# Service Connection

The Maine Drinking Water Program Newsletter

*"Working Together for Safe Drinking Water"*

Fall 2015 ▪ Volume 23, Issue 3

## Inside this Issue:



## Are You Ready for the RTCR?

*Erika Bonenfant, Education and Outreach Coordinator*

By now you've probably heard talk about the Revised Total Coliform Rule, better known as the "RTCR," and how it goes into effect on April 1, 2016. But do you know how the RTCR will impact your water system? Better yet, are you ready for it? The type and size of your water system will determine both how the RTCR will impact your water system and what you should do now to prepare.

**Seasonal Public Water Systems**

The RTCR has specific requirements for seasonal public water systems. Seasonal public water systems are defined as non-community public water systems that have an annual operating period of less than 12 months (i.e. only in operation for a portion of the calendar year). Examples include campgrounds, golf courses, girls and boys camps, ski resorts and some restaurants and motels.

***Startup Procedures***: Seasonal water systems must conduct a State-approved startup procedure at the beginning of each operating season before serving water to the public. Seasonal water systems must also certify, with a signed form, that they have completed the State-approved startup procedure.

***What this means for 2016:*** Before you open your seasonal public water system and begin serving water to the public, you must complete a State-approved startup procedure and send in certification that you have completed the startup procedure. You must do this before you open. For example, if your seasonal public water system opens on May 1, 2016, you will need to complete the startup procedure and send in the certification form before May 1, 2016. Startup procedures must be completed and accompanying certifications must be submitted each year, before you open.

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## New Drinking Water Training Videos Now Available

Through a cooperative agreement with the U.S. Environmental Protection Agency, the Rural Community Assistance Partnership (RCAP) recently released a set of five new videos on drinking water operations best practices for maintaining compliance and protecting public health. A link to the videos is available on the DWP website. The following are brief descriptions of the available videos:

**Protecting Distribution System Water Quality:** A discussion of six items for water operators to consider, in order to protect water quality in the distribution system.

**Hydrant Inspection and Flushing:** An overview of basic inspection and flushing of fire hydrants.

**Measurement of Chlorine Residual:** An overview of taking a good chlorine sample, using a colorimeter and a handheld spectrophotometer.

**Coliform Sampling Best Practices:** A discussion of the steps needed for proper coliform sampling and how to find a good sampling site.

**Valve Maintenance:** An overview of the basics of valve exercising.

Please note, these training videos are short and do not have training credit hours (TCH) associated with them.

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

**Emergency Preparedness – Don't Forget the Small Details**

In the year 1485, the army of King Richard III of England was defeated by Henry Tudor's (Henry VII) smaller army resulting in the dethroning of Richard III. Legend has it that King Richard asked a groom to take his horse to the blacksmith to get it ready for battle. The blacksmith, having just finished shoeing the horses for the King's army, had nearly exhausted his stocks of material and was without sufficient nails to attach the last shoe. Impatiently, the groom demanded that the blacksmith attach the shoe with whatever material he had.

Not knowing this vulnerability, in an attempt to rally his faltering army, Richard galloped his horse toward the line of battle. Before Richard could reach his men, his horse lost a shoe, stumbled and fell, throwing the king to the ground. Richard jumped from the ground as his horse galloped off. As Henry's army advanced, Richard waved his sword high in the air, shouting, "A horse! A horse! My kingdom for a horse!"

But it was too late. By then, Richard's men were fleeing in fear of Henry's advancing army, and the battle was lost. Since that time people have uttered the proverb:

For want of a nail, a shoe was lost,
For want of a shoe, a horse was lost,
For want of a horse, a battle was lost,
For want of a battle, a kingdom was lost,
And all for the want of a horseshoe nail.[1]

Although we don't know if the lack of a horseshoe nail was really the cause of King Richard's loss and death, we do know it is generally in the small details of preparedness that we are successful in facing challenges and emergencies.

Is your water system properly prepared to handle the various emergency situations that you could face? Do you know your vulnerabilities?

