

A close-up photograph of a young child with blonde hair, holding a clear glass filled with water. The child's face is partially visible on the left side of the frame. The glass is held with both hands and is placed on a dark wooden surface. The background is softly blurred.

South Berwick Water District
WATER QUALITY REPORT

2009



IN MEMORIAM

Michael R. Nadeau

Superintendent, 1988-2009

As this 2009 Annual Water Quality Report was being finalized, Michael R. Nadeau, District Superintendent for 21 years, passed away suddenly on July 1, 2009. Mike was a superintendent of extraordinary vision and innovation. His 21 years of leadership saw the birth of the modern South Berwick Water District. He was instrumental in the design and construction of a number of our modern facilities, obtained many research grants partnering the District with both universities and the American Water Works Association, and was recognized within the industry as a visionary leader. He was also instrumental in the foundation of the Southern Maine Regional Water Council and served as its founding President, along with the founding of the KEYS Group. His loss to the District and community is significant, but his legacy to the District and to the industry will long survive him.

WELCOME

Welcome to the 14th annual Water Quality Report for customers of the South Berwick Water District. It summarizes 2008 activities and offers information about your water service.

The District is a quasi-municipal utility providing 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.

The mission of the South Berwick Water District 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 ground water 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 site located off Rt. 4 has been identified and the land has been purchased. The site is currently under development for future use. The total combined capacity of the current supply is 1.0 million gallons a day.

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 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 1.0 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 power outage, the reservoir currently 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 capacity to supply our customers water and meet maximum demands with limited reliance on the storage reservoir.

2008 IN REVIEW

Highlights of 2008 include the replacement of approximately 1,000 feet of water-main on Railroad Avenue in conjunction with the Town's road improvement program. We have continued our Geographical Information System (GIS) Program, and when completed in the future, it will provide a detailed mapping and information system that will be shared with the Town, Sewer District, and other entities. The SBWD continues its meter change-out program to new radio-read technology that should be completed over the next several years. The District also continues to look for ways to further protect its water supplies as well as develop and secure future water supplies.

HYDRANT SNOW CLEARING

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

KEYS METER/BILLING STUDY

The Kittery Water District (whose service includes Eliot), the York Water District, and the South Berwick Water District are known collectively as the KEYS Group, and have been working cooperatively since 2005 to identify and implement ways to improve efficiency of services to achieve the highest quality services at the lowest possible cost for customers.

A study was completed 2008, and the KEYS Group will proceed, where determined appropriate, with immediate short and long-term goals in the areas found to be effective in significantly reducing costs. The KEYS Group strongly believes that implementing a sound comprehensive plan will result in purchasing and operational efficiencies that will almost certainly provide some measure of cost savings.

SOUTHERN MAINE REGIONAL WATER COUNCIL

The SMRWC was formed to promote regional cooperation between member utilities, to improve customer service, and to lower the cost of water for the customer base served by the public water systems in southern Maine. SMRWC member utilities include: Kennebunk-Kennebunkport-Wells Water District, Portland Water District, Biddeford-Saco Water Company, Sanford Water District, Kittery Water District, York Water District, and the South Berwick Water District.



John Leach is to the far right. Supt. Nadeau, who was instrumental in acquiring the grant, was unable to attend the meeting with the Governor.

SOUTHERN MAINE REGIONAL WATER COUNCIL (CONT.)

SMRWC conducted a study, with grant money provided by the Maine Municipal Bond Bank to gain a better understanding of the regions water supply, determine if regionalization of public water is beneficial and feasible, and evaluate the benefits and opportunities to working collectively together to assure a safe and reliable water supply to meet the region's growing needs. One of the possible outcomes of the study is the acknowledgement that a regional water system may one day be the best and most efficient means to provide reliable water and customer service to existing and future customers. It was also identified that the Saco River and Sebago Lake are the only fresh water sources with sufficient capacity to serve the long term population and economic needs of the region. The SMRWC will help to further protect these critical public resources.

The Council has performed many cost-sharing initiatives such as shared purchasing and maintenance programs, bulk chemical and fuel purchasing agreements and mutual aid cooperation of man-power resources and operations staff, to reduce operating costs. These initial cooperative steps have resulted in cost savings to the region's customers.

Sharing knowledge, enhancing cooperation, improving service, and lowering costs to the regions water customers is the goal and mission of the SMRWC.

