose pressure. Think about what you might need to respond. Below are some resources that can help. You can order copies from us or print copies yourself and tuck them into your emergency response toolkit. They are in our publications database at www.doh.wa.gov/odwpubs.

RESPONDING TO A PRESSURE-LOSS EVENT (331-338): This Q&A sheet explains pressure loss, how to prevent it, how to tell if one occurred, and what to do. You will also need **Drinking Water Warning: Loss of pressure (331-**

493-F), a form to notify your customers about the situation.

EMERGENCY DISINFECTION OF SMALL SYSTEMS (331-242): This publication explains when you need emergency disinfection and how to do it. Tables show how much chlorine bleach to use to disinfect a well, reservoir, and distribution system. Available in English and Spanish.

TREATING DRINKING WATER FOR EMERGENCY USE (331-115): This brochure for consumers explains how to treat drinking water by boiling or using bleach, how to store drinking water for emergencies, and how to find some hidden sources of water in the home. ♦