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Erika J. Bonenfant, Editor
Drinking Water Program
Division of Environmental Health
Maine Center for Disease Control and Prevention
Department of Health and Human Services
11 State House Station, 286 Water Street, 3rd Floor
Augusta, Maine 04333-0011
TEL: (207) 287-5681 TTY users: Dial 711 (Maine Relay)
FAX: (207) 287-4172
E-mail: erika.bonenfant@maine.gov
Web Address: http://www.medwp.com

***Director's Corner continued....***

Preparedness requires not only planning, but regularly exercising that plan. The safety and reliability of the water you provide will depend upon your ability to prepare for the various challenges your water system might encounter.

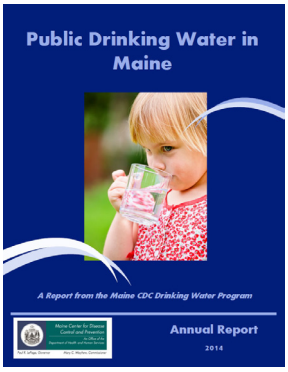
Safe and reliable water is essential to the protection of public health. Therefore, it is essential that public water suppliers are able to continue operation during adverse situations. Please take the time to assess your vulnerabilities and begin planning now. Don't forget the small details.

Yours for safe drinking water,

*Roger*

1. Eduardo Gavarret October 2013 quoting from: "For Want of a Horseshoe Nail," in William J. Bennett, ed., The Book of Virtues: A Treasury of Great Moral Stories (1993), 198–200.

## New "Public Drinking Water in Maine Annual Report: 2014" Now Available




The Drinking Water Program is pleased to announce the publication of a new annual report titled, "Public Drinking Water in Maine Annual Report: 2014." The report is intended to provide an overview of public water system compliance, quality of public drinking water and the efforts of the Maine Drinking Water Program in ensuring safe drinking water in Maine. The report can be found on the DWP website by going to www.medwp.com, clicking on the "Public Water Systems" link, and then on "Public Drinking Water in Maine Annual Report 2014."

*Photo credit: EPA*

## October is National Cybersecurity Awareness Month

*Sara Flanagan, Capacity Development and Security Coordinator*

A cybersecurity incident can significantly alter a water system's operations and adversely impact public health and safety. The Water Information Sharing and Analysis Center (WaterISAC) has developed a "top ten" list of cybersecurity recommendations that can be used to minimize your water system's vulnerability to a cyber breach or attack.

1. Maintain an accurate inventory of control system devices and eliminate any exposure of this equipment to external network.
2. Implement network segmentation and apply firewall.
3. Use secure remote access methods.
4. Establish role-based access controls and implement system logging.
5. Use only strong passwords, change default passwords and consider other access controls.
6. Maintain awareness of vulnerabilities and implement necessary patches and updates.
7. Develop and enforce policies on mobile devices.
8. Implement an employee cybersecurity training program.
9. Involve executives in cybersecurity.
10. Implement measures for detecting compromises and develop a Cybersecurity Incident Response Plan.

More detailed information on these 10 cybersecurity measures can be found here: https://www.waterisac.org/sites/default/files/public/10_Basic_Cybersecurity_Measures-WaterISAC_June2015_0.pdf

**Additional cybersecurity resources:**
Cyber Security 101 for Water Utilities: http://water.epa.gov/infrastructure/watersecurity/features/upload/epa817k12004.pdf

Process Control System Security Guidance for the Water Sector: http://www.awwa.org/Portals/0/files/legreg/documents/AWWACybersecurityguide.pdf

# How Does Maine Regulate Wastewater Disposal?

*David Braley, Subsurface Wastewater Team Leader*

Most wastewater generated in Maine is considered "domestic" wastewater. It's the wastewater from homes, schools, small businesses, hotels, restaurants and other similar facilities. These locations are commonly served by either a subsurface wastewater disposal system or public sewer. Larger commercial and industrial facilities may generate wastewater that is not similar in quality to domestic wastewater. It may contain chemicals or biological contaminants that require special handling and treatment prior to disposal, or must be transported to a facility licensed to treat and dispose of such wastewater. These facilities are licensed and regulated by the Maine Department of Environmental Protection (DEP).

