WATER TAP

WASHINGTON'S DRINKING WATER NEWSLETTER

The Green River Filtration Facility covers about 25 acres.

Tacoma's new Green River Filtration Facility

Just over a century ago, 42 million gallons-a-day of Green River water began flowing through a 43-mile pipeline into the City of Tacoma. Today, the Green River is still the city's primary water source, and one of the nation's last remaining unfiltered surface water supplies. To comply with the federal Long Term 2 Enhanced Surface Water Treatment Rule (LT2), Tacoma Water and its Second Supply Project (SSP) partners expect to start up a new filtration facility late this year with final completion by May 2015.

Tacoma Water provides direct drinking water service to about 316,000 people in the City of Tacoma, and parts of King and Pierce counties. The utility also supplies water to a number of wholesale customers as well as its SSP partners, Covington Water District, the City of Kent, and Lakehaven Utility District.

In 2005, the SSP partners completed a transmission pipeline from the Green River, increasing the capacity of the Green River supply to about 167 million gallons per day. Including the SSP partners, about 500,000 customers receive water from Tacoma's system. If all wholesale and partner utilities are counted, about 1 million customers could receive water from Tacoma's system.

We adopted LT2 in 2008 to improve drinking water quality. It requires public water systems that use surface water or groundwater under the direct influence of surface water to provide additional public health protection against *Cryptosporidium*.

Following a year-long process to identify feasible options, narrow the options, estimate cost and rate impacts, and communicate with stakeholders, Tacoma Water selected filtration as the best option for long-term treatment of the Green River.

(Continued on Page 5)

Seasonal water users

If summer is your operating season, it's time to think about starting up your water system. Your start-up season will be trouble-free if you take steps as winter ends to ensure the system is coliform-free when you begin serving water to the public. For guidance, see Start-up and Shut-down Assistance for Seasonal Noncommunity Water Systems (331-314).

Washington State Department of Health
Environmental Public Health Division
Office of Drinking Water

Volume 29, #1 - March 2014

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Inside This Issue

DOH PUB. #331-200

The Director's Column

by Clark Halvorson

Low-cost loan program supported 69 water projects in 2013

For the Drinking Water State Revolving Fund loan program, 2013 was another great year. We supported 69 water systems with more than $180 million in funding!

The State Revolving Fund Team held a regular spring cycle that provided more than $100 million in low-cost loans to fund 48 projects.

We also offered a special fall cycle for water systems whose projects lost funding after our state Legislature made the difficult decision to eliminate the 2014 Public Works Assistance Account loan program to meet other pressing priorities and responsibilities. From that program, we identified 48 potentially eligible applicants with loan requests totaling $123.4 million. With a total of $83 million available to loan, we were able to fund 21 of those projects.

Loan amounts for the fall cycle ranged from $550,000 to help the City of Chehalis replace a high-level reservoir to $12 million for the partners in building the Green River Filtration Facility in Pierce County.

We work hard to support water systems across the state in their planning for the future. One of the challenges the past few years has been getting loan agreements done in time for water systems to take advantage of the warm weather construction season. To fix this, we are shifting the funding cycle calendar from spring to fall.

As we finish the 2013 funding cycle, our team is preparing for the 2014 cycle. We expect to have $41 million to $50 million available for the 2014 funding cycle next fall.

Ensuring the long-term sustainability of our state's drinking water infrastructure is a major challenge. Our program will need to continue to be flexible and forward-thinking, looking for efficiencies and partners wherever possible.

This year, the Drinking Water State Revolving Fund Program loan application period will begin September 1, and run through September 30, 2014.

Check our DWSRF webpage for more information.

Ownership Type	Projects Funded	Project Applications
Cities/Towns	39	44
Water Districts	13	23
Public Utility Districts	13	20
County Owned	0	1
Associations	4	4

System Size	Population	Projects funded
Large system	> 50,000	11
Medium systems	<50,000 and >/= 10,000	18
Small systems	<10,000	40

Firgrove's new tank exceeds expectations

By Mike Nepple, Coldwater Project Services

Construction on Firgrove's reservoir started in September 2009 and was completed in January 2013. The system serves 23,747 people in Pierce County.

