

SERVICE CONNECTION

The Maine Drinking Water Program Newsletter

Working Together for Safe Drinking Water

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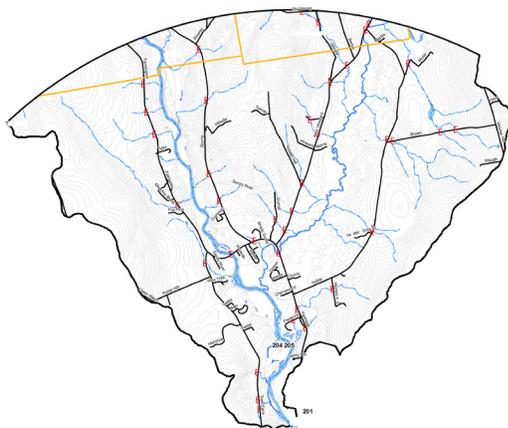
Source Water Risk Analysis

Reports Identify Potential Sources of Contamination for Community Water Systems with Direct River Intakes or Wells Adjacent to Rivers

Jessica Meeks

In 2014, a chemical spill in Charleston, WV, resulted in about 10,000 gallons of solvent entering a river 1.5 miles upstream of the water utility's intake. This catastrophe was a harsh reminder of the risks associated with surface water sources such as rivers and wells near rivers.

About a third of Maine's population is served by public water systems with surface water sources such as lakes, ponds, and rivers. Keeping surface water sources safe is important to protect public health and ensure that service remains uninterrupted. With this in mind, the Drinking Water Program (DWP) contracted with Sevee and Maher Engineers, Inc. in 2015-2016 to identify and map potential sources of contamination (PSCs) for community water systems with direct river intakes or wells adjacent to rivers. The outcome of this project was the creation of Source Water Risk Analysis (SWRA) reports.



Example of a five-mile watershed protection area for a river intake and riverbank well.

SWRA reports include maps defining each system's source water protection area along with the location(s) of PSCs within that area. Possible PSCs include above ground storage tanks for petroleum, substances such as solvents, pesticides and nitrates, and bacteriological sources like wastewater treatment plant outfalls, composting operations and landfills. The engineers went on to evaluate the risks associated with each PSC and define the specific threats within a system's source water protection area. The reports also provide a list of management actions that each system could put into practice to reduce the risk of impacts from a spill event. Risk management actions can help systems better prepare for potential emergencies.

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Maine Center for Disease
Control and Prevention

An Office of the
Department of Health and Human Services

Paul R. LePage, Governor

Mary C. Mayhew, Commissioner

DIRECTOR'S Corner

Don't Forget the Basics

Roger Crouse, Director



Greetings from Augusta! As you approach the busy summer season, your success in the delivery of safe and reliable water will most likely be achieved when you focus on the basics.

Famed football coach Vince Lombardi reportedly spent the first day of training focusing on the very basics of the game of football. “He would hold up a football, show it to the athletes who had been playing the sport for many years, and say, ‘Gentlemen, this is a football!’ He talked about its size and shape, how it can be kicked, carried, or passed. He took the team out onto the empty field and said, ‘This is a football field.’ He walked them around, describing the dimensions, the shape, the rules, and how the game is played.

“This coach knew that even these experienced players, and indeed the team, could become great only by mastering the fundamentals. They could spend their time practicing intricate trick plays, but until they mastered the fundamentals of the game, they would never become a championship team.”¹

Regardless of the type of facility you own or operate, the basics for the delivery of safe drinking water are the same. Here are the fundamentals we encourage you to focus on:

Protection of Your Source

For most water systems in Maine, the source of water is a drilled well. Protect your well from physical damage and protect your groundwater from contamination. Any contaminant poured, dumped or placed on the ground near your well could affect your water quality.

Properly Collect Your Samples

Failures to collect samples and sampling errors have cost public water systems in Maine lots of time and money. If you do not take appropriate cautions when collecting your

Total Coliform samples you could end up with a false positive, which would result in spending additional money on sampling.

Maintain Your Treatment System

Most treatment systems are in place to reduce your customers’ exposure to a known contaminant. Failure to regularly and effectively maintain your treatment system puts the health of your customers at risk.

Inspect your Pipes and Tanks

Storage tanks and a network of piping (also known as a distribution system) are important parts of a public water system’s ability to provide safe water to consumers. If not regularly inspected and properly maintained, contaminants can enter the drinking water through the pipes and tanks or could result in an inability to maintain the pressure needed to deliver water to each tap.