Subsurface wastewater disposal systems must be designed by a licensed site evaluator. Site evaluators are licensed by the Maine CDC's Drinking Water Program. The designs must conform to the standards found in the Maine Subsurface Wastewater Disposal Rules, 10-144 CMR 241 (Subsurface Rules). These rules are drafted and promulgated by the Department of Health and Human Services (Department). State law gives the Department authority to administer and enforce these rules to municipalities. Each municipality must appoint a local plumbing inspector (LPI) to administer the Subsurface Rules. The LPI is responsible for reviewing each application for a subsurface permit to ensure compliance with the Subsurface Rules. The LPI issues all subsurface system permits and conducts all system inspections during construction.

The Department's responsibility by statute is to ensure that municipalities are adequately administering and enforcing the Subsurface Rules. The Department conducts regular inspections of Maine municipalities to monitor compliance. The Department does NOT review or intervene regarding individual actions by a municipality. Applicants aggrieved by a local decision must appeal to the appropriate local body, usually the Zoning Board of Appeals. The Department does require certain complex variance requests be reviewed by Maine CDC staff prior to a permit being issued at the municipal level.

With authority comes responsibility. Municipalities by statute must require any malfunctioning subsurface wastewater disposal system be repaired or replaced within 10 days of discovery. The time required for corrective action may be extended, provided that the municipality is presented with a plan for proceeding that it deems reasonable. Failure to have a malfunctioning system corrected could result in fines being levied on the municipality by the Department.


*Installation of a residential leachfield*

The final piece of the wastewater puzzle is the septage that must be pumped from septic tanks on a regular basis. The septic tank acts like a filter that prevents solids from entering the disposal field, preventing it from being clogged and malfunctioning. Solids build up in the septic tank and must be periodically pumped from the tank and properly disposed of. Septage haulers and their vehicles are licensed by DEP and the proper disposal of the septage must be at a facility licensed for the disposal of this type of waste. Septage is usually treated by raising the pH to at least 12 to kill bacteria and viruses and then land spread as fertilizer. An efficient reuse as old as agriculture itself.

To summarize, the Department writes and adopts the rules for subsurface wastewater disposal systems and licenses system designers. Municipalities administer and enforce the rules through the LPI with Department oversight. DEP regulates all non-domestic-like discharges and the transporting and disposal of septic tank septage. A complicated, but effective, system of regulation has served Maine for decades and allows most of the decisions and regulation of wastewater disposal to occur at the local level.

## New "Do-It-Yourself" Wellhead Protection Plan Template Now Available

*Erika Bonenfant, Education and Outreach Coordinator*

Maine Rural Water Association, with support and guidance from the Drinking Water Program, has developed a Small System Wellhead Protection Plan Template to help small water systems (serving less than 250 people) create their own wellhead protection plans. This simple, easy to use template, complete with detailed instructions, enables a water system to fill out a step-by-step form to create their own wellhead protection plan. The template and instructions are available on the DWP website.

Having a wellhead protection plan is an easy and cost-effective way to prevent your drinking water source from becoming contaminated by managing potential sources of contamination in the area which supplies water to your well(s). In addition to protecting your well and preventing contamination, in some cases, having a plan may also enable your water system to qualify for reduced water quality sampling. Under the Revised Total Coliform Rule, effective April 1, 2016, water systems will need to meet certain criteria, in order to be eligible for reduced total coliform monitoring. One criterion is that a water system must have an active wellhead protection plan. An active plan is one that lists and tracks actions or activities supporting the goal of wellhead protection. Similarly, having an active wellhead protection plan is one criterion necessary for synthetic organic compound (SOC) testing waiver eligibility. Your Drinking Water Program field inspector will be assessing wellhead protection status during sanitary surveys.

## Enforcement Corner

*Tera Pare, Enforcement and Rulemaking Coordinator*

Did you know that if you hold a Maine eating or lodging license with Maine CDC's Health Inspection Program, and you are also a public water system regulated by the Drinking Water Program, renewal of that license depends on whether your business complies with drinking water requirements? The Maine Food Code requires that a number of safety regulations be followed, one of which is to provide safe water. So, if any restaurants or lodging establishments serve water from their own well or other source to at least 25 people for at least 60 days, then they must comply with both the Maine Food Code and the Maine Rules Relating to Drinking Water, in order to maintain that license.

