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SEARSPORT WATER DISTRICT 2015 WATER QUALITY REPORT



"We are constantly investing in you" - The above photos show our newly rebuilt PRV station.

Welcome to SWD's 2016 Water Quality Report (This report covers the calendar year between January 1 thru December 31, 2015)

This report provides you with information regarding the quality of your drinking water. We know that you count on us each and every day for safe and reliable water and the staff here at the Searsport Water District (SWD) are trained and dedicated in doing just that. Our state of the art inline analyzers monitor the water 24 hours a day to assure its safety. In order to further assure that your water is free of any potential contaminants we collect samples throughout the system each and every month and send those samples to a State certified testing laboratory. We believe that we have some of the best drinking water in the State of Maine, and we take our jobs very seriously when it comes to protecting it.

Source Water Assessment (Drinking Water Program)

The 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 and 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. Assessment results are available at town offices, public water suppliers, and the DWP. For more information about the SWAP, please contact the DWP at telephone (207) 287-2070.

ABOUT THE REGULATIONS

The Safe Drinking Water Act directs the State, along with the Environmental Protection Agency (EPA), to establish and enforce minimum drinking water standards. These standards set limits on certain biological, radioactive, organic substances sometimes found in drinking water. Two types of standards have been established. Primary drinking water standards are achievable levels of drinking water quality to protect your health. Secondary drinking water standards provide guidelines regarding taste, odor, color, and other aesthetic aspects of your drinking water which do not present a health risk.

Where Does Your Water Come From?

The primary water supply for the Searsport Water District is from a single gravel packed well located along Rte. 1A in Prospect, Maine. This well receives its water primarily in the form of precipitation, which is stored naturally in a large underground aquifer within the communities of Prospect and Stockton Springs. Much of the area surrounding the well is currently undeveloped and is owned by the Searsport Water District. We also own and maintain a smaller backup well and have an emergency interconnection with the Belfast Water District. These backups assure that we can provide water to all of our customers without interruption in service. The emergency interconnection allows both utilities the ability provide each other with water in the event of an emergency or during times of routine maintenance.

The EPA requires that we test several parameters. Here are just a few.

Water Test Results After Treatment

Although many regulated Organic and Inorganic Chemicals were not found, here is a list of chemicals that were detected in the water after treatment.

CONTAMINANT	DATE	RESULTS	MCL	MCLG	SOURCE
Microbiological					
Coliform (TCR) (1)	2015	0 pos	1 pos/month or 5%	0 pos	Naturally present in the environment.
Inorganics					
Barium (ppm)	5/20/2013	0.0027 ppm	2 ppm	2 ppm	Discharge of drilling wastes. Discharge from metal refineries. Erosion of natural deposits.
Chromium	5/20/2013	1.3 ppb	100 ppb	100 ppb	Discharge from steel and pulp mills. Erosion of natural deposits.
Fluoride (2)	5/20/2013	0.2 ppm	4 ppm	4 ppm	Erosion of natural deposits. Water additive which promotes strong teet. Discharge from fertilizer and aluminum factories.
Nitrate (4)	5/5/2015	0.37 ppm	10 ppm	10 ppm	Runoff from fertilizer use. Leaching from septic tanks, sewage. Erosion of natural deposits.
Radionuclides					
Gross Alpha (5)	5/9/2012	4.93 pCi/l	15 pCi/l	0 pCi/l	Erosion of natural deposits.
Radium-228	3/4/2013	0.518 pCi/l	5 pCi/l	0 pCi/l	Erosion of natural deposits.
Uranium-238	5/20/2013	5.8 ppb	30 ppb	0 ppb	Erosion of natural deposits.
Lead/Copper					
Copper 90th% Value (3)	1/1/2013—12/31/2015	0.11 ppm	AL=1.3 ppm	1.3 ppm	Corrosion of household plumbing systems.
Lead 90th% Value (3)	1/1/2013—12/31/2015	2.5 ppb	AL=15 ppb	0 ppb	Corrosion of household plumbing systems.
Disinfectants and Disinfection ByProducts.					
TOTAL TRIHALOMETHANE TTHM (9)	9/4/2013	7.6 ppb	80 ppb	0 ppb	By-product of drinking water chlorination.
Chlorine Residual	2015	RAA 0.37 ppm	MRDL = 4 ppm	MRDLG = 4 ppm	By-Product of drinking water chlorination

Definitions

MCL — Maximum Contaminant Level = The highest level of a contaminant that is allowed in drinking water.