If you need help with the basics of providing safe drinking water, please give us a call. Because we work with water systems of all types and sizes across the State, we have likely encountered situations just like yours.

Yours for safe drinking water, *Roger*

¹ Dieter Uctdorf, October 2010, quoting from [Run to Win: Vince Lombardi on Coaching and Leadership](#) (2001), p. 92, by Donald T. Phillips.

WE VALUE OUR READERS

We are interested in your opinion. What do you like about the *Service Connection*? Where do you see room for improvement? What would you like to see more of? Are there particular topics about which you’d like to learn more that we haven’t covered?

Let us know what you think!

Visit our Facebook page to take a short survey or get in touch with Sophia Scott (email sophia.scott@maine.gov or phone 287-5681).

Cover photo by Lee Kretschmar



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Starting-Up Your Seasonal Public Water System

Mike Plaziak

As the weather warms and spring approaches we are reminded that it is the time of year when seasonal public water systems (PWS) such as campgrounds, restaurants, hotels, and sporting camps are gearing up for public use. During the off season these systems depressurize and drain their water systems. Systems that close for the winter may experience poor water quality due to stagnant well water. Tanks and system piping left vented or open during the off season can also allow contamination into the system.

If you operate a seasonal public water system you can prepare for the upcoming season by following a few precautions before serving water to the public:

- **Inspect your well:** If you do not have a sanitary sealed well cap, or if the well cap is loose, take off the well cap and check to see if there is debris inside. Bugs and other critters can introduce bacteria into the water system. Use a shop vacuum to remove any unwanted material. If your well cap does not seal, replace it with a new one. Remember, the Ground Water Rule says that you must have a sample tap *before* your pressure tank, so you can collect source samples if your water tests positive for coliform.



*Damaged well caps require prompt attention.
(Photo: Maine DWP)*

- **Disinfect the system:** Water in your pipes and in your well sits over the winter and stagnates. If you've drained the system, there's a good chance that bacteria have moved in. You can kill bacteria by adding bleach to your well. You must use bleach that has been approved for disinfecting drinking water (e.g., Clorox®). Guidance for disinfection can be found on our website (www.medwp.com) under the Seasonal Water System section of our Public Water System webpage. Many systems break apart sections of water lines in the fall to ensure they are drained. You can help speed up disinfection by adding bleach directly into the water pipes before re-connecting.
- **Run your well to fill the system:** Turn on faucets at the ends of the system to push chlorinated water into all of the

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Revised Total Coliform Rule

Teresa Trott

The first ten months of the new Revised Total Coliform Rule (RTCR) has been eventful as systems and the Drinking Water Program learn how to adapt to the new practices. The RTCR is a "Find and Fix" rule. It corrects the likely cause of a contamination event and takes precautions to prevent contamination. This will help reduce repeat events and allow public water systems to maintain a supply of safe water for their consumers. Another important feature of the RTCR is that monitoring frequency is directly related to microbial risk and compliance history.

Seasonal systems that dewater when not operating are required to complete an approved start-up procedure. Following an appropriate procedure will remove contamination that may have entered the system over the winter. The RTCR requires seasonal public water systems to follow an approved start-up procedure each year before the system begins serving water to the public.

Once the start-up procedure is completed, the public water system must submit a completed certification form to the DWP to ensure that the procedure has been completed. The certification form (Approved Startup Procedure for Maine Seasonal Public Water Systems) can be found on our website: www.medwp.com > Public Water Systems > Seasonal Water Systems. The certification form must be submitted to the DWP prior to serving water to the public. Failure to complete the start-up procedure or submit the certification will result in a Notice of Non-Compliance from the Drinking Water Program. As required by the RTCR, a seasonal system that does not perform a start-up procedure and/or fails to submit the certification will be placed on a monthly sampling schedule for at least one year.

In 2017 sanitary surveys will include a review of sampling plans and source water protection areas. Results of these surveys may change your required sampling frequency. Small systems on quarterly monitoring need a 12 month clean compliance history to remain on quarterly sampling. Community and seasonal non-community systems are required to monitor monthly unless they meet source, construction, and compliance history requirements. Non-community systems may be increased to monthly sampling if they experience two monitoring or water quality events in 12 months.

Remember, always take samples carefully and on time.

For more information on RTCR, visit the Drinking Water Program website at www.medwp.com. ■

Source Water Protection Gets Recognition

Sophia Scott

In January The Nature Conservancy (TNC) published a report, *Beyond the Source: the environmental, economic, and community benefits of source water protection*¹, explaining the many benefits of source water protection. While there are many positive impacts of source water protection, the TNC report focused on five valuable outcomes.

