



ANNUAL  
WATER  
QUALITY  
REPORT

*Water testing performed in 2005*

*Proudly Presented By:*  
BIDDEFORD AND SACO  
WATER COMPANY

PWS ID#: ME0090170

## Continuing Our Commitment

We proudly present our annual water quality report. This edition covers all testing completed from January through December 2005. We are pleased to tell you that our compliance with all state and federal drinking water laws remains exemplary. We are committed to delivering drinking water of the highest quality. To that end, we remain vigilant in meeting the challenges of source water protection, water conservation, and community education while continuing to serve the needs of all of our water users.

For more information about this report, or for any questions relating to your drinking water, please call either Norm Lavigne, Treatment Manager, at (207) 282-9141 or Jerry Mansfield, President of our Company, at (207) 282-1543. Public speakers for community meetings may be arranged by calling (207) 282-9141.



## Energy Costs Put Pressure on Water Rates

The big run up in energy costs that we've all seen in the prices we have to pay for electricity, heating oil, propane and gasoline have driven up our operating costs, both in the direct costs we have to pay for these items and in the pass-through costs for these items from our suppliers.

Unfortunately, the resulting impact on our financial viability of these items has been quick to materialize and intense, making it possible that we will have to apply for an increase in rates relatively soon. We will keep you informed of any decisions we make on rates. You can be assured that any rate increase we ask for will be limited to the minimum necessary to maintain quality service. As to timing, if we do decide to proceed, it is unlikely that any increase would become effective sooner than sometime either late in 2006 or early in 2007.

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## Information on the Internet

The U.S. EPA Office of Water ([www.epa.gov/watrhome](http://www.epa.gov/watrhome)) and the Centers for Disease Control and Prevention ([www.cdc.gov](http://www.cdc.gov)) Web sites provide a substantial amount of information on many issues relating to water resources, water conservation and public health. Also, the Maine Drinking Water Program has a Web site ([www.maine.gov/dhhs/eng/water/](http://www.maine.gov/dhhs/eng/water/)) that provides complete and current information on water issues in our own state. Finally, you can visit our Web site ([www.biddefordsacowater.com](http://www.biddefordsacowater.com)), where you can learn more about current operations and the history of our company. If you do not have Internet access, remember that all public libraries in our area offer free Internet access to all.

## Your Source of Water

The Saco River is our sole source of water. It begins as a small stream high in the White Mountains of New Hampshire and flows through about 124 miles of New Hampshire and Maine forest and farmland before reaching our treatment plant. The Saco River watershed actually covers an area of roughly 1,700 square miles in central New Hampshire and southwestern Maine. We are fortunate that the Saco River is one of the cleanest major rivers in Maine and New England, due in part to the lack of any substantial industrial development along its shoreline. In fact, the majority of the Saco River in Maine has been given the cleanest rating possible for water. Demand is great for high quality drinking water. We provide an average of more than 5 million gallons of water every day to a population of between 45,000 and 200,000 people (depending on the time of year). To learn more about our watershed on the Internet, go to U.S. EPA's Locate Your Watershed at [http://cfpub.epa.gov/surf/huc.cfm?huc\\_code=01060002](http://cfpub.epa.gov/surf/huc.cfm?huc_code=01060002). Additional information on the Saco River watershed and land use regulations in place for the watershed can also be obtained through the Saco River Corridor Commission's Internet site at [www.sccc-maine.org](http://www.sccc-maine.org), or by visiting our office.

A national source water assessment program was mandated by the 1996 amendments to the Safe Drinking Water Act. Once complete, the assessment program will provide an overview of all public water supply sources nationwide. In the State of Maine, the Drinking Water Program (DWP) coordinated the assessment program, which was completed in May 2003. The program identified future growth in source protection areas as the dominant risk factor threatening public water supplies. For more information, please visit the DWP's Web site at [www.maine.gov/dhhs/eng/water/](http://www.maine.gov/dhhs/eng/water/).

## Conservation Can Lower Your Water and Sewer Bills

It's hard to believe, but the average single family home in our service area uses approximately 80 gallons per person per day. The most important tip for homeowners who want to reduce their water use is to install a low-flow toilet. It has been reported that a family of three can save nearly 20,000 gallons of water per year by replacing a five-gallon per flush toilet with a new standard 1.6 gallon per flush model. As a somewhat less effective but much less costly alternative to completely replacing the toilet, a toilet dam can be installed that will reduce the volume of water required for each use. We have a supply of conservation kits available that include a toilet dam as well as a low-flow showerhead and two faucet aerators. Installation of the items in the kit can help reduce water use in your home to something well below that 80 gallons per person per day average. The cost for each kit picked up in our office is \$8. If you can't come to our office, we would be glad to mail one or more kits out to you; postage and handling costs are \$4 for the first kit and \$1 for each additional kit in the same request. Simply send us a check for the number of kits you want and we will be pleased to mail them along to you. The kit will pay for itself by lowering both your water and sewer bills; plus by installing the various water saving devices included, you will be helping to conserve one of southern Maine's most valuable resources, the Saco River.

## Substances That Might Be in Drinking Water

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, possibly including radioactive material, and can pick up substances resulting from human or animal activity.