Firgrove Mutual Water Company's Zone 2 reservoir has won three national awards. The Steel Tank Institute selected it as the 2012 Standpipe of the Year. It was a runner-up from over 200 entries in Tnemec's 2012 Tank of the Year contest, and the Society for Protective Coatings selected it for the 2014 William Johnson Award. However, Firgrove never set out to win any awards. It only wanted to improve service to customers.

Firgrove knew for a long time that it needed a new water storage tank. The 2002 Water System Plan (WSP) recommended replacing an older reservoir with a larger one and adding another million-gallon tank. The operators didn't need a study to tell them they were short on storage capacity in their primary zone. "You could see the water from lawn sprinklers dancing up and down in parts of the system as our larger pumps turned on and off," said Leonard Horton, Firgrove's superintendent. "It was like the water system was hyperventilating."

The ink was hardly dry on the WSP when developers notified the water company they were planning to convert a golf course to 1,700 new homes. Firgrove immediately updated their storage calculations. The numbers were daunting. The volume was now 3 million gallons and cost projections were uncertain as construction prices spiraled up before the financial crash of 2008.

Location and financing

There were not many suitable locations for the new reservoir. When Firgrove reviewed alternative tank sites, the news was shocking. "If we were not successful in locating the reservoir where we did, we stood to spend an additional million dollars or more for increased tank height and large-diameter transmission mains," said Larry Jones, Firgrove's general manager.

Another key step was financing. Firgrove applied for a Drinking Water State Revolving Fund loan to help with project funding. When the first application didn't succeed, they applied again and received a low-interest loan for $3 million in 2009.

The waiting continued as design documents were prepared, submitted, revised, and ultimately accepted in the timeless cycle of permitting approvals. Meanwhile, the lawn sprinklers continued their summer dance.

Decisions, decisions

Firgrove kept key staff closely involved throughout the project design. Everyone carefully considered the interlocking results of each decision. A decorative mural was proposed and embraced as a key element of the project. One day, Jones opened several email attachments to review renderings of tank mural options. "I just about fell out of my chair," he recalls. "Alternative four had my face plastered clear across the tank. Ultimately, Firgrove's Board of Trustees decided to go with another option," he added with a grin.

(Continued on Page 10)

Strut Your Stuff

Drinking Water Week 2014

Celebrate safe and reliable drinking water in your community

Drinking Water Week, May 4-10, is a great way for water systems to educate and connect with their community. The nomination period ended on February 1, and we believe it's important for water systems to acknowledge the vital role they play in providing safe drinking water to their customers.

There are many celebration ideas on the American Water Works Association website that range from promoting public communication to putting together a community event. A few of the ideas listed include: sending bill stuffers, publicizing the release of your consumer confidence report, inviting your community to an open house, and planning a community clean-up.

However you decide to celebrate, big or small, we'd like you to tell us about it.

Make a difference with the National Mayor's Challenge

The Wyland Foundation's 2014 National Mayor's Challenge for Water Conservation takes place April 1-30.

The challenge is simple: Be the community with the most residents making online pledges to conserve water, save energy, and reduce pollution. Residents from winning cities who take the pledge get entered into the national contest for a chance to win one of many great prizes, including the grand prize: a Toyota Prius!

The City of Bremerton did just that last year, winning first place in the 30,000-99,000 population category. Bremerton was the only Washington city to place in the top 10 in its population category.

In 2012, the Challenge motivated residents from 1,000 cities in all 50 states to make online pledges to save a total of 4.7 billion gallons of water over the next year.

The nonprofit Wyland Foundation, founded by renowned marine life artist Robert Wyland, is dedicated to promoting, protecting, and preserving the world's oceans, waterways, and marine life. The foundation encourages environmental awareness through education programs, public art projects, and community events.

Will your city or town be the next big winner? Tell your mayor about the National Mayor's Challenge for Water Conservation and get your community involved in helping to protect our nation's most valuable resource – water!

See Fix A Leak Week event on page 15.

Bob Choate, water treatment plant operator, and the City of Woodland have achieved optimization of their surface water treatment plant since 2009.

