



2002 WATER QUALITY REPORT

Proudly Presented by

**BRUNSWICK AND TOPSHAM
WATER DISTRICT**

PWS ID#: ME0090260

Continuing Our Commitment

The Brunswick and Topsham Water District is pleased to present you with our 2002 Annual Drinking Water Quality Report. This report, a requirement of the 1996 amendments to the Safe Drinking Water Act, is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the quality of your water and protect our water resources.



If you have any questions or comments about this report or any other aspect of our operations, please contact Norman J. Cyr, General Superintendent, at 729-9956 (phone), 725-6470 (fax), or normcyr@blazenetme.net.

Working Hard for You

Under the Safe Drinking Water Act (SDWA), the U.S. Environmental Protection Agency (U.S. EPA) is responsible for setting national limits for hundreds of substances in drinking water and also specifies various treatments that water systems must use to remove these substances. Each system continually monitors for these substances and reports their findings to the U.S. EPA. The U.S. EPA uses these data to ensure that consumers are receiving clean water.

This publication conforms to the regulation under SDWA requiring water utilities to provide detailed water quality information to each of their customers annually. We are committed to providing you with this information about your water supply because customers who are well informed are our best allies in supporting improvements necessary to maintain the highest drinking water standards.

How Is My Water Treated and Purified?

We add sodium hypochlorite (chlorine) at all of our sources to protect against bacteriological contaminants and fluoride to promote dental health. We also add sodium-zinc polyphosphate to inhibit corrosion of the distribution system piping and to reduce lead and copper corrosion of internal plumbing systems. The water from the Jackson and Taylor wells is filtered to remove iron and manganese caused by erosion of natural deposits in the sand and gravel aquifer. The pH of the water from the Jordan Avenue well field is adjusted using aeration. Sodium hydroxide is also available for pH adjustment.

Information on the Internet

The U.S. EPA's Office of Water (www.epa.gov/watrhome) and the Centers for Disease Control and Prevention (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.state.me.us/dhs/eng/water/) that provides complete and current information on water issues in our own state.



Community Participation

We want our valued customers to be informed about their utility. Feel free to attend our monthly board meetings held on the second Monday of each month at 7:00 p.m. at our office located at 266 River Road in Topsham.

Where Does My Water Come From?

Our sources of supply are all groundwater taken from various wells, as follows:

- Jackson Station, Topsham - 1-18" diameter well
- Jordan Avenue Station, Brunswick - 138-2.5" diameter wells
- Taylor Station, Brunswick - 1-18" diameter well and 1-12" diameter well
- Williams Station, Brunswick - 1-12" diameter well

Our water distribution system includes approximately 100 miles of water main, three storage tanks, 6,200 services, and 800 private and public hydrants. In 2002, we delivered an average of approximately 2.1 million gallons of water per day to our customers.

State-issued Waivers

The State of Maine Department of Human Services can grant variances such that Maximum Contaminant Level or treatment technique requirements do not have to be met under certain conditions. We have not requested or received any variances.

The state can also grant testing waivers to water utilities who have shown negative test results of contaminants for at least three consecutive years. The watershed must have no previous production, storage, disposal, or transportation of such contaminants or materials that may cause these contaminants. The following is a list of waivers that have been granted to the Brunswick and Topsham Water District until the year 2004 by the State of Maine Department of Human Services:

Jackson Station and Taylor/Williams Station - Carbamate Pesticide Screen, Herbicide Screen, Pesticide Screen, Semi-Volatile Organics Screen

Jordan Avenue Station - No Waivers Granted

System Improvements

We are continually working to improve our capabilities to provide high quality water to every tap. New filters for iron and manganese removal were installed at our Jackson Station in 1991 and at our Taylor Station in 2000. Construction of our new Jordan Avenue pumping station and treatment facility was completed in the summer of 2001. This new station will help to ensure that we can reliably meet water system demands. The new station includes treatment systems to adjust the pH of the water to minimize corrosion of pipes and internal plumbing systems.

We are currently developing additional wells at our Jackson and Taylor stations. These new supplies will provide a backup source of supply in the event of equipment failures. They will also provide us with more operational flexibility in terms of performing regular maintenance on our wells.



