Dear Customer,

The Municipal Services Department — Utilities Division is pleased to provide you with this year’s annual water quality report. The source of water used in this report includes both Canobie Lake and Arlington Pond. The report covers the results of Laboratory testing required by State and Federal regulations through the most recent monitoring compliance period.

The Water Treatment Plant produced over 778 million gallons of water in 2018 for an average daily production of 2.13 million gallons per day which was up slightly from 2.1 million gallons in 2017. We are committed to providing you with the best water quality available and are proud to report that we have met all state and federal requirements during 2018 with no violations. Our daily goal is to provide you with a safe and dependable supply of high quality drinking water at a reasonable price. On behalf of myself and the twelve dedicated members the Utilities Division, I wish to thank rate payers of the town in supporting two of our most precious resources.

Safe drinking water at the tap is imperative and a mission of the Utilities Division.

Sincerely,

Roy E. Sorenson
Municipal Services Director

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Drinking Water Contaminants and Vulnerable Customers

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. All drinking water, including bottled water, may reasonably be expected to contain small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. However, some people may be more vulnerable to contaminants in drinking water than the general population, Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have recently undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly people, pregnant women and infants are examples of people who are at higher risk from drinking water contaminants. People in these groups 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. More information about contaminants and potential health effects including means to reduce the risk from microbial contaminants can be obtained by calling the USEPA safe drinking water hotline at 1-800-426-4791 or by visiting the web site of the USEPA’s Office of Groundwater & Drinking Water at http://www.epa.gov/safewater.

Contact Information and Opportunities for Public Input

The Town of Salem welcomes public input on the programs and activities of all Town Departments. We encourage residents to call or write the members of the Board of Selectmen, Town Manager, or the Municipal Services Department to express their concerns or interest in the operation of the Town’s water utility. Please feel free to contact us with any concerns or questions.

- Municipal Services Department
  (603) 890-2150
- Utilities Division
  (603) 890-2171
- Residential accounts & billing questions:
  (603) 890-2047
- Commercial accounts & billing questions:
  (603) 890-2042
- Water quality questions:
  (603) 890-2171

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Source Water Assessment Summary

DES prepared drinking water source assessment report for all public water systems between 2000 and 2003 in an effort to assess the vulnerability of each of the state’s public water supply sources. Included in the report is a map of each source water protection area, a list of potential and known contamination sources, and a summary of the available protection options. The results of the assessment, prepared on November 1, 2002 are noted below.

- First source Canobie Lake
  EPAID 2051010-001
- Second source Arlington Pond Reservoir
  EPAID 2051010-010

2 susceptibility factors were rated high, 3 were rated medium and 7 were rated low.

Note: This information is over 10 years old and includes information that was current at the time the report was completed. Therefore, some of the ratings might be different if updated to reflect current information. At the present time, DES has no plans to update this data.

The completed Assessment Report is available for review at Canobie Lake Water Treatment Facility. For more information, call the Utilities Division (603) 890-2171, or visit the DES Drinking Water Source Assessment website at http://des.mh.gov/organization/divisions/water/dwgb/dwsspp/dwssap.htm.

Drinking Water Contaminants:

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in water source 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 storm water runoff, industrial or domestic wastewater discharges, oil and gas production and mining or farming.
- **Organic Chemical Contaminants**, including synthetic and volatile organic chemicals, which are the by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff and septic systems.
- **Radioactive Contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.

Lead: 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. This water system is responsible for high quality drinking water, but cannot control the variety of materials used in your plumbing components. When your water has been standing for several hours, you can minimize the potential for lead exposure by flushing cold water; run your tap for at least 30 seconds 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, test 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.

Here are some tips on different ways to save water at home. While these tips may seem pretty obvious, they really can conserve a lot of water.

- Repair all leaky faucets: One leaky faucet can waste up to 15 to 20 gallons a day.
- Run full-load dishwashers to save 15 gallons per load and hot water costs, too. Use the “light-wash” setting if available.
- Water lawn and garden early in the morning when evaporation is the lowest.
- 1 inch of water per week during the summer months is adequate for outdoor landscapes.

This report was generated and formatted by Fred Wallace and Maria Poor.

www.townofsalemnh.org
## Glossary of Technical Terms

**Ppm** - Parts per million or milligrams per liter (mg/L)

**PPB** - Parts per billion or micrograms per liter (ug/L)

**Action Level (AL)** - The concentration of a contaminant which, if exceeded, triggers treatment and/or other requirements which a water system must follow.

**Maximum Contaminant Level (MCL)** - The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology and taking cost into consideration.

**Maximum Contaminant Level Goal (MCLG)** - The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are enforceable standards.

**Maximum Residual Disinfection Level (MRDL)** - 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.

**Maximum Residual Disinfection Goal (MRDLG)** - The level of a drinking water disinfectant below which there is no known or expected risk to health.

