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SEARSPORT WATER DISTRICT 2016 WATER QUALITY REPORT



Some of the work that we have performed included renewal of 3 water services at the end of Cottage Street in Searsport (left photo). This included a new section of water main and a new fire hydrant on the end of the line (right photo).

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

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 and/or from your public water utility.

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.

Water Test Results

| CONTAMINANT | DATE | RESULTS | MCL | MCLG | SOURCE |
|---|---------------------|-------------------------------------|----------------------|------------------|--|
| Microbiological | | | | | |
| Coliform (TCR) (1) | 2016 | 0 pos | 1 pos/month or 5% | 0 pos | Naturally present in the environment. |
| Inorganics | | | | | |
| Barium (ppm) | 6/7/2016 | 0.0027 ppm | 2 ppm | 2 ppm | Discharge of drilling wastes. Discharge from metal refineries. Erosion of natural deposits. |
| Chromium | 6/7/2016 | 1.4 ppb | 100 ppb | 100 ppb | Discharge from steel and pulp mills. Erosion of natural deposits. |
| Fluoride (3) | 6/7/2016 | 0.2 ppm | 4 ppm | 4 ppm | Erosion of natural deposits. Water additive which promotes strong teeth. Discharge from fertilizer and aluminum factories. |
| Nitrate (5) | 6/7/2016 | 0.38 ppm | 10 ppm | 10 ppm | Runoff from fertilizer use. Leaching from septic tanks, sewage. Erosion of natural deposits. |
| Radionuclides | | | | | |
| Combined Uranium | 6/7/2016 | 5.3 ppb | 30 ppb | 0 ppb | Erosion of natural deposits. |
| Gross Alpha (7) | 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 (4) | 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) | LRAA (2016) | 7 ppb Range (6.8-6.8 ppb) | 80 ppb | 0 ppb | By-product of drinking water chlorination. |
| Chlorine Residual | 2016 | RAA 0.43 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 LRAA 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).

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

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

pos = positive samples.

MFL = million fibers per liter.

Notes:

- Total Coliform Bacteria: Reported as the highest monthly number of positive samples, for water systems that take less than 40 samples per month.
- E. Coli: E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely-compromised immune systems.
- Fluoride: For those systems that fluoridate, fluoride levels must be maintained between 0.5 to 1.2 ppm. The optimum level is 0.7 ppm.
- Lead/Copper: Action levels (AL) are measured at consumer's tap. 90% of the test must be equal to or below the action level.
- 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.
- Arsenic: While your drinking water may meet EPA's standard for Arsenic, if it contains between 5 and 10 ppb you should know that the standard balances the current understanding of arsenic's possible health effects against the costs of removing it from the drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems. Quarterly compliance is based on running annual average.
- 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.
- 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.
- 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 | 6/7/2016 | SULFATE: | 5.0 | ppm | 6/7/2016 |
| MAGNESIUM: | 3.1 | ppm | 6/7/2016 | ZINC: | 0.0038 | ppm | 6/7/2016 |
| SODIUM: | 5.9 | ppm | 6/7/2016 | IRON: | 0.098 | ppm | 6/7/2016 |

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. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants 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 2016, 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, SEMIVOLATILE ORGANICS. 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 2016.

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 approximately 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 safe drinking water to each other in the event of an emergency.

DISTRICT OPERATIONS FOR THE YEAR 2016

In 2016, we worked on repainting the interior of our pump stations, completing most of them throughout the year. Our 2004 Utility Truck was traded in for a new Ford F350 Utility Truck with Reading Utility Body and a new plow. Our service technicians, Tim Wilson and Adam Clark both passed their State of Maine Class II Water Operator Exams and are now officially licensed to operate the Searsport Water District system. At the pump station, we installed a new surge suppressor, however after several attempts we found that the surge suppressor did not perform as expected and we were able to return the unit for a full refund. In its place, we will try a pressure relief valve to reduce the amount of water hammer that is experienced during a sudden power outage when the pump is running. We also had to purchase and install a new in-line pH analyzer for the pump station. This unit replaced the old in-line pH analyzer that could no longer be repaired.

An application was completed and submitted to the Maine Drinking Water Program for Engineering work associated with new main replacement projects to be completed in 2018 and 2019. The total cost of the main replacement projects is expected to be approximately \$3,000,000.00. We will find out in January or February 2017 if the Engineering portion of the projects will be funded. If so the preliminary engineering portion will be completed in 2017 with applications for construction to be completed in 2018 and 2019. These projects are expected to have minimum impacts on water rates as a result of retirement of one of the district's bonds along with the availability of grant funds from the Maine Drinking Water Program.

In the field, we continued the process of replacing the older water meters with the new radio read meters, and we will continue this project on an annual basis. We also flushed and flow tested the fire hydrants throughout the system and installed five (5) services for new residential and commercial customers. Repairs were made to the splash board on our dam at Half Moon Pond. We installed a new hydrant for flushing purposes at the end of the Harris Road main in Stockton Springs. At that time, we installed a new main line gate valve, eliminated an old valve pit, and upgraded the bleeder line. Another new hydrant was also installed on the end of the Cottage Street main in Searsport. A new main line gate valve and service upgrades were completed at that location as well. We began the task of stripping the old concrete sealant from the exterior surface on Reservoir #3 and replacing it with new concrete sealer. We will complete this project in 2017. We filled a 1.8-million-gallon tank at the Irving Terminal in Searsport for hydro-testing that tank before it could be put back into service. This provided a significant amount of additional revenue for the District.

In 2016, the District pumped a total of 117,116,000 gallons of water. This amount is an increase of 4,924,000 gallons over 2015. Our daily average was 319,989 gallons per day or 222 gallons per minute. This amount is 50.27% 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 2016 was 65,374,600 gallons. This amount is an increase of 4,706,616 gallons over 2015.

The District's major goals are to provide its present and future customers with water that meets the highest standards possible at an affordable price. All of this must be done while still being able to maintain and make necessary upgrades to its water supply system.

The employees of the Searsport Water District work hard to assure that our customers receive what we believe is some of the best water in the State of Maine. Providing safe, reliable drinking water 24 hours a day is our number one priority and could not be done without the continued support of the Trustees.

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

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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