



Winter 2005

# Service Connection

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



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 Center for Disease  
 Control and Prevention

## A River Runs 'Over' It

Eben Joslyn, Southern Maine Field Engineer

There are few events that occur in the course of normal operations that are as disconcerting as a sudden drop in storage volume. One such event occurred this past summer in the western Maine town of Bethel.

On August 13<sup>th</sup>, during the peak of the summer tourist season, operators Lucien Roberge and Don Katlin of the Bethel Water District began to notice a downward trend in the level of their storage reservoir. It was initially attributed to the summer demand. The next day, when the reservoir volume had dropped half again overnight, they became very worried. District staff began to search for a leak in remote portions of the system and discovered that the river crossing below the Androscoggin River was the culprit.

Divers from Waterworks Diving were hired to repair the leak but were unable to do so because of the angle created by soil accumulation below the pipe that separated it at a bell. In the interim, District staff, with support from other community agencies, made a temporary river crossing by connecting fire hydrants on either side of the river with fire hoses running along a bridge. With flow to the system reduced by half, a water conservation order was issued by the District in an effort to reduce the pumping demands that had been placed on the system and allow the reservoir to begin to fill again.



*Bethel Water Source*

For the next two and a half weeks, district staff worked to keep the temporary system up and running while their engineer, A. E. Hodsdon, undertook the task of designing a new river crossing, acquiring the appropriate permits and materials and hiring contractors. The contractor, Cross Excavation, installed the new river crossing on September 1 and tied the pipe into the system on the next day. By September 5, pressure in the system and the volume of water in the reservoir stabilized, allowing the conservation order to be lifted.

While the cause of the separation of the pipe in the river has not been officially determined, what is most important are the steps the district took to repair the break and resume supplying the public with safe drinking water and fire protection in a reasonable amount of time.

The restoration of normal water system operations was only possible because of the diligence of the Bethel Water District operators, the cooperative work with their engineer and contractors, coordination with the Department of Environmental Protection and the Department of Health and Human Services Drinking Water Program, as well as mutual aid provided by the Bethel Sewer and Fire Departments. The following districts should be recognized for the assistance they provided during this event: Bridgton Water District, Rumford Water District and Aqua Maine, Rockport Division.

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## Service Connection

### Director's Corner

Nancy Beardsley, Director



My top priority over the last few years has been securing funding for the Drinking Water Program and the DWSRF. We finally succeeded in getting our state matching funds request onto this November's ballot. Maine voters approved our request for \$3.5 million to match \$17.5 million in federal funds. We can now restore basic programs and anticipate a very busy construction season next year.

This success would not have been possible without the help of the Maine Water Utilities Association, the Maine Rural Water Association, the individual utilities who spent many hours at the Legislature and behind the scenes, Legislators and DHHS management. Our unified effort finally yielded positive results.

We have a very challenging year ahead of us – we now need matching funds for 2007! I'm confident that if we work together, we will continue to be successful in protecting public health. Thank you for your support of our program and staff.

My best wishes for a happy and healthy 2006,  
Nancy

### Drinking Water Security Project

Bill Johnson, Security Coordinator

In September, the Drinking Water Program (DWP) hired Woodard and Curran (W&C) to assist us in preparing for emergency response measures. W&C surveyed agencies and public water systems in order to: (1) assess the extent of emergency response preparations made by water systems, and (2) find out what responses and actions water systems and agencies expect from the DWP in emergency situations.

W&C will work with the DWP to define appropriate emergency response procedures, establish links and communication procedures, update the DWP's emergency response plan and assist with emergency response training. The survey results will be ready in January, with an updated DWP emergency response plan (ERP) completed sometime in March or April. The DWP encourages and welcomes your interest in this project.

## Service Connection

### THE DRINKING WATER PROGRAM NEWSLETTER

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## Drinking Water State Revolving Loan Fund

Roger Crouse, Assistant Director



Why is this man smiling? On November 8, 2005, Maine voters approved Question 3 on the statewide ballot. Included in this question was \$3.5 million to support the Drinking Water State Revolving Loan Fund (DWSRF). The \$3.5 million will secure \$17.5 million in federal matching funds.

