



# Service Connection

THE DRINKING WATER PROGRAM NEWSLETTER  
"Working Together for Safe Drinking Water"

Volume 20 Issue 3  
Fall 2012

## Preparing Your Seasonal Water System for Winter

Jason Pushard, Compliance Officer

It is often said "An ounce of prevention is worth a pound of cure." Preparing your water system now for the long, cold Maine winter can save you a lot of time and expense when you reopen in the spring.



The time you will need to spend winterizing depends mostly on the size, design and complexity of your water system. Please consider the procedures outlined below when closing your water system for the season. Following these procedures will help ensure your water system is in good shape and will need fewer repairs when you reopen in the spring:

1. Inspect your entire system and look for problems and damage that need attention or repairs. Look for leaks and exercise valves to ensure they are working properly. Inspect your well cap for openings that could allow rodents, insects, or other contamination to enter, and correct, if necessary. The off season could be a better time for these problems to be fixed, rather than trying to do it while you are open.

2. Turn off the power to your water supply pump.

3. If there is potential for your pressure tank or storage tank to freeze, drain it. If there is no potential for your tanks to freeze, you may choose to leave them full.

4. Drain all of the water from your internal plumbing. If your piping is

designed to drain to the lowest point, it may be as simple as opening a water outlet at the highest point in the system and then opening a water outlet at the lowest point. If not, it may be necessary to connect a compressed air source to the highest point and continue to release air into the system until all of the water is forced out of the lowest point. Make sure to cap off or screen any openings into your plumbing system and close all of the valves after the system is drained. For example, if you have plastic plumbing that runs on top of the ground that supplies different buildings while your system is open, when you disconnect the plumbing for the winter, make sure to cap off or screen the plumbing inlet to the building to prevent rodents and bugs from crawling in.

5. Other items to consider draining are jet pumps (after discontinuing power to the pump), chemical feed pumps, hot water

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"Working Together for Safe Drinking Water"

## Service Connection

### Director's Corner

#### Going for the Gold

As I watched a variety of Olympic competitions this summer, I marveled at the physical abilities of the athletes. Their dedication to their sport is clear. However, more important to winning has to be their drive to prepare for the competition. The marathon runner Juma Ikangaa said after winning the New York Marathon, "The will to win is nothing without the will to prepare." The goal to reliably provide safe drinking water in all, or almost all, circumstances requires us to prepare now for the times of challenge and adversity.

Shortly after the events of 9/11, Congress and the U.S. Environmental Protection Agency mandated that water systems conduct "vulnerability" assessments, principally to identify security risks at public water systems. While assessing security risks is still very important, a more holistic view of the water system is needed. What risks exist in your system that could jeopardize the goal of reliably providing safe drinking water to your customers?

Identifying risks and mitigating or eliminating risks require time and resource commitment. Our ability to bring home the gold in this race depends on our "will to prepare" for the variety of circumstances that could impact your water systems.

If you don't know where to start, please consider using the components of our four-part educational core message below to begin.

- ✓ Protect your Source
- ✓ Take Your Samples
- ✓ Maintain Your Treatment
- ✓ Inspect your Pipes and Tanks

Reducing risks and vulnerabilities will help ensure that your customers always receive safe water. Please contact a member of our staff if you need help in your preparations and good luck in your quest for the gold.

Yours for Safe Drinking Water,

*Roger*



## Service Connection

### THE DRINKING WATER PROGRAM NEWSLETTER

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## Electronic Submittal of Lab Sample Results

Robin Frost, SDWIS Administrator

For some time, the Drinking Water Program has been working on a sample data entry tool for in-state commercial and utility laboratories, for submitting sample results electronically to the DWP. We have recently completed an upgrade of the tool, and two commercial labs have tested it by entering a few samples, which we have processed. The testing was successful, and the labs were satisfied with the changes that we made to the tool. We are now ready to distribute the tool to all in-state commercial and utility labs for testing. Each lab was asked to submit one sample of each sample type that is analyzed by September 30, 2012. Once we confirm that their files can be processed successfully, the labs will begin submitting sample results electronically by January 1, 2013.