Naturally Occurring Bacteria

The simple fact is bacteria and other microorganisms inhabit our world. They can be found all around us: in our food; on our skin; in our bodies; and, in the air, soil and water. Some are harmful to us and some are not. Coliform bacteria are common in the environment and are generally not harmful themselves. The presence of this bacterial form in drinking water is a concern because it indicates that the water may be contaminated with other organisms that can cause disease. Throughout the year, we tested 180 samples (15 samples every month) for coliform bacteria. In that time, none of the samples came back positive for the bacteria. Federal regulations now require that public water testing positive for coliform bacteria must be further analyzed for fecal coliform bacteria. Fecal coliform are present only in human and animal waste. Because these bacteria can cause illness, it is unacceptable for fecal coliform to be present in water at any concentration. Our tests indicate no fecal coliform is present in our water.

Radon

The highest radon level for our system was 1,736 pCi/L, taken in March 2002. Radon is found in soil and bedrock formations and is a water soluble, gaseous by-product of uranium decay. Most radon is released to the air moments after turning on the tap. Only about 1–2% of radon in the air comes from drinking water. The U.S. EPA is proposing setting lower standards for public drinking water, between 300 and 4,000 pCi/L. The State of Maine currently recommends follow-up action (or treatment) for radon levels in drinking water above 20,000 pCi/L. Breathing radon released to air from tap water increases the risk of lung cancer over the course of your lifetime. If you wish to seek more information about radon, please contact this office, call (800) SOS-RADON, or contact the State Drinking Water Program and request a "Radon Fact Sheet."



Water Quality

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

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 can acquire naturally occurring minerals - in some cases radioactive material and substances resulting from the presence of animals or from human activity. Substances that may be present in source water include:

Microbial Contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife;

Inorganic Contaminants, such as salts and metals, that 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 that 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 byproducts of industrial processes and petroleum production, and may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants that 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.



Sensitive Sub-populations

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, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. U.S.EPA and 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.

Water Conservation Tips

Water conservation measures are an important first step in protecting our water supply. Such measures not only save the supply of our source water, but can also save you money by reducing your water bill. Here are a few suggestions:

Conserving water inside your home:

- Fix leaking faucets, pipes, toilets, etc.
- Replace old fixtures; install water-saving devices in faucets, toilets and appliances.
- Wash only full loads of laundry.
- Do not use the toilet for trash disposal.
- Take shorter showers.
- Turn off water while shaving or brushing teeth.
- Soak dishes before washing.
- Run the dishwasher only when full.

Conserving water outdoors:

- Water the lawn and garden in the early morning or evening.
- Use mulch around plants and shrubs.
- Repair leaks in faucets and hoses.
- Use water-saving nozzles.

Information on other ways that you can help conserve water can be found at www.epa.gov/safewater/publicoutreach/index.html.



What's in My Water?

The Brunswick and Topsham Water District routinely monitors for constituents in your drinking water according to federal and state laws. The following table shows any detection resulting from our monitoring for the period of January 1 to December 31, 2002. Regulated contaminants that were below detectable levels are not shown. If no tests were required for a given contaminant in 2002, the law requires that the most recent test results be included here. Test results that are more than five years old are not allowed.

REGULATED SUBSTANCES							
SUBSTANCE (UNITS)	YEAR SAMPLED	MCL	MCLG	AMOUNT DETECTED	RANGE (LOW-HIGH)	VIOLATION	TYPICAL SOURCE
Alpha emitters (pCi/L)	2002	15	0	2.91	NA	No	Erosion of natural deposits
Arsenic (ppb) ¹	2002	10	0	3.9	NA	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2002	2	2	0.00065	NA	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chromium (ppb)	2002	100	100	0.6	NA	No	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride (ppm) ²	2002	4	4	1.62	0.98-1.47	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate (ppm)	2002	10	10	1.89	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Radium 228 (pCi/L)	2002	5	0	0.37	NA	No	Erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2002	80	0	75.8	38.2-95.2	No	By-product of drinking water disinfection

Tap water samples were collected for lead and copper analyses from 32 homes throughout the service area

SUBSTANCE (UNITS)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH% TILE)	NO. OF HOMES ABOVE AL	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2002	1.3	1.3	0.46	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2002	15	0	3	0	No	Corrosion of household plumbing systems; Erosion of natural deposits

¹These arsenic values are effective January 23, 2006. Until then, the MCL is 50 ppb and there is no MCLG.

²Fluoride levels must be maintained between 1–2 ppm for those systems that fluoridate water.



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.

NA: Not applicable

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).