

2010

South Berwick Water District
WATER QUALITY REPORT





**Protecting public health, safety, and the environment
by providing the highest quality water**

WELCOME

Welcome to the 15th annual Water Quality Report for customers of the South Berwick Water District. It summarizes 2009 and 2010 activities, and provides important information about your water service, its quality and safety.

The District is a quasi-municipal utility providing the public with clean, safe drinking water and fire protection services 24 hours a day, 365 days a year, to the citizens of South Berwick and Berwick, Maine. Our mission is to protect public health, safety, and the environment by providing the highest quality water for domestic use and fire protection while emphasizing customer service, innovation, and cost control.

YOUR WATER SUPPLY

The South Berwick Water District uses groundwater for its supply. The well supplies consist of a combination of well points (7), a gravel packed well (1), and Bedrock wells (8) located in four separate well fields throughout the towns of South Berwick and Berwick. A new bedrock well site located off Route 4 is under construction. The total combined output of the current supply is 1 million gallons per day. The water distribution system includes approximately 34 miles of main pipe and 155 fire hydrants.

TREATMENT

With the exception of the Willow Drive supply, the District uses sodium hypochlorite (chlorine) for disinfection and does not treat its well supplies. In the case of Willow Drive, the District employs an iron and manganese (caused by erosion of natural deposits) removal plant (Pureflow Filtration) using a proprietary filter media which also removes arsenic. Aeration is also employed to remove dissolved nitrogen and some radon.

STORAGE

The Powder House Hill Reservoir is a 1 million gallon reservoir located on Powder House Hill in South Berwick. The reservoir is constructed with two buried concrete chambers. Each chamber has a volume of 500,000 gallons. The chambers are designed to operate separately or as a single unit. The reservoir has an overall elevation of 297.67' USGS. This elevation provides system average pressure of 75-80 psi, with lows in mid-30 psi and highs of 135 psi.

In case of emergencies, such as a power outage, the reservoir has enough storage capacity to provide drinking water and fire protection during those emergencies. Once a stand-by generator has been installed at the Willow Drive Treatment Plant along with the existing stand-by generator at Junction Road, the District will have the added capacity to supply our customers with water and meet maximum daily demands with limited reliance on the storage reservoir.

2009/2010 HIGHLIGHTS

The South Berwick Water District continues its meter change-out program to new radio-read technology. Construction has started at the property off Route 4 for a new well site. Upgrades at the Willow Drive well site are being considered, as well as the installation of a back-up generator. A grant has been submitted to Efficiency Maine for upgrades to the Willow Drive Station. If the grant is awarded, it will save \$40,000 in construction costs and reduce electrical costs.

NEW EMPLOYEE

Donna Tice

The South Berwick Water District has hired a new office manager. Donna has over eight years of corporate financial operations experience, and has returned to work after focusing on raising a family. Donna is from, and resides in, Eliot.

COMMUNICATIONS TOWER

The South Berwick Water District is planning to install a Communications Tower at the top of Powder House Hill in conjunction with the South Berwick Police, Fire, Rescue and Highway Departments. The communications tower will improve the reliability of our SCADA System and allow for future expansion to a fixed-base meter reading system. It will also be used to update information for delivering water service, distribution and source water protection.

ELECTRONIC PAYMENT OF BILLS

We are currently researching the options of receiving electronic and credit card payments. The goal is to offer convenient, secure payments by credit card or electronic check via the internet, phone, or in the office.

SOURCE WATER PROTECTION

Source water protection is the primary way of protecting our water supply, and is accomplished by avoiding contamination from land uses and activities on or close to wellheads. By controlling land uses in the areas surrounding wellheads, we can protect the quality of groundwater and avoid health threats, supply interruptions, and enforcement problems.

The South Berwick Water District has received two Source Water Protection Grants from the State of Maine Drinking Water Program. The first grant will be used to provide fencing around the Agamenticus Well site. The second grant will be used for two projects:

1. Inventory residential petroleum storage tanks in our wellhead protection areas
2. Participating in a joint workshop of the Salmon Falls Watershed Collaborative

SOURCE WATER PROTECTION LOANS

A land acquisition loan program is available through the State of Maine Drinking Water Program. The purpose of the loan program is to provide low cost funds to purchase land for wellhead protection. The purchase of land surrounding wellheads is the primary way of protecting our water supply, and will allow us to continue to provide safe, clean drinking water to the community as well as prevent rate increases by providing low cost loans.

DIGSAFE

State law requires all utility companies be notified of any excavation. Calling DIGSAFE is not the only phone call you need to make. Most small local utilities do not belong to the DIGSAFE system because of the cost to be a member. Before doing any type of earth work with a machine, from landscaping to major construction, please contact the South Berwick Water District to mark out your water line.