TOP award winners

Our Treatment Optimization Program (TOP) awards bronze, silver, and gold certificates to surface water systems the first time they meet the turbidity goals for 3-, 5-, and 10-consecutive years, respectively. Among the winners in 2013 were City of Kelso, silver; and City of Woodland, bronze. Congratulations!

From left: Randy Johnson, Monte Salte, and Paul Reebs, City of Kelso, have achieved optimized performance of the surface water treatment plant since 2006.

Green River... (Continued from Page 1)

"The cost implications are significant and not weighed lightly," wrote Tacoma Water Superintendent Linda McCrea in a March 16, 2010, memo. "The multiple benefits of providing filtered water are also significant and we believe this is the appropriate time to move forward with that step."

Filtration will satisfy the LT2 by removing microorganisms while providing a wide range of additional water quality and regulatory benefits such as:

- Improving the taste and clarity of water.
- Reducing the amount of sand and silt entering water pipes.
- Minimizing natural organic material that forms disinfection byproducts when it reacts with chlorine.

From left: Tacoma Water Project Engineer Jason Moline describes the future treatment process from the deck of the new filters to Secretary of Health John Wiesman, Drinking Water Director Clark Halvorson, and Deputy Secretary Dennis Worsham during a site visit in January 2014. *Photo courtesy of Tacoma Water*

The Office of Drinking Water approved construction of a dual media filtration facility on the Green River in 2012. The groundbreaking for construction occurred in May that year.

Construction of the filtration system, with an initial budget of up to $217 million, will cost about $185 million and support many jobs. During the peak of construction, 150–200 construction workers are on site each day. Project funding came from various sources. The SSP partners were responsible for one-third of the project cost (about $62 million). Including the SSP partners, about $38 million came from low-interest loans from the Public Works Trust Fund and $72 million will come from the Drinking Water State Revolving Fund. Bond sales and internal funds provided the rest of the project funding.

When complete, the filtration facility will meet new national public health standards and improve water quality. The filtration facility will be able to treat 150 million gallons of drinking water per day, and will be the largest filter treatment plant in Washington.

Want to advance your drinking water system upgrade?
Sign-up for a tech team meeting

By Cathi Read, Small Communities Initiative, Department of Commerce

Every fall the Infrastructure Assistance Coordinating Council (IACC) holds a conference at the Wenatchee Conference Center where participants can select from about 45 concurrent sessions on funding programs, regulatory issues, case studies, panels, and guidance on special topics. As an added bonus, drinking water system staff can preregister for a "tech team" meeting to discuss the particular needs of their infrastructure projects.

"This was my first time attending the IACC conference… For us, the tech team was of great value as we were able to share information regarding our infrastructure needs and receive valuable input from various funding sources in one time and place," said Mayor Rick Heiberg, MBA, Town of Coulee City. "It seemed to me that there was a kind of synergy that developed with all of us sitting around a table exchanging ideas and thoughts on the various possibilities."

To request a tech team at the Sept. 30–Oct. 2, 2014, conference, watch for the conference registration brochure. You can also contact Cathi Read to request a tech team, add your name to the "conference information" distribution list, or receive a summary of funding programs for drinking water projects.

The 2013 conference offered several drinking water-specific sessions. You can view PDFs of the presentations at http://infrafunding.wa.gov/conference.html

IACC is a nonprofit organization. Its members are staff from state and federal agencies, associations, tribes, and nonprofits. On average, 275 people attend the conference, including staff and elected officials from cities and towns, tribal members and staff, special district commissioners, water association commissioners, consulting engineers, regulatory agency staff, state and federal funding program staff, technical assistance providers, and product vendors.

For more information about IACC, visit http://infrafunding.wa.gov

Tech team meetings

The IACC Conference is not the only opportunity to discuss your project with funding program staff. Contact Public Works Board regional service coordinators (www.pwb.wa.gov) to set-up a tech team meeting in your community.

At technical assistance team ('tech team') meetings, communities can request input on their priority infrastructure projects. Tech team members help participants frame their infrastructure issues clearly, explore possible solutions, identify potential financing programs, and develop a list of next steps.