In addition to the projects from the 2005 Intended Use Plan, we anticipate funding the following projects with 2006 State and Federal dollars:

WATER SYSTEM	PROJECT	SRF LOAN AMOUNT
Eagle Lake Water & Sewer Dist	New source to reduce disinfection by-products	\$300,000
Mars Hill & Blaine Water Co	New source to reduce disinfection by-products	\$1,137,312
Passamaquoddy Water Dist	Replacement of transmission main	\$1,000,000
Woodmans Trailer Park	Interconnection with another PWS to reduce/eliminate arsenic	\$75,000
Sugarloaf Water Association	Installation of treatment for corrosion control	\$36,720
Port Clyde Water District	Replacement of distribution mains	\$500,000
Calais Water Dept	Elimination of backwash disposal area near wells	\$460,000
Calais Water Dept	Booster chlorination station	\$255,000
Sugarloaf Water Association	Search for additional groundwater sources	\$82,540
Calais Water Dept	Replacement of distribution mains	\$454,000
Winter Harbor Water Dist	Replacement of distribution mains	\$125,000
Biddeford & Saco Water Co	Replacement of floating cover on reservoir	\$375,870
Long Pond Water Dist	Replacement of distribution mains	\$811,000
Winter Harbor Water Dist	Replacement of distribution mains	\$1,500,000
Vinalhaven Water Dist	Replacement of distribution mains	\$166,260
Howland Water Dept	Replacement of distribution mains	\$1,000,000
Bethel Water Dist	Replacement of surface water source with groundwater sources	\$2,944,200
Bath Water Dist	Replacement of storage tank	\$2,199,565

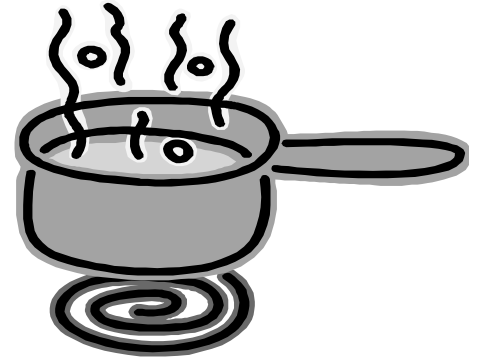
Contact Roger Crouse at 287-5684 or [roger.crouse@maine.gov](mailto:roger.crouse@maine.gov) for more information.



# What To Do When There Is A Boil Water

Nate Saunders, Field

A Boil Water Order is placed on a Public Water System when there is an imminent risk to public health related to the drinking water. The most common reasons for a Boil Water Order are the confirmed presence of E. coli bacteria in the water, the occurrence of zero or negative pressure in a water system, or the operational failure of a disinfection system. When a Public Water System is on a Boil Water Order, many questions arise from consumers on what this means. Included below are questions that are commonly asked and answers that address the issues.



**What should I do now that I have received the Boil Water Order?** You should boil, for at least five minutes, any water you are going to consume which includes drinking water, washing vegetables or other foods, brushing teeth, or making ice.

**Why do I have to boil the water?** A system is placed on a Boil Water Order because something has happened that has or will likely introduce harmful bacteria into the water system. In order to kill the bacteria in the water, making it safe to drink, the water needs to be boiled for at least five minutes. In most circumstances today, people will choose to use bottled water instead of boiling and cooling off the water before use.

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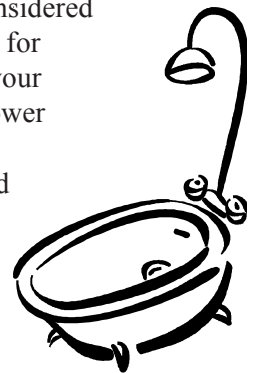
**I got the Boil Water Order notice this afternoon and I just finished making and feeding formula to my baby and my kids have been drinking the water all week... what do I do now?** Consuming water with harmful bacteria in it commonly causes gastro intestinal distress that includes upset stomach, diarrhea, nausea, and vomiting. If you have been drinking water from a water system that has been placed on a Boil Water Order, be aware of the common symptoms that can occur and if they do occur, consult your local physician and discuss the Boil Water Order with him or her. Specific medical tests will help identify that drinking water is or is not the cause of the symptoms and the type of treatment that will be appropriate.



**Can I brush my teeth with the water since I am not drinking it?**

Getting water into your mouth is a form of “consumption” and can introduce harmful bacteria in water into your body. For this reason you should use boiled or bottled water for brushing your teeth.

**What about bathing in the water?** A Boil Water Order is issued to prevent “consuming” the water without boiling it first. Since the bacteria considered here is not absorbed through the skin, water from the tap can be used for showering or bathing as long as care is taken not to get the water in your eyes, nose, and mouth. To help control this, you might choose to shower from the neck down and wash your hair in the sink. For babies and young children, it is recommended that you use a sponge bath method to avoid the child’s hands and fingers getting the water into their mouths.