MCLG — Maximum Contaminant Level Goal = The level of a contaminant in drinking water below which there is no known or expected risk to health.

RAA — Running Annual Average = The average of all monthly or quarterly samples for the last year at all sample locations.

LRAA—Locational Running Annual Average = A 12 month rolling average of all monthly or quarterly samples at specific sampling locations. Calculation of the RAA may contain data from the previous year.

AL — Action Level = The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

MRDL — Maximum Residual Disinfectant Level = The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG — Maximum Residual Disinfectant Level Goal = The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

TT — Treatment Technique = A required process intended to reduce the level of a contaminant in drinking water.

UNITS

ppm = parts per million or milligrams per liter (mg/L).

ppb = parts per billion = micrograms per liter (ug/l).

pCi/L = picocuries per liter (a measure of radioactivity).

pos = positive samples.

MFL = million fibers per liter.

Notes:

- 1) Total Coliform Bacteria: Reported as the highest monthly number of positive samples, for water systems that take less than 40 samples per month.
- 2) Fluoride: For those systems that fluoride, fluoride levels must be maintained between 0.5 to 1.2 ppm. The optimum level is 0.7 ppm.
- 3) Lead/Copper: Action levels (AL) are measured at consumer's tap. 90% of the test must be equal to or below the action level.
- 4) Nitrate: Nitrate in drinking water at levels above 10 ppm is a health risk for infants of 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 you should ask advice from your health provider.
- 5) Gross Alpha: Action level over 5 pCi/L requires testing for Radium226 and 228. Action level over 15 pCi/L requires testing for Uranium. Compliance is based on Gross alpha results minus Uranium results = Net Gross Alpha.
- 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. It is also advisable to test indoor air for Radon.
- 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 water. Compliance is based on running annual average.

Secondary Contaminants: We are not required to list these but choose to do so for those who are monitoring sodium levels.

CHLORIDE:	8.0	ppm	5/20/2013	SULFATE:	4.0	ppm	5/20/2013
MAGNESIUM:	3.4	ppm	5/20/2013	ZINC:	0.0029	ppm	5/20/2013
SODIUM:	8.1	ppm	5/20/2013				

All other regulated drinking water contaminants were below detection levels.

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 and can also come from gas stations, urban runoff, and septic systems.
- **Radioactive Contaminants**, which can be naturally-occurring or be the result of oil and gas production and mining activities.

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

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing.

Searsport 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 for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Act Hotline or at: <http://www.epa.gov/safewater/lead>

WAIVER INFORMATION—In 2013, our system was granted a “Synthetic Organics Waiver”. This is a three year exemption from the monitoring/reporting requirements for the following industrial chemical(s): TOXAPHENE/CHLORDANE/PCB, HERBICIDES, CARBAMATE PESTICIDES. This waiver was granted due to the absence of these potential sources of contamination within a half mile radius of the water source.

Violations: No Violations in 2015.

Where Can You Get More Information? - This report is only a summary of activities during the past year. If you have any questions about your water quality, please call (207) 548-2910 during business hours (Mon – Fri between 7:30 a.m. and 3:30 p.m.). For additional information, contact the Maine Department of Human Services Drinking Water Program at (207) 287-2070, the EPA’s Safe Drinking Water Hotline At 1-800-426-4791, the National Center for Disease Control (CDC) at (404) 639-3311, or visit one of the following web sites. USEPA: www.epa.gov/safewater – AWWA: www.awwa.org – Maine DWP: www.medwp.com



Water System Data & Treatment

The Searsport Water District provides drinking water and fire protection to 1157 customers via approximately 32 +/- miles of water mains. We also maintain 3 in-ground concrete reservoirs which have a combined storage capacity of 1.7 million gallons of treated water. Our treatment process is simple yet effective. It includes aeration for Radon and CO2 removal and the addition of Sodium Hypochlorite (bleach). Removal of CO2 helps increase pH thus significantly reducing corrosion within the distribution system. Sodium hypochlorite (bleach) is also added for disinfection. This is all necessary to maintain the quality of your water while meeting all EPA standards. We are also fortunate to have a connection with the Belfast Water District. This interconnection provides both utilities with the ability to supply water to each other in the event of an emergency.