"I enjoyed the informal conversation and sharing of information among the funding agencies, not just for the project of focus, but for other projects we might consider in the future," said Jocelyne Gray, PE, Mason County PUD No. 1 about the tech team meeting she attended in 2013.

IACC held drinking water tech team meetings in 2012 for the Town of Creston, Town of Almira, City of Royal City, City of Chewelah, Port of Royal Slope, Skamania PUD, Swinomish Tribe, Hunters Water District, and Roosevelt Water Association. In 2013, they met with Mason County PUD No. 1, City of Winlock, City of Pateros, Town of Riverside, City of Mabton, and City of Brewster.

For examples of projects that benefitted from a tech team, visit http://www.pwb.wa.gov/technical-assistance/TechTeam/Pages/default.aspx

Consumer Confidence Reports due July 1, 2014

It's time again to let your customers know about their safe, reliable, and sustainable water.

Group A community water systems must provide an annual Consumer Confidence Report (CCR) to their customers and us by July 1 of each year. Wholesalers must provide information to their purchasers by April 1.

Each year your CCR must include information from the previous calendar year. That means the report you prepare for distribution prior to July 1, 2014, will contain 2013 information. Your report **must include at least the following information** about the quality of water you serve to customers:

1. Water system information (name, ID number, and so on)
2. Source information (groundwater, surface, GWI, and so on)
3. Contact information (owner, operator, or purveyor)
4. Water quality table, definitions, and mandatory language

The booklet, Tips for Preparing User-Friendly Consumer Confidence Reports (331-296), will help you prepare your CCR. It provides a comprehensive tool for preparing CCRs.

For more information, visit our CCR home page.

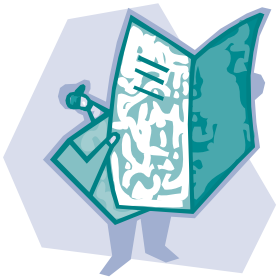
The U.S. Environmental Protection Agency (EPA) offers a free CCR resource called CCRiWriter. CCRiWriter is easy to use. After you fill in the blanks and answer the questions with your data, it will generate the CCR with the mandatory definitions, language, and water quality table.

When finished, you can print your report and distribute it to your water system users. To get credit from us, you must send a copy to your Office of Drinking Water regional office by July 1, 2014 (preferably with the certification form). Our contact information is on the back of the certification form.

The certification form, due October 1, verifies the distribution of your CCR to customers by the July 1 deadline. Sendingthe form to your regional office with a copy of the CCR will help us credit your system correctly.

If you choose to deliver your CCR to customers electronically, the Web address (URL) you use must open directly to the CCR or your system will not receive credit. Information on electronic delivery methods is in Consumer Confidence Reports-Electronic Delivery Options and Considerations (331-470).

New & Revised Publications



When an institutional building becomes a water system (331-488). New January 2014. Two pages of questions and answers explain when an institution becomes a public water system and important legal obligations it must meet.

Sanitary Survey Field Guide (331-486). New December 2013. 176 pages provide information and guidance on our expectations for our sanitary survey program participants. For use with the Third Party Sanitary Survey Checklist.

Office of Drinking Water Fee Schedule (331-228). Revised January 2014. Nine pages contain the fee schedules for Water System Evaluation and Project Review and Approval (WAC 246-290-990), Waterworks Operator Certification (WAC 246-292-995), and Drinking Water Operating Permits (WAC 246-294-070).

Owning and Managing a Drinking Water System (331-084). Revised December 2013. Eight pages give water system owners and board members an overview of their responsibilities and tips to help them make decisions that will sustain the long-term capacity of their water system. Includes a short history of drinking water regulation.

Our publications are online at https://fortress.wa.gov/doh/eh/dw/publications/publications.cfm

Briefs

Need green infrastructure ideas?

EPA's Green Infrastructure Program launched the 2014 Webcast Series, which began in January and continues every two months throughout the year. This series is geared toward public officials and practitioners beginning to implement green infrastructure, and those looking to enhance established programs.