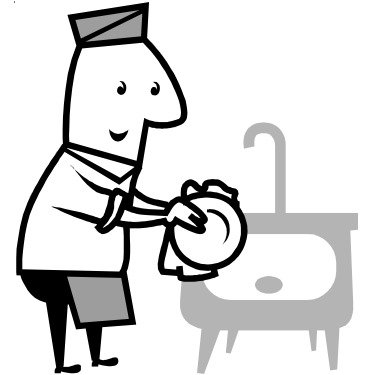
**What about making coffee?** Since almost all coffee makers today do not boil the water for five minutes therefore do not thoroughly disinfect the water, we recommend using bottled water for making coffee when on a Boil Water Order.



# Boil Water Order: Guidance For The Consumer

Public Services Manager

**What about washing dishes?** If you have a dishwasher with a high temperature setting and the dishes are dried before use, this is believed to be an adequate disinfection process. If you have a more industrial dish washer with a chemical disinfection cycle, that is a more sure way of disinfecting dishes. If you do not have a high temperature cycle on the dishwasher, it is recommended that you rinse the dishes in the sink with a tablespoon of household bleach on the water, the same process that would be recommended if you are washing dishes by hand.



**Will this water be a problem for my pets?** Many pets will be unaffected by consuming water under a Boil Water Order but some may be affected. As a precautionary measure, we recommend including the pet in the Boil Water Order and feeding them bottled water. For specific guidance for your individual pet, we recommend that you contact a veterinarian.

**What if I have arsenic or some other contaminant in my drinking water?** Do not boil the water as the boiling process removes some of the water and essentially makes the contaminant concentration higher. Instead, use bottled water.

If you have additional questions about what to do when under a Boil water Order, please call the Drinking Water Program at 287-2070. There are a number of individuals who can assist you with the issues that arise during a Boil Water Order. A copy of this guidance will be available on the Maine Drinking Water Program website: [www.medwp.com](http://www.medwp.com)

## DEFICIENCIES REQUIRING A BOIL WATER ORDER

(see DWP website for complete Boil Water Order Policy)

1. Acute bacteria violation (fecal and/or E. Coli present - issued after recheck samples are taken) or repeated non-acute bacteria violations.
2. Turbidity MCL violation (turbidity above 5.49 NTU)
3. Inadequately treated (lack of filtration or chlorination) surface water entering system.
4. System without water or with negative pressure zones (see Appendix A).
5. No working chlorination on a system which is required to submit monthly chlorine residual reports to the DWP.
6. Dead animals (mice, rats, birds, etc.) observed in any groundwater source.
7. In lieu of routine sampling where chronic contamination has occurred.
8. Equipment failure resulting in inadequate disinfection and/or filtration of a surface water supply not immediately repairable.



## Long Term 2 Enhanced SWTR and Stage 2 D/DBP Rule Updates

Jennifer Hitchcock,  
Surface Water Treatment Rule Coordinator



The Environmental Protection Agency (EPA) released the final Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR) and the Stage 2 Disinfectants / Disinfection Byproducts Rule (Stage 2 D/DBPR) on December 15, 2005.

Both rules are a continuation of previous rules related to protecting consumers from microorganisms and disinfection byproducts in their drinking water. The DWP, in conjunction with the EPA, will be providing training for affected water systems on these new rules starting in 2006.

All Surface Water Systems will be required to do some raw water quality monitoring as part of the LT2ESWTR, and possibly some treatment upgrades as a result of the testing. Be on the lookout for information that the DWP will mail to your system in the near future detailing your system's requirements.

All Community (C) and Non-Transient, Non-Community (NTNC) public water systems that use a chemical disinfectant are affected by the Stage 2 D/DBPR, as well as any C or NTNC public water systems that purchases or uses disinfected water. These systems will also be mailed notices from the DWP in the near future detailing their specific requirements.

As a reminder, all public water systems affected by the Stage 1 D/DBPR should be taking chlorine residuals at the same time and location as bacteria samples in addition to any required Haloacetic acid and Trihalomethane testing. Results of these chlorine residuals should be reported on a quarterly basis to the DWP on either your small system chlorination monthly operating report or on MOR-005 or MOR-006.