How does the Health Inspection Program know whether a restaurant or lodging facility is in compliance with the Drinking Water Program? Both offices are located in the same Division of Environmental Health, within the Maine CDC, and are physically located on the same floor of the same building in Augusta, Maine. Proximity helps. In addition, the enforcement staff from both programs have worked together to develop a process so that whenever a public water system enters formal enforcement with the Drinking Water Program, the Health Inspection Program is immediately notified that an administrative order was issued to the facility. The Health Inspection Program's enforcement coordinator takes measures to hold the renewal of that eating or lodging license and notify the facility that it must comply with the Drinking Water Program's regulations, in order to renew its license.

The majority of drinking water violations committed by these particular restaurants, hotels and motels in Maine result from owners and managers failing to test their water for bacteria and nitrates as frequently as the Drinking Water Program requires. Without those test results, the Drinking Water Program, the Health Inspection Program, the facility and its consumers have no way of knowing whether the water is safe to drink for the residents and visitors at the establishment. As a team, our programs work together to coordinate an effective method of protecting the people of Maine. Remember to test your water, and your license renewal process will be smoother.

*Continued from cover...*

The Drinking Water Program has a pre-approved startup procedure available on the DWP's RTCR website. Any startup procedures that vary from the procedure in the DWP's approved startup procedure must be pre-approved by your DWP field inspector.

**Public Water Systems with Populations over 1,000**

***Sample Site Plans:*** The RTCR requires that total coliform samples be collected by public water systems at sites which are representative of water quality throughout the distribution system and according to a written sample site plan subject to DWP review and approval. As some guidance may be necessary while producing this document, a blank template for a sample site plan is available. This template provides space for all items necessary for a RTCR compliant sample site plan and can be found on the DWP's RTCR webpage.

***What you need to do before December 31, 2015:*** As part of the RTCR, all public water systems with populations over 1,000 must submit their new RTCR compliant sample site plan to the Drinking Water Program by December 31, 2015.

**Public Water Systems with Populations under 1,000**

***Sample Site Plans:*** At your next sanitary survey, your field inspector will work with you to review and update your sampling site plan to meet the requirements of the RTCR.

**All Water Systems**

***There are several things every water system can do now to get ready for the RTCR:***

- Make sure that your water system is in good operating condition
- Ensure you are sampling regularly and correctly. The RTCR brings a change in the response to total coliform positive sample results. Water systems that have multiple positive total coliform bacteria sample results will be required to conduct an assessment of their water system to find any problems and take corrective action.
- Consider developing a plan to protect your source. In order to qualify for reduced monitoring of total coliform bacteria under the new RTCR, a water system must have what is considered a "protected source" which will include having a source water or wellhead protection plan in place for your water system.
- Visit the DWP's RTCR webpage to learn more about the RTCR and the changes that go along with it. The DWP's RTCR webpage can be found by going to www.medwp.com, clicking on the "Public Water Systems" link, and then click on the "Revised Total Coliform Rule" link.

## Water Operator News and Reminders

*Teresa Trott, Licensing Officer*

**Renewals**

It is renewal time once again! Check your operator license for a renewal date of 12/31/2015, and then check the website for a tally of training credit hours on record with the Water Operator Board. If you believe you have more training than what is listed, please contact Julia Kimball, the Board clerk, by email at julia.kimball@maine.gov or call 287-5699 to discuss the training credit hours record. If your water system holds in-house training, remind them to send a copy of the attendance list at least once per year to be recorded in Board records. Watch for license renewal forms around the first of November.