All public water systems need to provide their system name, PWSID number, and sample location to the lab when submitting samples for analysis. Be sure to inform the lab that the samples are for drinking water compliance. Please keep in mind that compliance sample results must be submitted to the DWP by a certified lab.

### New Staff Glenn Angell



Glenn Angell joins the Subsurface Wastewater Unit of the Drinking

Water Program as the new State Site Evaluator. Glenn first obtained his license in 1976 and has designed systems part time since 1988. He comes to us from the Office of Information Technology where he was IT Manager for Agriculture, Conservation, Environmental Protection, Inland Fisheries and Wildlife and Marine Resources. Prior to that, he was an IT Coordinator for the DEP helping manage IT development projects and coordinating activities between DEP staff and IT developers and technicians. Glenn can be reached at 592-2084 or [glenn.b.angell@maine.gov](mailto:glenn.b.angell@maine.gov).

### *Continued from Cover*

heaters (don't forget to shut off power to the hot water heater before draining the tank), furnaces, dishwashers, toilets, plumbing to refrigerators with ice machines, back flow prevention devices and water meters. This list is not all inclusive and you may have additional appliances or devices that may need to be drained to protect against freezing. Do not forget to add environmentally friendly anti-freeze to your toilet bowls and sink and shower traps to prevent the traps and bowls from cracking and to keep sewer gases from entering buildings.

6. Protect your distribution system by not leaving taps open in the off season. Never use automotive anti-freeze in your water system because it is a health hazard!
7. Turn the power off to all treatment systems. Properly discard any unused chlorine solutions and stock. For other treatment systems, follow the manufactures' instructions for equipment, chemicals or filter media not in use for long periods of time.

Closing your system for the winter may be time consuming in some cases, but it will provide you with peace of mind knowing that at start up, repairs to the system should be minimal.

If you shut down your water system for the winter, please make sure that you flush and shock chlorinate your system in the spring prior to re-opening for the season. We would also recommend collecting an Operations & Maintenance (non-compliance) bacteria sample to make sure that your water system is bacteria free before you open for the season. You can find the shock process and other procedures for opening your seasonal water system at the following Drinking Water Program link: <http://www.maine.gov/dhhs/mecdc/environmental-health/water/resources/wakeupyourwatersystem.htm>



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## Enforcement Corner

### HOW DO YOU RATE?

#### EPA Report Prioritizes Public Water Systems in Violation

*Tera Pare, Enforcement Coordinator*

**Background:** Every quarter, the Maine Drinking Water Program (DWP) receives a report from EPA listing public water systems (PWS) in Maine. This report, called the Enforcement Targeting Tool (ETT), uses a scoring system to prioritize those PWSs in violation of safe drinking water rules and regulations, by using a scoring system. The purpose of the ETT is to target those PWSs in need of formal enforcement action, in order to facilitate their return to compliance.

**What Exactly Does Enforcement Mean?** EPA has a very specific set of parameters that qualify actions as formal enforcement. Examples of acceptable enforcement measures employed by the DWP include administrative consent orders, administrative compliance orders and administrative penalties. For Maine to maintain its primacy status, the DWP must properly initiate these enforcement actions against those PWSs that violated drinking water regulations and failed to return to compliance within the specific deadlines outlined in the initial Notices of Noncompliance.