**Radiochemistry**

<table>
<thead>
<tr>
<th>Contaminant/ Units of Measure</th>
<th>Level Detected</th>
<th>MCL</th>
<th>MCLG</th>
<th>Typical Source of Substance</th>
<th>Health Effect of Contaminant</th>
<th>Meets Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uranium (pCi/L)</td>
<td>0.05</td>
<td>30</td>
<td>0</td>
<td>Erosion of natural deposits</td>
<td>Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer and kidney toxicity.</td>
<td>YES</td>
</tr>
<tr>
<td>Gross Alpha (pCi/L)</td>
<td>0.50 x/ 1.50</td>
<td>15</td>
<td>0</td>
<td>Erosion of natural deposits</td>
<td>Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.</td>
<td>YES</td>
</tr>
<tr>
<td>Radium 226 (pCi/L)</td>
<td>0.12 x/ 0.26</td>
<td>5</td>
<td>0</td>
<td>Erosion of natural deposits</td>
<td>Some people who drink water containing radium 226 in excess of the MCL over many years may have an increased risk of getting cancer.</td>
<td>YES</td>
</tr>
<tr>
<td>Radium 228 (pCi/L)</td>
<td>0.42 x/ 0.46</td>
<td>5</td>
<td>0</td>
<td>Erosion of natural deposits</td>
<td>Some people who drink water containing radium 228 in excess of the MCL over many years may have an increased risk of getting cancer.</td>
<td>YES</td>
</tr>
<tr>
<td>Combined Radium (pCi/L)</td>
<td>0.54 x/ 0.53</td>
<td>5</td>
<td>0</td>
<td>Erosion of natural deposits</td>
<td>Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.</td>
<td>YES</td>
</tr>
</tbody>
</table>

### Inorganic

- **Hardness (mg/L)**: 39.65 N/A N/A - Naturally present in the environment. There does not appear to be any convincing evidence that water hardness causes adverse health effects in humans. The hardness of water is measured in milligrams per liter (mg/L) typically, the water produced by Salem Water is considered “slightly hard.”

- **Sodium (mg/L)**: 51 N/A N/A - Runoff from road salt. At present there are no health based standards for Sodium in EPA’s Safe Drinking Water Act.

- **Barium (mg/L)**: 0.0234 2.0 2.0 - Corrosion of household plumbing systems; erosion of natural deposits. Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.

- **Lead (mg/L)**: 0.01046 Al = 0.015 0 - Corrosion of household plumbing systems; erosion of natural deposits. Lead in drinking water can also cause a variety of adverse health effects. In babies and children, exposure to lead in drinking water above the action level can result in delays in physical and mental development, along with slight deficits in attention span and learning abilities. In adults, it can cause increases in blood pressure. Adults who drink this water over many years could develop kidney problems or high blood pressure.

- **Copper (mg/L)**: 0.0018 Al = 1.3 1.3 - Corrosion of household plumbing systems; erosion of natural deposits. Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson’s Disease should consult their personal doctor.

### Nitrate

- **Nitrate (mg/L)**: 0.25 10 10 - Runoff from fertilizer use; leaching from septic tank; sewage; erosion of natural deposits. (5 ppm – 10 ppm nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than 6 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 for advice from your health care provider. (Above 10 ppm) Infants below the age of 6 months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.

### Nitrite

- **Nitrite (mg/L)**: 0 1 1 - Runoff from fertilizer use; leaching from septic tank; sewage; erosion of natural deposits. Infants below the age of 6 months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.

### Chlorine

- **Chlorine (mg/L)**: 1.35 4 (MRDL) 4.0 (MRDLG) - Water additive used to control micro-organisms. Drinking chlorinated water for 15 years or longer, has been officially linked to an increase in incidence of colon cancer.

### pH

- **pH**: 8.4 N/A N/A - Acidity or low pH of drinking water is usually a result of natural geological conditions at the site, possibly compounded by acid rain. The pH of drinking water is not a health concern.

### Organic

- **Total Trihalomethane (TTTHM) (ppb)**: 37.06 annual avg 80 N/A - By-product of drinking water disinfection. Some people who drink water containing chlorinated hydrocarbons in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increase of getting cancer.

- **Halocarbon (HAA5) (ppb)**: 1.05 annual avg 60 N/A - By-product of drinking water disinfection. Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increase of getting cancer.

### Semi-Volatiles

- **Bio- (2-ethylhexyl) phthalate (ppb)**: 0 400 400 - Discharge from rubber and chemical factories. Low systemic toxicity, but ingestion of large doses cause gastrointestinal irritation, central nervous system depression, coma and hypotension.

### Microbiological

- **Turbidity (NTU)**: 0.1243 TT N/A - Soil runoff. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, associated headaches.

- **Total Organic Carbon (TOC) (mg/L)**: 2.55 TT N/A - Naturally present in water. Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver, or kidney problems, or nervous system effects, and may lead to an increase in risk of getting cancer.

- **Total Coliform Bacteria**: <40 sample >1 is positive 0 - Naturally present in water. Coliforms are bacteria that are naturally present and are used as an indicator that other; poten- tially harmful, bacteria may be present.

### EPA requires monitoring of over 80 drinking water contaminants. Those contaminants listed in the table above are the only contaminants detected in your drinking water.