The report found that protecting source water can:

- Improve water security in terms of quality and quantity;
- Help combat the impacts of climate change through protecting forested lands and other land management practices;
- Allow us to prepare for the potential effects of climate change;
- Result in better human health, not only through improvements in drinking water quality, but also through downstream impacts, such as healthier fisheries; and
- Protect biodiversity and ecosystems around the globe.

What is Source Water Protection?

Source water protection is one part of ensuring safe drinking water by protecting and improving the land around wells and intakes.

You can see these benefits of source water protection happening in Maine today. Protecting and preserving land for source water protection increases habitat areas for deer, moose, and other game. Source water protection efforts mean lakes and streams are healthier and can support larger populations of fish and other wildlife. Source water

protection results in less pollution reaching the coast, a place where many Mainers work and play. Public water systems that protect their source water areas will typically be able to also spend less on water treatment, saving rate payers' money. These are just a few of the benefits of source water protection here in our State.

The importance of source water protection is something that the Maine CDC Drinking Water Program has long recognized. The DWP offers support to public water systems to protect their source waters through the Source Water Protection and Wellhead Protection grant programs. Last year the DWP funded 19 wellhead protection projects and six source (surface) water protection projects through these grant programs. This year, the DWP set aside \$100,000 to fund each of these grant programs. The DWP also offers low interest loans through its Land Acquisition Loan program. Water systems can use these loans to purchase lands or

conservation easements within their wellhead protection or source water protection areas. Since 1997 nearly 4,317 acres have been protected through the Land Acquisition Loan program.

Applications for Source Water Protection and Wellhead Protection Grants become available each year in January. Applications are typically due at the end of March and are awarded in the late spring. Applications for Land Acquisition Loans are accepted at any time.

If you have any questions please contact Sophia Scott: email sophia.scott@maine.gov or phone 287-5681. ■

¹ Find the report online at <http://www.nature.org/beyondthesource>

Reminder: Testing for Lead in Schools

Peter Bernard

The Drinking Water Program would like to remind our readers of the ongoing initiative to test for lead in schools' drinking water. While participation is voluntary, the DWP, along with the Maine Rural Water Association, Maine Water Utilities Association, and the Maine Public Drinking Water Commission, are encouraging water utilities to work with schools in this important effort.

The DWP will cover the cost of lead analysis for up to ten water samples from each school. The sampling kits will include prepaid postage labels for shipping the kits to the laboratory for analysis. None of the testing costs for the

first ten samples will be passed onto the utilities, schools, or school districts. In some cases, additional sampling will be needed and schools should be prepared for additional expenses.

Information posted on our website listed two different dates, April 1 and May 31, 2017, as the deadline for this project. To ensure schools do not miss out on this opportunity, we have determined May 31st to be the final date for returning filled sample bottles to the Health and Environmental Testing laboratory. If you have questions about the school lead sampling project please contact Jim Jacobsen (james.jacobsen@maine.gov – 287-5695) or Roger Crouse (roger.crouse@maine.gov – 287-5684). ■

Source Water Risk Analysis

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The SWRA reports are being provided to the respective public water systems involved in this project. The reports are a valuable tool to help these community systems reduce the risk of possible contamination. In addition, DWP staff are reviewing the SWRA reports to identify utilities that have a higher risk and may benefit from spill response training exercises such as the table top exercise (TTX) facilitated by the Maine Rural Water Association in Farmington. Utilities that are in consideration for future spill response exercises will be contacted by someone from the DWP. Please feel free to contact Jessie Meeks (jessica.meeks@maine.gov – 287-2647) or Mike Abbott (michael.abbott@maine.gov – 287-6196) with any questions. ■

Seasonal Public Water Systems

Continued from page 4...

pipes. When you smell chlorine coming out of the taps, shut off the water and let it sit overnight. Chlorine works best if it is allowed to stay in contact with contaminated materials overnight.

- **Flush the chlorine out:** After you have let your water sit overnight, open the faucets and allow the chlorinated water out of the system. Use a hose to direct the chlorinated water to places where it won't damage vegetation or come in contact with surface water. Don't flush chlorinated water into your septic system because the chlorine can kill the 'good' bacteria in your septic system.

Compliance Reminders

Teresa Trott

Check your system's annual testing requirements online at <https://tinyurl.com/RequiredTests>.

Sample early in your monitoring period to ensure sampling is completed on time.

Seasonal Systems must complete Approved Annual Start-up Procedures and submit certification before you open and begin serving water to the public.