**How is the ETT Scored?** The ETT assigns points for each unaddressed violation at a public water system within the last 5 years, which are added together to create a total score for each PWS. The specific formula is the Sum of  $(S1 + S2 + S3 + \dots) + n$ . “S” means the violation severity, generally based on the Public Notice Tiers in 40 CFR 140, Subpart Q and the Administrative Penalty Schedule in Maine’s Rules Relating to Drinking Water at 10-144 CMR 231, Section 1-C (I). Therefore, those violations causing more threat to public health, such as exceeding the Maximum Contaminant Level for Coliform, will receive a larger “S” factor than a CCR Rule violation. And the “n” values equal the maximum number of years since the PWS’s oldest unaddressed violation. For example, if the PWS’s oldest unaddressed violation in the past five years occurred in the current calendar year, an “n” factor of zero is assigned. If it occurred two years ago, an “n” factor of 2 is assigned.

**What Score Raises a Red Flag?** The ideal score for any PWS is zero; however the EPA requires the DWP to address any PWS with a score of 11 or higher, because they are considered “Nationally Significant.” Each quarter, the DWP must research the compliance status of each PWS in Maine with a nationally significant score, and report to EPA whether the PWS returned to compliance, whether the PWS violations were addressed by enforcement, whether the PWS remains active, along with causes of the violations and plans for resolving the violations, if they remain outstanding.

**How Many Public Water Systems Score At Least 11 in Maine?** 92 systems most recently scored 11 or higher: 18 Community, 27 Non-Transient, Non-Community, and 47 Transient systems.

**How Accurate is this ETT?** Less than 30% of the PWSs on the list actually require DWP enforcement. Why not 100% accurate? There are a number of factors, some of which include the time lag. Data used for the report is at least three months old, so, during that time, the PWS may have returned to compliance, received an administrative order or closed. Another possible factor contributing to inaccuracy is EPA’s data extraction not detecting the DWP enforcement actions.

**Is My PWS on the ETT?** If you would like to know whether your PWS is listed among the 92, please contact Tera Pare. Your chance to clear up inaccuracies, tie up loose ends, and work with the DWP to avoid future costly measures is within your grasp.





## Funding Public Water System Infrastructure Improvements

*Norm Lamie, Chief Engineer*

Access to \$8,975,000 for the 2012 Maine Drinking Water State Revolving Fund (DWSRF) depends on the ability to acquire the State Match.

The State of Maine Legislature passed a bill allowing a Referendum question this fall to provide the 20% State Match for the 2012 DWSRF, as well as the 2013 DWSRF. Our ability to access the 2012 and 2013 DWSRF federal funds is contingent on Maine voters approving Referendum Question 5 in the November 6, 2012 election.

The DWSRF State Match (\$3.59 million) is part of a larger bond question that includes the State Match for the Clean Water SRF program. Referendum Question 5 will read as follows:

*Question 5 (Bond Issue): Do you favor a \$7,925,000 bond issue to be expended over 2 years for revolving loan funds for drinking water systems and for wastewater treatment facilities, which will make the State eligible to secure \$39,625,000 in federal grants?*

A "yes" vote on this question will allow the Drinking Water Program to access approximately \$16 million in federal funds. With the new federal funds, state match and repayment funds, the Drinking Water Program will have approximately \$28 million for construction projects and another approximate \$6 million for non-construction project activities including:

*Sixteen DWP staff positions, small water system technical assistance, operator training, wellhead protection grants, capacity development grants, consolidation grants, education and outreach, land acquisition loans and more.*

A "yes" vote will allow the Drinking Water Program to continue these activities for two years. If you would like more information on the plans for 2012 and 2013 DWSRF spending, please visit our website at [www.medwp.com](http://www.medwp.com).