The next webcast will be:

May 6, 2014

More Bang for the Buck: Integrating Green Infrastructure into Existing Public Works Projects

- Charlotte Katzemoyer, director of public works, City of Lancaster, PA
- Matthew Millea, deputy county executive for physical services, Onondaga County, NY

For more information, go to http://water.epa.gov/infrastructure/greeninfrastructure/gi_training.cfm

Correction

In the December 2013 *Water Tap* article, Understanding your system's water rights and how they relate to water system planning, we incorrectly defined how to interpret the instantaneous quantity on water rights, also known as Qi. We apologize for our error and any confusion it may have caused. Here is a correction.

Drought watch

Early in February, snowpack conditions across the state were well below normal—most basins were reporting 50 to 65 percent of normal. The Olympics were particularly hard hit with less than 35 percent of normal snowpack. The state Water Supply Availability Committee met to review conditions and consider whether a drought emergency was in the offing.

Department of Ecology has authority to evaluate, declare and manage drought emergencies in Washington. Even with such dismal snow conditions, the committee decided to reconvene in March to make their recommendation. Decisions about water availability on the Columbia and Yakima rivers generally occur in early March. So, waiting provides better information to decide whether a drought declaration is needed.

February brought one series of storms after another. Snowpack in the mountains started to grow and continued through the month. By early March, all but three basins reported snowpack near 80 percent of normal. The Olympics were at 50 percent of normal.

It is still winter in the mountains and conditions change weekly. While snowpack is less than normal, the trend is good and the forecast for summer river flows looks acceptable.

The USDA updates its snapshot of current snowpack conditions every few days.

Ginny Stern, *ODW Hydrologist*

The Revised Total Coliform Rule

In November, the State Board of Health (board) decided to add two new topics to the current rule making for the U.S. Environmental Protection Agency's Revised Total Coliform Rule (RTCR). Therefore, the board withdrew the previous pre-proposal statement (CR-101) and filed a new one.

The purpose of the rule making is to adopt the RTCR and to consider changes to the existing requirements for planning and disinfection to streamline the regulations, improve clarity, and provide flexibility to systems.

Other rule-making information

To learn more about our rule-making activities, visit our Rule-Making Activities webpage and subscribe to our drinking water rules email list.

We also discuss rule-making activities at our Drinking Water Advisory Group meetings, which are open to all interested parties.

Questions?

Contact Brad Burnham, rules coordinator, at 360-236-3158.

Local Health implements new Group B Rule

We share responsibility for regulating Group B systems with local health jurisdictions (LHJ). About 10 LHJs adopted or plan to adopt their own local Group B rule. Local rules will regulate water systems in those jurisdictions instead of the state rule. Local Group B rules may differ from the state rule if the local rule is at least as stringent as the state rule. In some cases, the local rule may be more stringent than the state rule.

Twelve LHJs entered or plan to enter into a "joint plan of responsibility" (JPR) with us to implement the state's Group B Rule in their jurisdictions. A JPR lays out our respective roles and responsibilities. In those jurisdictions, our job is to assist the LHJs as they help you. We will implement the new rule in the remaining areas of the state.

If your LHJ doesn't have a local rule or agreement with us, we implement the state's Group B Rule in your area. Please contact our regional office.

No LHJ is responsible for approving new Group B systems serving 10 or more residential service connections because those systems must meet the design requirements of the Group A Rule.

If you are seeking approval of a new Group B water system, or if you are an owner or customer of an existing Group B water system with questions, please contact your LHJ.

For more information about Group B water systems, please visit our Group B webpage.

2014 Report Deadlines

Mark your calendar. Make sure you submit the following reports by their due date.

