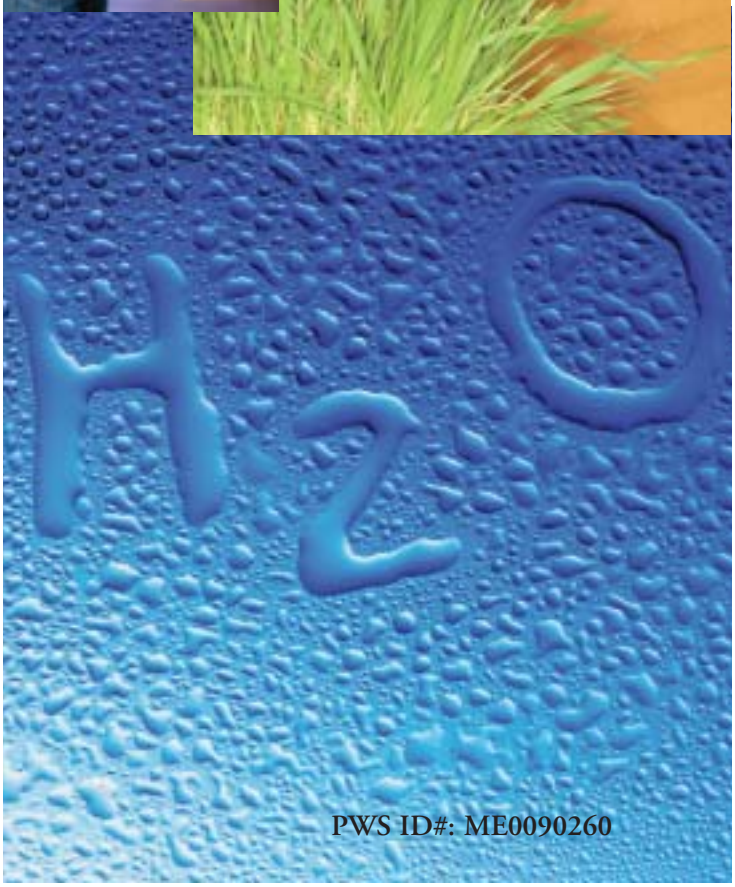
Annual Water Quality Report

Proudly Presented By:

Brunswick and Topsham Water District



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Continuing Our Commitment

The Brunswick and Topsham Water District is pleased to present you with our 2004 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 of 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 (207) 729-9956 (phone), (207) 725-6471 (fax), or normcyr@blazenetme.net (email).

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 5:30 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: one 18-inch-diameter well
- Jordan Avenue Station, Brunswick: 138 2.5-inch-diameter wells
- Taylor Station, Brunswick: one 18-inch-diameter well and one 12-inch-diameter well
- Williams Station, Brunswick: one 12-inch-diameter well

Our water distribution system includes approximately 100 miles of water main, three storage tanks, 6,400 services, and 850 private and public hydrants. In 2004 we delivered an average of approximately 2.1 million gallons of water per day to our customers.

Contamination from Cross-Connections

Cross-connections that could contaminate drinking water distribution lines are a major concern. A cross-connection is formed at any point where a drinking water line connects to equipment (boilers), systems containing chemicals (air conditioning systems, fire sprinkler systems, irrigation systems) or water sources of questionable quality. Cross-connection contamination can occur when the pressure in the equipment or system is greater than the pressure inside the drinking water line (backpressure). Contamination can also occur when the pressure in the drinking water line drops due to fairly routine occurrences (main breaks, heavy water demand), causing contaminants to be sucked out from the equipment and into the drinking water line (backsiphonage).

Outside water taps and garden hoses tend to be the most common sources of cross-connection contamination at home. The garden hose creates a hazard when submerged in a swimming pool or when attached to a chemical sprayer for weed killing. Garden hoses that are left lying on the ground may be contaminated by fertilizers, cesspools or garden chemicals. Improperly installed valves in your toilet could also be a source of cross-connection contamination.

Community water supplies are continually jeopardized by cross-connections unless appropriate valves, known as backflow prevention devices, are installed and maintained. We have surveyed all industrial, commercial, and institutional facilities in our service area to make sure that all potential cross-connections are identified and eliminated or protected by a backflow preventer. We also inspect and test each backflow preventer to make sure that it is providing maximum protection.

For more information, visit the Web site of the American Backflow Prevention Association (www.abpa.org) for a discussion on current issues.