### New Guidance Available for Responding to Loss of Water Pressure and Treatment Failure

*Erika Bonenfant, Education & Outreach Coordinator*

Do you know the appropriate steps to take if your water system loses pressure? What if your disinfection system fails? When must a Boil Water Order be issued? These situations and questions can come up when you least expect it. The time to know the steps and procedures to deal with these situations is now, before you are caught in the middle of the emergency. The Drinking Water Program has assembled a series of fact sheets aimed at providing guidance to water systems, both small and large, on how to respond to these types of emergencies. The fact sheets available include: Protecting Public Health During Chlorination Disinfection System Failures, Protecting Public Health During UV Disinfection System Failures, Responding to Loss of Pressure Events (Large Water Systems), and Responding to Loss of Pressure Events (Small Water Systems). These fact sheets are available on the DWP website by going to "[www.medwp.com](http://www.medwp.com)," and clicking on the link in the left hand navigation column titled "Resources, Guidance, and Water Information." The fact sheets are linked under the "Emergency Information" section of the page. These documents are also available in hardcopy by contacting your field inspector.



# Water Operator Board News

Teresa Trott, Licensing Officer



### It's Renewal Time!

Now is a good time to check the expiration date on your water operator license. If your license has an expiration date of 12/31/2012, now is the time to renew.

Renewal forms will be sent November 1<sup>st</sup>. The forms will provide a summary of Training Contact Hours (TCHs) reported during the license period. It is only necessary to document TCHs **not** listed on the form. TCHs are a renewal requirement; however, it is not a requirement to be employed by a water system to maintain your license.

Check "Maintaining Your License" on the Water Operator Board's website (<http://www.maine.gov/dhhs/mecdc/environmental-health/water/licensing/operators/waterops.htm>) for:

- Operator TCH totals on file with the Board
- Professional Development Training Calendar
- Training providers
- Call Terry Trott at 287-7485 if you have any questions.

### Annual Report

The 2011 Operator Certification Annual Report was recently accepted as meeting certification and recertification guidelines by EPA. Maine was commended for strong compliance rates for operators and systems. The report can be found on our website at: <http://www.maine.gov/dhhs/mecdc/environmental-health/water/licensing/operators/waterops.htm>

### Changes to "Designated Operators"

Historically, notices of non-compliance have been sent only to the public water system administrative contact. In some cases, this mail delivery resulted in the "designated operator" having no knowledge of the violation. Starting in January 2013, the DWP will send copies of notices of non-compliance to the "primary" designated operator, in addition to the administrative contact. For systems with more than one designated operator, a "primary" designated operator must be identified. DWP staff will contact each system with multiple designated operators to determine the appropriate "primary" designated operator.

The new 2014 license period starts when DWP receives your completed renewal form. Don't delay submitting your form. Early renewals can gain TCHs in November and December for the next cycle. Delaying your renewal shortens your time to gain TCHs on the new license.

Licenses are a personal achievement. Holding a water treatment or distribution license attests to the knowledge, ability and professionalism of the operator. When you, as an operator, choose to be in responsible charge of a facility by signing a Designated Operator Form, you are agreeing to be responsible for the water quality and quantity of water produced and served by that water system. There are many tasks that are designed to assure that the water quality and quantity meet drinking water standards. These tasks may be delegated to others by providing training and written procedures; however, it is important to remember that *the responsibility cannot be delegated*. It is your responsibility, as the licensed operator, to inform the DWP when you are no longer in responsible charge of a public water system.

## 2012 DWP Annual Staff Merit Award Winners

The DWP Staff Merit Award, given annually by the Maine Public Drinking Water Commission, recognizes an employee of the Drinking Water Program who has made a significant contribution in the past year to the goals and mission of the program. Nominations are solicited and received from the drinking water "community" in Maine, including the DWP staff, other Maine water industry associations, and public water systems.



This year, the Commission expressed how difficult their job was to select an award recipient from a number of worthy and deserving nominees. In the end, the Commission was pleased to present the award to two staff members this year: Field Inspector Daniel Piasecki and Compliance Officer Jennifer Grant.



*Congratulations, Dan and Jennifer!!*







## Spotlight on DWSRF

Norm Lamie, Chief Engineer

Some Drinking Water State Revolving Fund (DWSRF) Construction projects move like a fine-tuned Swiss clock. Others face a number of twists and turns along the way.