**Maintaining Professionalism**

How does the Board help to maintain the professionalism of water system operators? Training--yes, but also by holding operators accountable for their responsibilities and duties as public water system operators, including reprimand, where necessary, through a formal complaint process. The Board's authority was strengthened recently through discussions with the Drinking Water Program to better define the roles of the Board and the DWP. The DWP has the backing of the federal and State drinking water rules to ensure the water system meets requirements. The Board has authority to suspend or revoke a license of an operator if it is determined that the operator acted in a way that jeopardized the safety of the water being served. In legal terms: determine if an operator committed fraud or deception or had been negligent in using reasonable care, judgement or knowledge in the performance of duties or was determined to be incompetent or unable to properly perform duties of a water operator.

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*Operator News Continued from page 6...*



**Drawing lines of Responsibility**
The owner of a public water system is required to put all quantity and quality decisions into the hands of an appropriately licensed operator. The operator is responsible to ensure that the water meets quality standards. Monitoring and sampling are measurements of meeting these standards. Yes, an operator may delegate tasks; however an operator cannot delegate the responsibility of ensuring that the task is done correctly and on time. Currently, there are four complaints under review with the Board alleging this very argument including failure to sample, failure to report and failure to receive approval for treatment installation. All of these types of complaints indicate the possibility that the operator was negligent in using reasonable care, judgement or knowledge in the performance of duties. To follow these cases, please review Board minutes on the website.

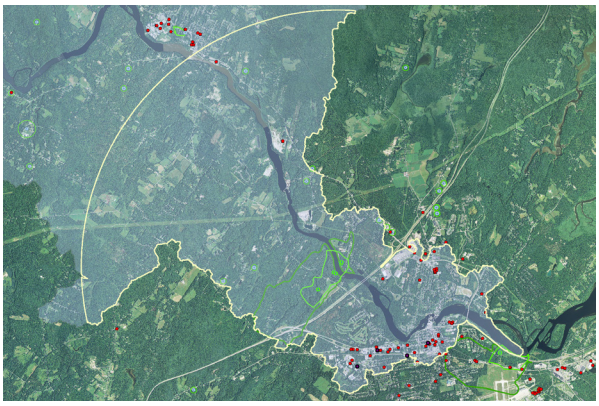
# Maine's Source Water Susceptibility Mapping Project is Underway

*Mike Abbott, Hydrogeologist*

The Drinking Water Program has recently contracted with Sevee & Maher Engineers, Inc. (SME) of Cumberland, Maine to identify and map potential sources of contamination (PSCs) for many of Maine's public water systems. The need for these efforts became evident following the January 2014 incident in Charleston, West Virginia, where over 10,000 gallons of solvent leaked into the Elk River about 1.5 miles upstream from the water utility intake, contaminating the drinking water supply for more than 300,000 people. This event has prompted source water protection personnel around the country to look beyond the immediate area near a river intake or "riverbank" well (sand and gravel well in close hydraulic contact with a river) when searching for PSCs, such as above-ground oil and chemical storage tanks that could impact a drinking water supply.

*Tanks in the Freedom Industries tank farm along the Elk River in Charleston, West Virginia. © AP Photo/Steve Helber, File*

The primary focus of the mapping work will be on ten water systems that have a direct intake in a river or stream, and thirty systems using riverbank wells. Using a combination of database research, interviews and on-the-ground reconnaissance, SME will inventory PSCs within the river watershed, reaching about five miles upstream from each intake or riverbank well. The DWP is currently updating source protection area delineations for these forty systems. The new five-mile watershed protection areas will soon be added to the source water protection layer on our Google Earth-based maps available on the Public Water Resources Information System page within the DWP (www.medwp.com).



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

As part of the contract, SME will be working with each of the forty public water systems to update their Source Water Protection Plan (SWPP), which will include an evaluation of each system's susceptibility to identified PSCs. The new SWPPs will also contain suggested source protection activities to reduce the risk of contamination and help the public water system become more prepared to effectively manage water supply resources in the event of a spill.

Input from each water system will be very important in this process. If your system is on the list, someone from the DWP or SME will be contacting you soon to schedule a visit to your water system so we can discuss information you may already have on upstream threats and to learn about your current approach to minimizing the risk. In the meantime, please feel free to contact Mike Abbott (287-6196) or Erika Bonenfant (287-5681) with any questions.