HYDRANT SNOW CLEARING

We would like to thank all those who keep the hydrants in front of their homes clear from snow. The Water District and Fire Department are forever grateful.

CONSERVATION

The United States has one of the world's greatest supplies of clean drinking water. This resource needs to be conserved so that the same high quality is available for the future. Conservation results in lower demand and lower bills.

Run your washer and dishwasher only when they are full. This saves up to 1000 gallons per month.

If your shower fills a one-gallon bucket in less than 20 seconds, replace the showerhead with a water-efficient model. They are inexpensive, easy to install, and can save you up to 750 gallons a month.

Collect water used in rinsing fruits and vegetables, and reuse it to water plants.

Put food coloring in your toilet tank. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it can save up to 1000 gallons a month.

Set a kitchen timer when watering your lawn or garden to remind you when to stop. A running hose can discharge up to 10 gallons a minute.

Wash your car on the lawn, and you'll water your lawn at the same time.

CROSS CONNECTION

Cross Connection contamination is a potential serious public health issue that can be avoided. Water pressure changes can cause cross connection contamination when water from fixtures or appliances that have been exposed to chemicals or bacteria, such as garden hoses, irrigation systems, or boilers, get pulled back into the water main and into the public water supply. A backflow prevention device will ensure this does not happen. It is the policy of the South Berwick Water District and Maine State Plumbing Code that all service connections have installed a backflow prevention device, and must ensure it operates properly.

SOURCE WATER ASSESSMENT

Sources of drinking water include rivers, lakes, ponds and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and radioactive material and can pick up substances resulting from human or animal activity. The Maine Drinking Water Program (DWP) has evaluated all public water supplies as part of the Source Water Assessment Program (SWAP). The assessments included geology, hydrology, land uses, water testing information, and the extent of land ownership or protection by local ordinance to see how likely our drinking water source is to being contaminated by human activities in the future.

WAIVER INFORMATION

In 2008, we applied for and were granted a partial or a full three-year waiver for water testing for certain synthetic organic compounds (SOC) (Phase II/V). This is an exemption from doing tests for insecticides, herbicides, fungicides, and certain other industrial chemicals that are regulated in drinking water. The State of Maine Drinking Water Program grants a waiver only upon determining, on a case by case basis, that "it will not result in an unreasonable health risk." For any water tests that are not waived, we are required to report contaminants that were detected in our water supply.

VIOLATIONS

No violations issued in 2009.

WATER QUALITY TEST RESULTS

CONTAMINANT	DATE	RESULTS	MCL/AL	MCLG
MICROBIOLOGICAL				
Total Coliform (1)	2009	0 pos	1 pos	0 pos
INORGANICS				
Arsenic (2)	06/22/09	10 ppb	10 ppb	0 ppb
Barium	06/22/09	0.009 ppm	2 ppm	2 ppm
Chromium	06/22/09	2.4 ppb	100 ppb	100 ppb
Copper 90th% Value (4)	2008-2010	0.5 ppm	1.3 ppm	1.3 ppm
Fluoride (3)	06/22/09	0.4 ppm	4 ppm	4 ppm
Lead 90th% Value (4)	2008-2010	3 ppb	15 ppb	0 ppb
Nitrate Nitrogen (5)	06/22/09	0.28 ppm	10 ppm	10 ppm
RADIONUCLIDES				
Radon Screen (6)	06/01/06	2840 pCi/l	4000 pCi/l	N/A
DISINFECTANTS & BYPRODUCTS				
Total Trihalomethanes TTHM (7) Range (0-6.4ppb)	2007	2.32 ppb	80 ppb	0 ppb
CHLORINE RESIDUAL				
Chlorine Residual RAA Range (0.11-0.25 ppm)		0.165 ppm	MRDL = 4ppm	MRDLG = 4ppm

DEFINITIONS

MCL: The highest level of a contaminant that is allowed in drinking water.

MCLG: The level of a contaminant below which there is no known or expected risk to health.

RAA: The average of all monthly or quarterly samples for the last year at all sample locations.

AL: The concentration that, if exceeded, triggers treatment that a water system must follow.

UNITS

ppm: Parts per million or milligrams per liter (mg/L).

ppb: Parts per billion or micrograms per liter (ug/L).

pos: Positive samples.

pCi/l: Picocuries per liter (a measure of radioactivity).

SECONDARY CONTAMINANTS

Type	Level	Tested
Sodium	68 ppm	06/22/09
Chloride	19 ppm	06/22/09
Iron	0.13 ppm	06/22/09
Magnesium	1.1 ppm	06/22/09
Manganese	0.011 ppm	06/22/09
Nickel	0.003 ppm	06/22/09
Sulfate	32 ppm	06/22/09
Zinc	0.01 ppm	06/22/09

All other regulated drinking water contaminants were below detection levels.