DISTRICT OPERATIONS FOR THE YEAR 2015

The year started off with a significant amount of snow fall and temperatures that were well below normal for a longer period of time than we normally experience. This led to deeper than normal frost conditions which resulted in several frozen water service lines extending from our water mains to customer homes. As a result of the significant snow fall we had to repair a few hydrants that were hit by plow trucks and one that was hit during an automobile accident. We also had to clear snow from the top of our #3 Reservoir in order to reduce the weight load and prevent any potential damage from weight overloading should we have received an early spring rain event.

At the beginning of the year we sold two of our utility trucks, one of which was over 12 years old. We applied those funds towards the purchase of 2 new trucks. One is a new 4-wheel drive dump truck with a plow and the other is a new utility truck. We were able to sell our older vehicles for a total price of \$42,025.00 thus significantly offsetting the costs of the new trucks. We attribute the high resale price of the old trucks to the excellent maintenance and care that our utility crews have performed over the years.

During the year we replaced the 19 year old flow control valve at our pump station with two new VFD (Variable Frequency Drive) units. The old valve was causing significant problems with pumping and needed constant attention. The new VFD units work excellent and have reduced energy costs at our pump station. The total price of the new VFD's was just over \$16,000.00 for the complete purchase and installation. We also replaced, due to a malfunction, the level control indicator unit in our clearwell. The unit was approximately 19 years old and had provided great service throughout those years.

2015 was also the year of inspections. The Maine Drinking Water Program conducted their Sanitary Survey inspection, which they do every three years. Our system was given an outstanding grade and was in compliance with all requirements. It was noted that all of our stations looked as if they were brand new and extremely well maintained. The Maine Department of Labor and Maine Municipal Association also performed safety inspections and found minor deficiencies which were quickly resolved and brought back into compliance.

All required water quality samples were taken throughout the year and passed including lead and copper samples, which is required every three years as part of our reduced monitoring requirement. Our low lead and copper results indicate that the investment we made in our new deep bubble aeration unit back in 2014 is now paying off. This new aeration system has resulted in eliminating the need for Sodium Silicate, which results in a savings of approximately \$6,000.00 per year.

Throughout the system we also performed the following repairs: Installed four new water services and one new fire protection service and replaced a couple of water service lines. Made 23 repairs to water service shut off valves and/or gate valves. Installed and/or repaired 43 water meters and repaired two water leaks in our distribution system.

In 2015, the District pumped a total of 112,212,000 gallons of water. This amount is an increase of 9,822,000 gallons over 2014. Our daily average was 307,430 gallons per day or 213 gallons per minute. This amount is 48.30% of the total daily safe yield based on a calculated safe yield of 636,500 gallons per day. Total water sold to metered customers during 2015 was 60,667,984 gallons. This amount is a decrease of 285,332 gallons over 2014.

In closing, I would like to thank all of our customers for their continued support. Our entire staff works hard to assure that you, our customer, receive what we believe is some of the best water in the State of Maine. Providing you with safe, reliable drinking water 24 hours a day is our number one priority.

We are always ready to serve 24 hours a day 7 days a week. Should you need emergency assistance after hours please call the emergency number listed below. Thanks again for your support.

Sincerely,

Herb Kronholm

Herbert Kronholm, Superintendent
Searsport Water District

Current Contacts at the Searsport Water District

Trustees

William Shorey, Chairman
Bruce Mills, Treasurer
Larry Clark, Clerk

Operators

Herbert Kronholm, Superintendent
Timothy Wilson, Foreman
Adam Clark, Service Technician

Office Staff

Brenda Corbin, Office Mgr.
Kyle Anne Benson, Office Asst.

Phone: (207) 548-2910 Fax: (207) 548-6719 email: info@searsportwater.org or visit our website: www.searsportwater.org

Business hours are Monday – Friday 7:30 a.m. to 3:30 p.m.

In case of an emergency during non business hours please call the Waldo County Dispatch Center @ 1-800-660-3398