Date	Systems*	Must provide	To the
April 1	Wholesalers	Source information and sample results	Consecutive systems that buy their water
****Delayed**	Group A community water systems with 1,000 or more connections	Cross-Connection Control Annual Summary Report (ASR) forms	Customers and the Office of Drinking Water
July 1	Group A community water systems	Consumer Confidence Report (CCR)	Customers and the Office of Drinking Water
July 1	Municipal water suppliers	Water Use Efficiency Report Report	Customers and the Office of Drinking Water
October 1	Group A community water systems	Consumer Confidence Report Report Certification Form	Office of Drinking Water
Jan. 31	Water systems that use polymers	Epichlorohydrin and Acrylamide Certification From	Office of Drinking Water
10th of every month	Water systems that chlorinate	Monthly residual reporting form	Office of Drinking Water

**There may be some exceptions **Due to website difficulties.*

Firgrove... (Continued from Page 3)

Storage volume requirements were scrutinized during the final design. Water stored below a certain elevation would not be available at adequate service pressure. Providing all 3 million gallons of the required storage at gravity elevation would require a 5-million-gallon standpipe or a 3-million-gallon elevated tank with a similarly high price tag. Firgrove decided to balance reliability and operational flexibility by providing the operational equalization and fireflow storage at gravity elevations and implementing a variable speed pumping system to 're-elevate' the dead standby storage in an energy-efficient manner.

The last and final wait

Following award of the construction contract in early 2011, Mother Nature unleashed the wettest spring in 117 years. The tank foundation excavation became a mud-pit that eagerly swallowed several tons of carefully placed reinforcing steel. Eventually, the weather turned sunny, and progress was rapid through the summer and fall. Then, rainy fall weather slammed the gate on applying final coatings to the new tank. Progress came to a halt as rust stained the freshly welded steel through the long winter.

In 2012, construction crews remobilized and completed the long-awaited project. The lawn sprinklers danced their last as the mural artists applied a forest scene to the tank. Different parts of the new landscaping thrived and withered according to some obscure inner impulses. The new equipment went through seemingly endless tests. Final punch lists were negotiated and then, in the way of all major construction projects, a sudden quiet descended on the site. The water company was left alone to operate their new facility. And, the local community had a highly visible and attractive asset.

Please don't steal our water!

By Ingrid Salmon, Coliform Program

Water costs plenty of money to pump, deliver, test, and manage. The last thing you want is someone stealing it.

Recently, a water district told us they were having problems with a mobile vehicle-washing business stealing water from a district hydrant. The washing business did not have permission to use the water nor were they willing to pay for a temporary hook-up or even verify that they were using the proper cross-connection control device. The district caught the owner of the wash business taking water several times and each time they approached him about it, he refused to stop.

Tampering is against the law and dangerous

In Washington State, tampering with water utilities is a gross misdemeanor or felony. Utilities may recover costs and other expenses associated with the tampering incident. Tampering with a public water system is also a federal offense.

Washington criminal and civil code defines tampering as attempting to divert utility services, connect without authorization, prevent a utility in determining a charge for their services, or to use without permission (RCW 9A.61.020 and RCW 80.28.240).

Tampering or stealing water can result in a cross connection that degrades or contaminates water if the connection has not been protected from back flow into the water system. The distribution system also can suffer from water "hammer" due to rapid pressure changes, which sound like someone hammering on the pipe.

What you can do

- **Be prepared.** Create written policies that define customers, water rates, and connection requirements, including how to create a temporary connection. These policies will put your utility in a better position to fight water theft.
- **Document thefts.** If you see someone taking water or find an illegal connection, take pictures or video. Beyond that, you'll need to develop a fair process that provides information and warning to those who steal—both for customers and for non-customers. You might start with a warning letter that instructs the person to cease the illegal hook up or pay a tampering fee. State the facts that you know and request a response within a reasonable timeframe. Warn them that you'll pursue civil or criminal action if they don't respond or stop their actions. If you offer a process for temporary connections, such as providing a watering station at your main office, you might be able to convert folks into customers.
- **File a police report.** The police might not know about water theft laws or be too interested in helping you pursue criminal action, but you'll need a police report if you want to prosecute. Consider meeting with your local police to help them better understand the problem and the impact on your utility.
- **Measure your water use.** When you install source and service meters, you will know whether someone is using water without payment or authorization.

Water theft hurts all customers and can be harmful to a water system's quality and operations. Utilities deserve to be paid for their hard-earned product—safe and reliable water.

Declining water levels in Mid-Columbia Basin raise concerns

By Mike Dexel, water resources policy lead

Are you sure you have enough water available to meet current and future demand? What are you doing to track and monitor your water supply? If you live in the Mid-Columbia River Basin, you might already be tracking groundwater levels in your major supply wells. If you're not, you may want to start very soon!