NEW EMPLOYEES MEET THE NEEDS OF OUR CUSTOMERS

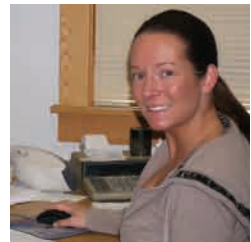
Dana Curtis

The SBWD has hired a new Water Systems Operator, filling the position left vacant with the departure of our previous WSO. Dana comes with over 25 years of related experience, the last 12 years with the Town of Kittery. Dana lives in South Berwick and is married with two children.



Sarah Sullivan

The SBWD has hired a new Office Manager, filling the position left vacant with the departure of our previous OM. Sarah comes with a background in sales and marketing. She has a B.S. degree in Business Management and a minor in Entrepreneurship and Small Business Administration from Northeastern University.



NEW OFFICE HOURS

After examining the out-sourcing of District billing services, it was determined due to cost restraints to keep the billing services in-house but to reduce to business office hours to further reduce costs. The new business office hours are: Monday through Friday, 9:00 AM to 12 NOON and from 1:00 PM to 4:00 PM. As always, there is a mail slot for after hour payments at the main door entrance at the office.

METER CHANGE-OUT PROGRAM

The South Berwick Water District is replacing all water meters with automated radio read (AMR) meters. AMR employs the latest technology in meter reading technology to allow the SBWD to read water meters without accessing private property. AMR uses radio signals to send meter readings to a mobile receiver greatly increasing the efficiency and accuracy of meter readings. If it hasn't already been installed, new meters are scheduled to be installed at your premises, free of charge, within the next 3-5 years. This system, once complete, will allow the SBWD, jointly with the Kittery and York Water Districts, to employ just one meter reader serving all three Districts. Other benefits include improved customer service and cost efficiencies, improved energy efficiency and conservation, and safety.

GIS COORDINATOR - REGIONAL HIRE

In the fall of 2008, the SBWD along with three other water utilities, the Kittery Water District, the Sanford Water District and the Kennebunk, Kennebunkport and Wells Water District, jointly hired a GIS Coordinator, Justin Richardson, GISP to oversee the GIS mapping of water utility assets for all four Districts. While under the direct employment of the KKW Water District, a "billable rate" was established for each utility thus saving thousands of dollars that otherwise would have had to be expended through an outside engineering firm. This is a win-win situation for all Water Districts involved. These cost savings can also be passed on to local Towns and Sewer Districts seeking GIS services.

WATERSHED PROTECTION/LAND ACQUISITION

The District acquired over 11 acres of land, designed for a subdivision, to further protect our water supplies at Willow Drive and Agamenticus Station. These two supplies represent approximately 60% of the SBWD's total supply.

FUTURE WELL SITE

The SBWD purchased a 3.67 acre site and had 28.79 acres placed into a protective covenant for a future well site off Rte 4 in South Berwick. The site is currently under development.

AWWA WATER AUDIT

The SBWD participated in an AWWA water audit through the MWUA for ways to better account for all water by a water utility. We are pleased to report that the SBWD ranked among the top world wide performers in leakage control or unaccounted-for water.

NEWWA COVER STORY

The New England Water Works Association featured the SBWD in the June 2008 Issue of the NEWWA Journal. The Willow Drive Treatment Facility was the cover story with a water system profile of the SBWD in an adjoining article. This was a once in a lifetime opportunity.

NEW TERMS AND CONDITIONS

The SBWD had new Terms and Conditions approved by the Maine Public Utilities Commission in January of 2008. The Terms and Conditions provide existing and new customers and the SBWD a summary of their rights and responsibilities. These Terms and Conditions will govern and guide the SBWD in the operation of its business.

GRANT AWARDS

The SBWD received two grant awards in 2008/2009. A grant for a utility trench box was granted by the Maine Municipal Association. The trench box, which protects personnel when excavating below ground, will be mutually shared with the Town Public Works Department and the Sewer District. A grant was also given the SBWD for Well-Head Protection measures through the Maine Center for Disease Control.

A MESSAGE FROM BOARD OF TRUSTEES: "ONLY TAP WATER DELIVERS"

Any measure of a successful society - low mortality rates, economic diversity, productivity, and public safety - is in some ways related to safe water. However, we often take safe water for granted. Please remember that during the next ice storm or other related incident. While you lost your power, telephone, TV and internet, your water was still there.