One of last year's very successful projects was the replacement of aging infrastructure at the Old Town Water District. The work consisted of replacing approximately 1,580 feet of old cast iron unlined water main, services, and fire hydrants with new 12-inch ductile iron pipe on Bradley Road, Route 178, in Milford. In the DWSRF application completed by Superintendent Frank Kearney Sr., he stated "this section of road has old cast iron pipe that has failed nine (9) times in the last five (5) years. A pipe failure on this section of water main leaves the Town of Bradley without water and/or results in a boil order."



The project ranked 11th out of 16 projects that qualified for the 2011 Primary List. The project's ranking was improved by having the project on the District's Master Plan, completing an environmental review, and having the preliminary engineering done. In other words, the project was nearly ready to proceed to construction.

The District received its Project Award letter on May 11, 2011, informing them that up to \$340,068 of funding was available as a low interest loan for the project. The District accepted the award and immediately proceeded with its Bond Council review and the Maine Municipal Bond Bank Loan Application.

The Drinking Water Program completed a review, based on the Plans and Specifications prepared by A.E. Hodsdon, on June 2, 2011. The project was advertised on June 10, 2011, and bids were opened on July 7, 2011. Four bids were received ranging in price from \$316,320 to \$486,990. A construction contract was executed on August 2, 2011, with Sargent Corporation.

Because this project included a State Highway, Drinking Water Program Field Inspector and DWSRF Project Manager Daniel Piasecki provided project certification as per the MDOT State Agency Addendum to Rules, Regulations and Policies on Highway Opening Permits. The only minor "slowdown" this project experienced was a missing flagger classification in the Wage Rate. A Request for Authorization of Additional Classification and Rate for the "flagger" was made on September 29th and a response was provided by the Department of Labor on November 3, 2011.

The project achieved Substantial Completion on October 14, 2011.

When Superintendent Kearney was asked how the customers benefited from this project, he stated, "lower rates, better service, safer water, and more confidence in public utilities." He also said, "this program is extremely valuable to our ratepayers. As the years go by... Maine will value the intelligent choices being made to continue funding this program. Plus, the money stays in Maine working for us over and over. An excellent program!"

Thank you Mr. Kearney, and great work by all involved!





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and Human Services

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Safe, Healthy and Productive Lives

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# Source Water Protection

## A Guide for Public Water Systems

Maine CDC Drinking Water Program • 11 SHS Augusta, ME 04330 • 287-2070 • www.medwp.com

### The Importance of Source Protection



The ideal water source is a pure source of water in a remote, forested natural area with no sources of pollution influencing it. Most water sources, however, are geographically located near more densely populated areas. As a result, drinking water sources are vulnerable to contamination whether it be from harmful chemicals or biological organisms (such as bacteria and viruses). Contamination often comes from activities on the land near the source of water. Water systems, no matter how small or large, must produce safe water through a “multiple barrier approach” which includes protecting the source, providing proper disinfection and treatment, cleaning and maintaining water pipes and tanks that carry and store the water after treatment, and monitoring water quality throughout all of those processes. Source protection is the first and most important of these barriers. If pollutants never get into a surface water (lake, river, stream) or

groundwater (well) source, then people won’t consume them even if other barriers fail. Additionally, treating a contaminated drinking water source is typically much more costly than protecting it from contamination in the first place.

#### Levels of Source Protection

Source protection comes in many layers, like an onion. Start with basic, key pieces and work upward and outward. As you get farther from your source, it becomes more important to engage others to help you serve safe and sustainable drinking water.

### Source Protection Basics

#### For smaller groundwater systems:



*To Assure the Best Source Protection, Consider the Following:*

- 1) **Well casing is seated into rock and** grouted, while an earthen surface seal (where well casing meets the ground) is present, intact, and mounded around the casing, so water can’t pool
- 2) **Sanitary seal well cap is fitted with an intact insect screen**
- 3) **The area within 300 feet of the well is clear of potential contaminants. Take inventory of the area:**
  - ✓No petroleum or other toxic storage or use;
  - ✓No septic systems;
  - ✓Ideally, no structures other than the well: if there are structures, the items stored within them are safe and securely contained.
  - ✓Immediate well area is surrounded with fencing, as appropriate. Another option is armoring the well (i.e. locking well cap), if vandalism is a concern.