Important Dates

- **June 1 to September 30:** Systems on Reduced Monitoring schedules for lead and copper or disinfection by-products

- **Flush your tanks:** Be sure to drain and refill your water storage tanks to remove rusty water and ensure that the valves still work. Continue flushing until the water is no longer discolored.
- **Walk your pipes:** If you have lines that run over the ground, take a walk around to make sure that they are not leaking. Leaking lines may result in bacteria entering the system and can increase your power costs, as more water will be pumped than is needed. It can also run your well dry when you least want it.
- **Wait a week before taking bacterial samples:** We strongly encourage collecting an Operations and Maintenance (O&M) total coliform bacteria sample to ensure your efforts to prepare for the season have been successful. O&M samples do not count toward annual testing requirements.
- **Collect your initial compliance samples within 30 days** of opening as required by the State Drinking Water Regulations. You can find information about required water tests and testing frequency in the Annual Testing Requirements letter that was mailed to your system.

REMEMBER: Seasonal water systems must perform a state-approved startup procedure and provide certification to the DWP that they have met that requirement. Certification must be completed and submitted to the DWP *before* serving water to the public.

If you have any questions regarding the compliance requirements for your system, call your Public Water System Inspector at 287-2070. ■

must sample, post the results to customers, and provide certification to the DWP within this time period

- **July 1:** DWP mails Annual Drinking Water Fee invoices to water systems.

Filtered surface water systems with populations of less than 10,000 must submit source water sampling schedules for an October 1 start date.

Community systems must deliver and distribute their annual Consumer Confidence Reports to customers.

- **July 31:** Synthetic Organic Chemical (SOC) Waiver Applications are due to the DWP
- **September 30:** Surface water systems with filtration waivers must submit Watershed Control Program Reports and Inspection Reports to the DWP. ■

New DWP Staff Members

Sophia Scott

The Drinking Water Program welcomes Jessica Meeks and Sophia Scott, the newest additions to the Engineering and Water Resources team. Jessica and Sophia will be focusing on source water protection.



*The Source Water Protection team.
L-R: Sara Flanagan, Sophia Scott, Jessica Meeks
(Photo: Martha Nadeau)*

Jessica Meeks joins the Drinking Water Program as our Hydrogeologist. Jessica holds a M.S. in Geology from Syracuse University and will be completing her Ph.D. in Hydrogeology in May, 2017, at the University of Neuchatel in Switzerland, where she lived for 3 years while studying groundwater recharge. Interspersed between her academic efforts, Jessica worked as an environmental consultant, helping to mitigate contamination to groundwater, and a hydrogeology instructor at the bachelor and masters levels. (Phone 287-2647, or email jessica.meeks@maine.gov.)

Sophia Scott joins the Drinking Water Program as the Source Water Protection Coordinator. Sophia received a BSc. in agricultural and environmental sciences from McGill University and recently earned her M.S. in environmental science and policy from Plymouth State University. Her academic research focused on sustainability science, social-ecological systems, and bridging the gap between science and policy. Sophie's past work includes horticulture design, oyster farming, and science communication. (Phone 287-5681, or email sophia.scott@maine.gov.) ■

PWS Compliance Sample Results Now Online

Robin Frost

As of February, 2017, the Drinking Water Program is posting public water systems' compliance sample results on our website. To find compliance sample results visit our website: www.medwp.com > Public Water Systems > Water Sampling and Testing > Drinking Water Testing Requirements. Public water systems can use their Public Water System Identification Number (PWSID) to access a report identifying all of the compliance sample results that have been received and processed by the DWP. These reports are updated on a weekly basis to provide the most up-to-date compliance sample information.

Please remember that labs have until the 10th of each month to submit samples and that it can take up to a week for the DWP to process the sample results. Given this time lag, the most recent compliance sample results may not be available on the website until the end of the month following sample collection. ■

Water Operator News

Julia Kimball

The 60-day grace period for operators whose licenses expired on December 31, 2016, has passed. If your license has expired and you wish to renew, you will be required to pay a \$50 late fee in addition to the \$75 license renewal fee.

Operators, well drillers, and site evaluators can renew their licenses online. This service allows licensees to pay online with a credit card and receive a digital copy of their license.

Operators looking for training opportunities can use the training calendar located on the DWP website. Both classroom and online courses are regularly posted.

Online license renewal and the training calendar can be found on Water Operators page of the DWP website: medwp.com > Professionals > Water Operators Board. Please contact the Drinking Water Program with any questions (287-2070). ■



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