Department of Health and Human Services
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Newsletter of the Maine Drinking Water Program
Maine CDC
286 Water Street, 3rd Floor
11 State House Station
Augusta, Maine 04333-0011

| | | | |
|---|---|---|---|
| Dawn Abbott | 287-6471 | Enforcement Specialist | dawn.abbott@maine.gov |
| Michael Abbott | 287-6196 | Hydrogeologist | michael.abbott@maine.gov |
| Glenn Angell | 592-2084 | State Site Evaluator | glenn.b.angell@maine.gov |
| Christine Blais | 287-3220 | Assistant Laboratory Certification Officer | christine.blais@maine.gov |
| Erika Bonenfant | 287-5681 | Education & Outreach Coordinator | erika.bonenfant@maine.gov |
| David Braley | 441-5324 | Wellhead Protection Coordinator, SWP | david.braley@maine.gov |
| Darren Brann | 287-5545 | Compliance Officer | darren.brann@maine.gov |
| Haig Brochu | 592-0954 | Field Inspector | haig.brochu@maine.gov |
| Roger Crouse | 287-5684 | Drinking Water Program Director | roger.crouse@maine.gov |
| Denise Douin | 592-2165 | Field Inspector & SRF Project Manager | denise.douin@maine.gov |
| Greg DuMonthier | 592-1674 | Field Inspector | greg.dumonthier@maine.gov |
| Sara Flanagan | 287-5678 | Capacity Development & Security Coordinator | sara.m.flanagan@maine.gov |
| Robin Frost | 287-8411 | SDWIS Administrator | robin.frost@maine.gov |
| Carlton Gardner | 287-8403 | Compliance and Enforcement Team Leader | carlton.gardner@maine.gov |
| Larry Girvan | 592-7386 | Field Inspector & SRF Project Manager | larry.girvan@maine.gov |
| Jennifer Grant | 287-3962 | Compliance Officer | jennifer.grant@maine.gov |
| Jeremiah Haws | 287-8402 | Compliance Officer | jeremiah.haws@maine.gov |
| Holly Hockertlotz | 287-1979 | Compliance Officer | holly.hockertlotz@maine.gov |
| James Jacobsen | 287-5695 | Project Manager/Webmaster | james.jacobsen@maine.gov |
| Jennifer Jamison | 287-1929 | Laboratory Certification Officer | jennifer.jamison@maine.gov |
| Julia Kimball | 287-5699 | Operator Certification/ Well Drillers Board Clerk | julia.kimball@maine.gov |
| Norm Lamie | 287-2647 | Assistant Director & Chief Engineer | norm.lamie@maine.gov |
| Brent Lawson | 592-7376 | State Plumbing Inspector | brent.lawson@maine.gov |
| Rychel McKenzie | 991-2383 | Field Inspector & SRF Project Manager | rychel.mckenzie@maine.gov |
| Martha Nadeau | 287-5683 | Assistant Information Analyst | martha.nadeau@maine.gov |
| Tera Pare | 287-5680 | Enforcement & Rulemaking Coordinator | tera.pare@maine.gov |
| McKenzie Parker | 557-2255 | Field Inspector & SRF Project Manager | mckenzie.parker@maine.gov |
| Jason Pushard | 287-8487 | Compliance Officer | jason.pushard@maine.gov |
| Nathan Saunders | 287-5685 | Field Inspection Team Manager | nathan.saunders@maine.gov |
| Fran Simard | 287-8074 | Secretary | fran.simard@maine.gov |
| Amilyn Stillings | 287-6472 | Information Coordinator | amilyn.stillings@maine.gov |
| Daniel Thompson | 287-2070 | Receptionist | daniel.thompson@maine.gov |
| Teresa Trott | 287-7485 | Operator Licensing/Environmental Review Coord | teresa.trott@maine.gov |
| Kate Tufts | 215-0624 | Field Inspector | kate.tufts@maine.gov |
| David Welch | 287-3056 | Data Management Specialist | david.welch@maine.gov |
| Scott Whitney | 592-0578 | Field Inspector | scott.whitney@maine.gov |
| Jim Willis | 287-5694 | Office Clerk | james.willis@maine.gov |