- 4) **If you don’t own at least 300 feet around your well, ensure you have a relationship with your neighbor(s):**
  - ✓Your neighbor(s) understands that the activities listed above could put your well (and theirs) at risk;
  - ✓Your neighbor(s) is willing to grant you an easement on the area in your primary protection area;
  - ✓Your town has an ordinance guiding land use in your protection area for future development;
  - ✓If there are activities near your well that could contaminate groundwater, they are well managed; and
  - ✓You encourage your neighbors to take care of their septic tanks, petroleum, and chemicals with as much care as you do.

#### Keep Your Drinking Water Safe:

- ✓ Protect Your Source
- ✓ Take Your Samples
- ✓ Maintain Your Treatment
- ✓ Inspect Your Pipes & Tanks

*Keep Your Drinking Water Safe: Special Insert 2 of 4*

## The Next Level of Source Protection

### **For community groundwater and surface water systems:**

1) **If there are no local wellhead/watershed ordinances**, talk to your town officials about developing one. The DWP has a model ordinance and can offer technical assistance.

2) **Make sure your Code Enforcement Officer knows about your water system** and applicable state laws on development and risk management in a source protection area.

3) **With an ordinance in place, work with your neighbors and Code Enforcement Officer** to minimize the risk of current activities, by assuring that:

- ✓ Existing petroleum and chemical uses are well-managed and monitored;
- ✓ Lawn care and gardening avoid pesticide use and over-fertilization (think first, spray last);
- ✓ Septic systems are well-maintained and pumped regularly;
- ✓ Exposed soil is stabilized, construction sites use appropriate erosion control and manage fuels and lubricants carefully;
- ✓ Existing industrial and auto repair activities use best management practices (see *Best Management Practices for Groundwater Protection below*); and
- ✓ Any new above ground home heating oil tanks replaced or installed are double walled.



## Advanced Source Protection Work

### **For larger community water systems:**

1) **Develop alliances with conservation groups** to help plan for long-term water sustainability;

2) **Help conservation groups find resources to protect land** in your source protection area;

3) **Acquire land or easements yourself in your source protection area:** DWP has land acquisition loans to help;

4) **Consider acquiring an alternate source in case of contamination or shortage:** interconnection, a new well in a different area; and

5) **Work with forest landowners and farmers in your protection area.** Ensure they have good management plans and are capable of making a return on their land, so it's less likely to be developed.

### DWP Resources Available for Source Water Protection:

<i>Resource</i>	<i>About</i>	<i>Contact</i>
Land Acquisition Loans	Low Interest Loans for community and non-profit non--community water systems for the purchase or legal control of land within source protection area	Erika Bonenfant erika.bonenfant@maine.gov 287-5681
Source Water & Wellhead Protection Grants	Grants to community or non-profit, non-community public water systems using surface water or groundwater to protect public drinking water sources.	Erika Bonenfant erika.bonenfant@maine.gov 287-5681
Model Wellhead Protection Ordinance	Guidelines for developing and drafting a groundwater protection ordinance	Andy Tolman andrews.l.tolman@maine.gov 287-6196
Best Management Practices for Groundwater Protection	A guide to encourage educated decisions, informed practice, and directed planning in regard to groundwater protection, particularly in the vicinity of public drinking water supply wells.	Andy Tolman andrews.l.tolman@maine.gov 287-6196
Drinking Water Protection in Maine fact sheet	A summary of regulatory authority to protect drinking water in Maine	Andy Tolman andrews.l.tolman@maine.gov 287-6196