Two recent reports revealed some startling statistics about the Mid-Columbia Basin:

- The U.S. Geological Survey (USGS) measured groundwater level declines in 83 percent of wells. The 2013 USGS report, Groundwater Depletion in the U.S., noted that the greatest declines are in the deeper aquifers, and water levels in almost one-third of the wells have dropped by more than 20 feet in recent years.
- Another recent study by the Columbia Basin Ground Water Management Area concluded that at least half of the 25 municipalities studied in Adams, Franklin, Grant, and Lincoln counties probably won't be able to meet their future water needs.

Irrigation of local farms in this area accounts for almost 90 percent of total water use. The farmers rely on a groundwater supply that pumps water faster than the aquifers can recharge. Declining water supplies could become a substantial public health problem if not addressed with diligence. This will have big impacts on not just one or two water systems, but potentially a large number of communities.

We are working with the Department of Ecology to provide targeted technical assistance to help communities in the four-county area plan for long-term, sustainable water supplies.

Last August, we sent a questionnaire to the 25 municipalities in the groundwater management area study to understand their needs and challenges in meeting water demand. In January, we met with the municipalities and other stakeholders in Moses Lake to hear their stories and start a conversation about what we can do better to assist them. What we've heard so far is that water systems care deeply about making sure their wells are productive, sustainable and, most of all, reliable.

We have talked about the importance of measuring water levels to understand how regional water declines truly affect major production wells. Many water systems are thinking about what they can do now to help mitigate their impact on the amount of water they pump from the aquifer through better conservation programs and repair or replacement of leaking infrastructure.

If you live in an area where water supply is a concern, take steps now to plan for your next source of supply. Begin taking more frequent water level measurements. Implement a more aggressive Water Use Efficiency Program to reduce the amount of water you need to pump to meet demand. Put together a water shortage response plan. Make sure decision makers are aware of a declining water supply so they can act before it's too late.

To learn more about the declining water supply in this area, or get more involved, contact Mike Dexel at 360-236-3154.

Health advisories by the numbers

By Carolyn Cox, ODW Public Information Coordinator

Our staff keeps track of the number of health advisories issued throughout the state each year and their causes.

As you might expect, the top causes of advisories were bacterial contamination and water outages with pressure loss. The total number of advisories from 2008 through 2013 fluctuated from a low of 78 to a high of 110.

A spike in coliform-related advisories in 2013 coincided with heavy rainstorms in the early fall. Floods and severe windstorms may account for spikes in health advisories in 2009 and 2012.

If you run the average of six years of data, you'll see that statistically there are two advisories a week in Washington State. This is a good reminder to dust off your Emergency Response Plan and Coliform Monitoring Plan and test your readiness to manage a drinking water emergency. You'll be glad you did the next time you're faced with one.

The table below provides a snapshot of health advisories statewide. The first chart breaks down the year 2013 by region. The second chart lists advisories statewide by year.

In both charts, the "other" category refers to health advisories issued for problems such as equipment failure and inadequate disinfection treatment.

Much of this information can be found in our Sentry Internet, a public website where you can view data about individual water system and generate your own reports.

2013

Region	Outage or Pressure Loss	Coliform	Nitrate	Treatment Technique Failure	Other	Total
Eastern	4	6	9	3	0	22
Northwest	19	16	0	0	3	38
Southwest	15	15	1	4	2	37
Total	38	37	10	7	5	97*

** Note: In 2013, 25 advisories–more than 25 percent of the total–occurred in the six weeks between Sept. 17-Oct. 30. Of those, 16 were for coliform violations. Heavy rains were blamed for a number of advisories.*

6-Year Snapshot

Year	Outage or Pressure Loss	Coliform	Nitrate	Treatment Technique Failure	Other	Total Advisories
2013	38	37	10	7	5	97*
2012	48	32	13	5	4	102
2011	31	26	17	1	3	78
2010	39	45	11	1	2	98
2009	41	43	11	4	11	110
2008	34	37	8	0	9	88

Groundwater advisory group tackles Yakima Valley nitrate

The recently created Lower Yakima Valley Groundwater Management Area Advisory Committee is working to address concerns about nitrate contamination of the valley's shallow aquifer. Several studies have identified significant pollution from land-use activities.