NOTES

- 1.) Total Coliform Bacteria: Reported as the highest monthly number of positive samples, for water systems that take <40 samples per month. For water systems that take > 40 samples per month, no more than 5% may be positive.
- 2.) Arsenic: The EPA adopted the new MCL standard in Oct 2001.
- 3.) Fluoride: Must be maintained between 1-2 ppm for those water systems that fluoridate their water.
- 4.) Lead/Copper: Measured at consumer’s tap. 90% of the test must be equal to or below action level.
- 5.) Nitrate: Nitrate in drinking water at levels above 10 ppm is a health risk for infants less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant ask advice from your health provider.
- 6.) Radon: The State of Maine adopted a Maximum Exposure Guideline (MEG) for Radon in drinking water at 4000 pCi/l, effective 1/1/07. If Radon exceeds the MEG in water, treatment is recommended. The US EPA is proposing setting federal standards for Radon in public water.
- 7.) TTHM/HAA5: Total Trihalomethanes and Haloacetic Acids (TTHM and HAA5) are formed as a by-product of drinking water chlorination. This chemical reaction occurs when chlorine combines with naturally occurring organic matter in the water.

Coliform: Naturally present in the environment.

Arsenic: Erosion of natural deposits. Runoff from orchards, glass and electronic production wastes.

Barium: Erosion of natural deposits. Discharge of drilling wastes. Discharge from metal refineries.

Chromium: Erosion of natural deposits. Discharge from steel and pulp mills.

Copper: Corrosion of household plumbing systems.

Fluoride: Erosion of natural deposits. Discharge from fertilizer and aluminum factories.

Lead: Corrosion of household plumbing systems.

Mercury: Erosion of natural deposits. Discharge from factories. Runoff from landfills and crop land.

Radon: Erosion of natural deposits.

Disinfectants: By-products of chlorination of drinking water.

Nitrate Nitrogen: Runoff from fertilizer use. Leaching from septic tanks. Erosion of natural deposits.

HEALTH INFORMATION

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. Contaminants that may be present in source water include:

Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and can also come from gas stations, urban runoff, and septic systems.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infection. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

INFORMATION REGARDING LEAD

Elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials associated with service lines and home plumbing. The South Berwick Water District is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap water for 30 seconds to 2 minutes before using water for drinking or cooking.

More information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

QUESTIONS, COMMENTS AND INFORMATION

We are proud of the work we do for you, and to be your source for all your water services. If you have any questions, comments or concerns about your water quality or service, please call the South Berwick Water District at (207) 384-2257 during business hours.

BUSINESS HOURS

Monday-Friday 9:00am - Noon and 1:00pm - 4:00pm.

In case of an emergency after hours contact the South Berwick Dispatch at 384-2254 and ask them to contact someone from the Water District.

TRUSTEES

Paul Klebaur, Chairman
James DeWitt Sullivan, Treasurer
Henry Miller, Clerk
Douglas Letellier
Warren Spencer

EMPLOYEES

John Leach, Superintendent
Dana Curtis, Water System Operator
Donna Tice, Office Manager

OUR WEBSITE

You can find more information online at www.sbwd.org.

ADDITIONAL CONSUMER RESOURCES

Environmental Protection Agency Safe Drinking Water Hotline: (800) 426-4791
American Water Works Association - General Information: (800) 926-7337
Center for Disease Control - Public Inquiries: (800) 311-3435
SaveWaterUS: www.savewaterus.com
H2OUSE: www.h2ouse.org
Great Works Regional Land Trust: www.gwrlt.org
Water Use It Wisely: www.wateruseitwisely.com
EPA Ground Water & Drinking Water: <http://water.epa.gov/drink>



QUARTERLY RATE SCHEDULE (Effective June 1, 2010)

For a meter reading of 0 to 7500 gallons, the consumption charge is \$52.00. For 7501 or more gallons used, the rate is \$.00667 per gallon or \$6.67 per 1000 gallons. There are minimum amounts per quarter based on the meter size as follows:

Meter Size	Minimum Per Quarter	Water Allowance Gallons
5/8"	\$ 52.00	7,500
3/4"	\$ 91.00	13,125
1"	\$ 156.00	22,500
1 1/2"	\$ 312.00	45,000
2"	\$ 520.00	75,000
3"	\$ 1,040.00	150,000
4"	\$ 1,560.00	225,000

Private fire hydrant rentals which are furnished, installed, and maintained by the user for the purpose of private fire protection is a charge of \$505.22 per quarter, and \$2020.90 per year. Private sprinkler connections have a service charge per inch of service pipe diameter for sprinkler, standpipe, or hose connection of \$94.10 per quarter, and \$336.40 per year.

South Berwick Water District
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(207) 384-2257
www.sbwtd.org