If you have any questions about the upcoming Stage 2 D/DBPR or LT2 or any of the current DBPR or SWTR, please contact Jennifer Hitchcock, SWTR/DBPR Coordinator, at (207) 287-3962 or at [jennifer.hitchcock@maine.gov](mailto:jennifer.hitchcock@maine.gov).

## Water Operators

Rebecca Reynolds,  
Water Operator Specialist

### Renewal Reminder

As the New Year 2006 arrives, don't forget that Water Operator license renewal time is here. Operators whose licenses expire on December 31, 2005 have a grace period of sixty days to renew their license. Licenses become inactive on March 2<sup>nd</sup>. Avoid this by renewing early.

If you need assistance meeting your Training Contact Hour requirements, check out the Drinking Water Operators Professional Development Training Calendar at [www.medwp.gov](http://www.medwp.gov). For further assistance, contact your Water Operator Specialist, Rebecca Reynolds at 287-5295, who will be glad to assist you.



### Exams

Maine now has several new Water Operators. The October exam results reflect the number of new operators in each Operator Class in the table below. Congratulations to the successful examinees. Your hard work benefits the Maine citizens who rely on your services for continued excellent water quality and public health. Next exam applications are due February 25<sup>th</sup> for the April 4<sup>th</sup> and 6<sup>th</sup> exams in Augusta and Presque Isle.

### October 2005: New Water Operator Licenses

VSWS	13		
Class I T	13	Class I D	15
Class II T & DE	7	Class II D & DE	6
Class III T & DE	1	Class III D & DE	2
Class IV T & DE	1	Class IV D & DE	1

### 2006 Calendar Corrections

**Please note the following calendar corrections:**

*November 16*

Board Meeting;  
Brunswick/Topsham Water District

*December 31*

Even Numbered Licenses Expire



## Resolve 029 Progress

Andy Tolman, Source Water Section Manager

The DWP continues work on a report to the legislature to identify and fill gaps in public water supply source protection. The source water assessments identified future development as the major risk to Maine's water supplies. While the best and most effective source protection is ownership of the watershed, this is often not practical. Good land use management is the next best means of source protection. Planning, zoning and permitting of land use activities is primarily done by local government. Both the content and effectiveness of local ordinances is quite variable.



Certain activities posing risks to water sources are regulated by the State, and many have provisions governing their practice in source protection areas. A variety of agencies and programs regulate activities with varying enthusiasm and effectiveness. So, the protection of water supplies is left to a large number of individuals and organizations, none of whom has complete control over water quality related activities.

An analysis of growth patterns in Maine indicates that public water supplies are at risk in two areas. Many systems are losing customers as both residents and industries leave urban areas. At the same time, rural areas where sources are located are experiencing unprecedented growth of low-density residential and commercial/industrial development, usually self-supplied with water and using septic systems for waste disposal.

Based on this situation, and on discussion with the Maine Geological Survey, Maine Department of Environmental Protection and Maine Department of Agriculture, we are considering some recommendations that may make this task easier:

1. Establish consistent policies among all state agencies to enhance source protection in all state decision making, development, and practices.

A number of state agencies have authority over activities that can impact public water supplies. In many cases, public water supply protection is not part of the framework for site selection and permitting decisions. Agencies that can assist source protection include:

  - Department of Conservation;
  - Department of Environmental Protection;
  - State Planning Office;
  - Inland Fisheries and Wildlife;
  - Department of Agriculture; and
2. Create an effective program to maintain agricultural and forestry land uses in source protection areas.
  - Promote well-managed forestry and agricultural uses to help maintain water quality and availability. Conversion of source protection areas to residential and commercial use can increase risks to water quality and availability.
  - Ensure that agricultural and forestry uses in source water protection areas are conducted in a sustainable manner, compatible with maintaining the quality and quantity of the water supply.
  - Establish landowner education, incentives and enforcement to reduce water quality impacts from agriculture and forestry. Although agricultural and forestry land uses represent the lowest level of threat to water quality, poor management can lead to a variety of problems, ranging from erosion to hydrocarbon and pesticide contamination of ground and surface waters.
3. Mitigate the effects of existing development on drinking water quality through the use of education, incentives, and enforcement.
  - Develop a plan to target enforcement of existing environmental laws including shoreland zoning in source protection areas.
  - Increase resources to enforce environmental laws. Focusing energy in existing programs as well as agricultural and forestry education and enforcement, can reduce risks to public health.
  - Encourage active management (BMP's) of existing potentially threatening uses in source protection areas.



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