Under the Safe Drinking Water Act (SDWA), the U.S. Environmental Protection Agency (U.S. EPA) protects the public health by setting national limits for hundreds of these substances in public drinking water supplies. Similarly, U.S. Food and Drug Administration (U.S. FDA) regulations establish limits for these same substances in bottled water in order to provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some substances. The presence of these substances does not necessarily indicate that the water poses a health risk. Substances 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, or wildlife;

**Inorganic Contaminants**, such as salts and metals, which can be naturally occurring or may 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 which may also come from gas stations, urban stormwater runoff, and septic systems;

**Radioactive Contaminants**, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.



## How Your Water Is Treated and Purified

The treatment process consists of a series of steps. First, raw water is drawn from the Saco River and pumped directly to a mixing tank at our treatment facility where alum, lime and polymer are added. The addition of these chemicals causes small particles to adhere to one another, making them heavy enough to settle into a basin from which sediment is removed. After settling, chlorine and polymer are added for disinfection and turbidity removal, respectively (turbidity is a common measure of the clarity of water). The water is then filtered through layers of fine coal and silicate sand. As smaller, suspended particles are removed, turbidity disappears and clear water emerges. Chlorine is added again at this point as a precaution against any bacteria that may still be present. We carefully monitor the amount of chlorine, adding the lowest quantity necessary to protect the safety of your water without compromising taste. Finally, lime (used to adjust the final pH of the water), fluoride (used to prevent tooth decay), a corrosion inhibitor (used to protect distribution system pipes) and ammonia (used to reduce the formation of THMs, a common by-product of disinfection) are added before the water is pumped to sanitized reservoirs and water towers, and into your home or business.

Our Saco River treatment facility has been awarded the Director's Certificate by the Partnership for Safe Water in recognition of our exceptional water quality and facility operations. We submit our facility to annual peer review under this program. Our treatment facility is among an elite group of only 20 nationwide to have been awarded the Director's Certificate for eight consecutive years!

## Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised people such as individuals with cancer undergoing chemotherapy, those who have undergone an organ transplant, those with HIV/AIDS or other immune system disorders, as well as some of the elderly and very young may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791.

## Table Definitions

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

**MCL (Maximum Contaminant Level):** 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.

**MCLG (Maximum Contaminant Level Goal):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

**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 contamination.

**NA:** Not applicable

**NTU (Nephelometric Turbidity Units):** Measurement of the clarity, or turbidity, of water.

**pCi/L (picocuries per liter):** A measure of radioactivity.

**ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).

**ppm (parts per million):** One part substance per million parts water (or milligrams per liter).

**removal ratio:** A ratio between the percentage of a substance actually removed to the percentage of the substance required to be removed.

**TT (Treatment Technique):** A required process intended to reduce the level of a contaminant in drinking water.

## What's in My Water?

We are pleased to report that during the past year, the water delivered to your home or business complied with all state and federal drinking water requirements. Each year we analyze more than 70,000 water samples for bacteria, turbidity, inorganic contaminants, lead and copper, nitrate, volatile organic contaminants, total trihalomethanes, and synthetic organic contaminants. For your information, we have compiled the table below to show which substances were detected in our drinking water during 2005. Although all of the substances listed below are under the Maximum Contaminant Level (MCL) set by U.S. EPA, we feel it is important that you know exactly what was detected and how much of the substance was present in the water. None of the 120 other substances regulated by the U.S. EPA were detected in our water. (The state requires us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.)

### REGULATED SUBSTANCES

SUBSTANCE (UNITS)	YEAR SAMPLED	MCL (MRDL)	MCLG (MRDLG)	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
<b>Alpha emitters</b> (pCi/L)	2002	15	0	0.09	NA	No	Erosion of natural deposits
<b>Barium</b> (ppm)	2005	2	2	0.004	NA	No	Erosion of natural deposits
<b>Chloramines</b> (ppm)	2005	(4)	(4)	1.27	0.03-1.9	No	Water additive used to control microbes
<b>Fluoride</b> (ppm)	2005	4	4	1.06	0.58-1.22	No	Erosion of natural deposits; Water additive which promotes strong teeth
<b>HAAs [Haloacetic Acids]</b> (ppb)	2005	60	NA	31.8	17-44	No	By-product of drinking water disinfection
<b>Nitrate</b> (ppm)	2005	10	10	0.1	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
<b>Total Coliform Bacteria</b> (% positive samples)	2005	5% positive monthly samples	0	2.3	NA	No	Naturally present in the environment
<b>Total Organic Carbon</b> (removal ratio)	2005	TT	NA	1.40	1.20-1.66	No	Naturally present in the environment
<b>TTHMs [Total Trihalomethanes]</b> (ppb)	2005	80	NA	35.3	16-53	No	By-product of drinking water disinfection
<b>Turbidity</b> (NTU) <sup>1</sup>	2005	TT	NA	0.05	0.02-0.12	No	Soil runoff

Tap water samples were collected for lead and copper analyses from 30 homes throughout the service area

SUBSTANCE (UNITS)	YEAR SAMPLED	ACTION LEVEL	MCLG	AMOUNT DETECTED (90TH% TILE)	HOMES ABOVE ACTION LEVEL	VIOLATION	TYPICAL SOURCE
<b>Copper</b> (ppm)	2005	1.3	1.3	0.07	0	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
<b>Lead</b> (ppb)	2005	15	0	7	1	No	Corrosion of household plumbing systems; Erosion of natural deposits

### UNREGULATED SUBSTANCES

SUBSTANCE (UNITS)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
<b>Hardness</b> (ppm)	2005	20.0	NA	Erosion of natural deposits
<b>Sodium</b> (ppm)	2005	7.5	NA	Erosion of natural deposits
<b>Sulfate</b> (ppm)	2005	11.0	NA	Erosion of natural deposits

<sup>1</sup> Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. During the reporting year, 100% of all samples taken to measure turbidity met water quality standards.