As your water provider, we're constantly monitoring your water to make sure it's safe and available 24/7, 365 days a year. It's part of what you pay for through your water bill. We deliver more than just water. We deliver public health, fire protection, support of our economy, and the overall quality of life we all enjoy.

Our job is to ensure that your water keeps flowing not only today or in times of emergencies, but well into the future. It's all part of our commitment to serve you and everyone in our community.

The Trustees hold meetings twice each month on the first and third Tuesdays at 7 PM. Meetings are held at the District's offices and are open to the public. Special meetings are occasionally called to deal with a specific issue, and are announced when scheduled.

WATER QUALITY TEST RESULTS

PWSID ME0091470

CONTAMINANT	DATE	RESULTS	MCL/AL	MCLG
MICROBIOLOGICAL				
Total Coliform (1)	2008	0 pos	1 pos	0 pos
INORGANICS				
Arsenic (2)	11/20/08	4.3 ppb	10 ppb	0 ppb
Barium	11/20/08	0.032 ppm	2 ppm	2 ppm
Chromium	11/20/08	1.3 ppb	100 ppb	100 ppb
Copper 90th% Value (4)	01/01/08	0.48 ppm	1.3 ppm	1.3 ppm
Fluoride (3)	11/20/08	0.3 ppm	4 ppm	4 ppm
Lead 90th% Value (4)	01/01/08	3 ppb	15 ppb	0 ppb
Nitrate Nitrogen (5)	11/20/08	0.51 ppm	10 ppm	10 ppm
VOLATILE ORGANICS				
Chloromethane	11/20/08	0.51 ppb	3 ppb	3 ppb
RADIONUCLIDES				
Radon Screen (8)	06/01/06	2840 pCi/l	4000 pCi/l	N/A
DISINFECTANTS AND BYPRODUCTS				
Trihalomethanes RAA TTHM (9)	2007	2.32 ppb	80 ppb	0 ppb
CHLORINE RESIDUAL				
Chlorine Residual RAA		0.16 ppm		

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.

ADDITIONAL INFORMATION

Source: 9 wells; Treatment: Chlorination, filtration

Violations: No violations in 2007

Waivers: 1/1/2005-12/31/2007 Partial waiver (TCP, TQ3, TSO)

SECONDARY CONTAMINANTS

Sodium	64 ppm	11/20/08
Chloride	46 ppm	11/20/08
Iron	0.13 ppm	11/20/08
Magnesium	7.3 ppm	11/20/08
Manganese	0.066 ppm	11/20/08
Nickel	0.002 ppm	11/20/08
Sulfate	52 ppm	11/20/08
Zinc	0.011 ppm	11/20/08

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. Water systems must meet this new standard by Jan.
- 3.) Fluoride: Fluoride levels must be maintained between 1-2 ppm, for those water systems that fluoridate their water.
- 4.) Lead/Copper: AL are measured at consumer's tap. 90% of the test must be equal to or below action level.
- 5.) Radon: The State of Maine currently recommends follow-up action (treatment) for Radon levels in drinking water above 20,000 pCi/L. The U.S. EPA is considering setting lower standards for Radon in drinking water.
- 6.) Action level over 5 pCi/L requires testing for Radium. Level over 15 pCi/L requires testing for Radon and Uranium.
- 7.) 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.
- 8.) Uranium: The U.S. EPA adopted the new MCL standard of 30ug/L (ppb), in December 2000. Water systems must meet this new standard after December 2003.
- 9.) TTHM/HAA5: Total Trihalomethanes and Haloacetic Acids (TTHM and HAA5) are formed as a by-product of drinking water chlorination. The chemical reaction occurs when chlorine combines with naturally occurring 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.

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.

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 is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

QUESTIONS, COMMENTS AND OTHER 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 (9 AM - NOON, and 1 PM - 4:00 PM, Monday through Friday, except for holidays).

You can find more information our website 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

WATER USE IT WISELY
www.wateruseitwisely.com

H2Ouse
www.H2ouse.org

EPA Drinking Water and Health: What you need to know
www.epa.gov/safewater/dwh

Great Works Regional Land Trust
www.gwrlt.org



**Providing the public with clean, safe drinking water
24 hours a day, 365 days a year**

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