Groundwater management areas, or GWMAs, are designed to protect groundwater quality, assure an adequate groundwater supply, and provide for efficient uses of groundwater resources, while recognizing existing permitted uses. The Lower Yakima Valley Groundwater Management Area Advisory Committee's work is tied to a comprehensive groundwater management plan developed by the state Department of Ecology.

To understand the committee's work, it helps to know a little history.

As a result of heightened public awareness from articles published in the *Yakima Herald Republic* in 2008 (Hidden Wells, Dirty Water), the U.S. Environmental Protection Agency (EPA) and state and local agencies conducted a series of public meetings in the valley.

Soon, the Lower Yakima Valley became a designated federal Environmental Justice Community. EPA began sampling wells in the area to determine the extent of degradation of the shallow aquifer. The agency's findings indicated the people most at risk from elevated nitrate are those served by private wells that draw water from the shallow aquifer.

About 8,000 households in the valley rely on private wells for their drinking water. In preliminary tests, about 12 percent of tested wells had levels of nitrate contamination that exceed the federal limit of 10 parts per million. Exposure to elevated levels of nitrate raises serious health concerns for infants and pregnant women.

The Lower Yakima Valley GWMA was created two years ago. The groundwater advisory committee was asked to identify and quantify sources that contribute to the elevated nitrate and develop solutions for reducing the nitrate level in the shallow aquifer. In addition, the group was asked to provide education and outreach to the population at risk and stakeholders and to recommend local, state, federal, or voluntary solutions to reduce the nitrate contamination.

The committee commissioned well water sampling and a survey of interested participants within the valley. These sample points will add to the existing data from EPA's earlier studies, including water quality data and source construction information we provided for Group B and Group A water systems in the area.

The lead agency for the GWMA is Yakima County Public Services. The advisory committee also includes: Yakima County commissioners, agricultural interests, environmental groups, Hispanic and lower valley community representatives, the Yakama Nation, Yakima County Farm Bureau, Yakima Dairy Federation, Sunnyside Roza Joint Board of Control, South Yakima Conservation District, the Port of Sunnyside, Yakima County Health District, Washington State University Irrigated Agriculture Research and Extension Center, the U.S. Environmental Protection Agency, the U.S. Geological Survey, the state departments of Agriculture, Health, and Ecology. Benton County officials formally requested that Benton County be excluded from the GWMA.

Chase those leaks with a Fix a Leak Week race!

EPA's WaterSense Program urges water utilities to organize races or other community events as a fun way to encourage customers to chase down leaks and stop wasting water.

It's all part of the 2014 Fix a Leak Week observance, March 17-23. The theme is "Chasing Leaks."

Several WaterSense partners across the country have planned races that feature running toilets and sprinting sprinklers to illustrate what can happen when leaks get out of control. To see a running "toilet" chased across a field, check out the City of Denver's "Use Only What You Need" conservation campaign.

The WaterSense Program created Fix a Leak Week to encourage Americans to repair or replace leaky plumbing fixtures and sprinkler systems.

Those drips add up. The average American household wastes more than 10,000 gallons each year—enough to fill a typical backyard swimming pool. If they stopped or significantly reduced that waste, they'd save as much as 10 percent on their water utility bills.

Finding and fixing leaks around the home can be as simple as check, twist, and replace.

Check toilets for leaks by putting a few drops of food coloring into the tank; wait a few minutes and see if color appears in the bowl before you flush. If it does, there's a leak.

Twist on a new WaterSense-labeled faucet aerator or showerhead, and tighten hose and pipe connections.

Replace fixtures if necessary with WaterSense-labeled models, which are independently certified to use 20 percent less water and perform as well or better than standard models.

The WaterSense Program offers partners and interested plumbers various tools to promote a "Chasing Leaks" race or other Fix a Leak Week event. For more information about joining the effort, email watersense@epa.gov or call 866-987-7367.

Fix a Leak Week

EPA WaterSense

In This Issue

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