How Is My Water Treated and Purified?

At all of our sources we add sodium hypochlorite (chlorine) 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.

Source Water Assessment Program

In 1996, amendments to the federal Safe Drinking Water Act (SDWA) required each state to complete assessments for each public water supply source. The assessments identify and describe conditions that may threaten the quality of water available to consumers. These assessments are the focus of Maine's Source Water Assessment Program (SWAP). The State of Maine Drinking Water Program (DWP) completed its SWAP report for the District in 2003. The report was sent to municipal officials in Brunswick and Topsham. The report can be viewed by contacting the Brunswick and Topsham Water District.

The responsibility for protecting public water supply sources from contamination falls largely to the public water suppliers. But municipal officials, not water suppliers, make land-use decisions. This means that protection of public water supplies requires a partnership between water suppliers, state and federal regulators, local landowners, and municipalities.

Categories of risk evaluation for public water sources include well type and site geology; existing and future risk of acute contamination; and existing and future risk of chronic contamination. The following is a summary of the assessment provided by the DWP. If you have any questions or comments, feel free to contact the Brunswick and Topsham Water District.

The DWP has assessed the risk of all our water sources, based on type and geology, to be at the moderate level. The only practical means of reducing the risk is through replacement of the source. Acute contaminants, such as pathogens, nitrates, and nitrites, are those that can make people sick immediately after being consumed. The DWP has assessed all of our sources to have low risk for existing and future acute contamination. Chronic contaminants are those that pose a health risk if consumed over many years. The DWP has assessed our sources to have, on average, moderate risk for existing and future chronic contamination.

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. The new station ensures that we can reliably meet water system demands. The new station includes treatment systems to adjust the pH of the water, which minimizes corrosion of pipe and internal plumbing systems.

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

Just recently, we began construction on a new water storage tank to be located at the existing site in Topsham. Demolition of the 93-year-old tank is almost complete and the new 4-million-gallon concrete tank should be completed and on-line by the end of 2005.

Sampling Waivers

The State of Maine Department of Human Services can grant waivers 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 that 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 Topshm Water District through the year 2004 by the State of Maine Department of Human Services: Jackson and Taylor/Williams Station - Carbamate Pesticide Screen, Herbicide Screen, Pesticide Screen, Semi-Volatile Organics Screen; Jordan Avenue Station - no waivers granted.

Radon

The highest radon level for our system was 587 picocuries per liter (pCi/L), taken in December 2004. 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% to 2% of the radon in 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 call (800) SOS-RADON, or contact the State Drinking Water Program and request a Radon Fact Sheet.

Substances That Might Be in Drinking Water

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, 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.

Sensitive 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. 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.

New Arsenic Regulation

Arsenic contamination of drinking water sources may result from either natural or human activities. Volcanic activity, erosion of rocks and minerals, and forest fires are natural sources that can release arsenic into the environment. Although about 90% of the arsenic used by industry is for wood preservatives, it is also used in paints, drugs, dyes, soaps, metals, and semiconductors. Agricultural applications, mining, and smelting also contribute to arsenic releases. Arsenic is usually found in the environment combined with other elements such as oxygen, chlorine, and sulfur (inorganic arsenic); or combined with carbon and hydrogen (organic arsenic). Organic forms are usually less harmful than inorganic forms.

Low levels of arsenic are naturally present in water—about 2 parts arsenic per billion parts of water (ppb). Thus, you normally take in small amounts of arsenic in the water you drink. Some areas of the country have unusually high natural levels of arsenic in rock, which can lead to unusually high levels of arsenic in water.

In January 2001, the U.S. EPA lowered the arsenic Maximum Contaminant Level (MCL) from 50 to 10 ppb in response to new and compelling research linking high arsenic levels in drinking water with certain forms of cancer. All water utilities are required to implement this new MCL starting in 2006.

Removing arsenic from drinking water is a costly procedure but well worth the expenditure considering the health benefits. For a more complete discussion visit the U.S. EPA's arsenic Web site at www.epa.gov/safewater/arsenic.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, 2004. Regulated contaminants that were below detectable levels are not shown. If no tests were required for a given contaminant in 2004, 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 [1] (pCi/L)	2004	15	0	0.21	NA	No	Erosion of natural deposits
Arsenic (ppb)	2004	10 [2]	0 [2]	6	NA	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2004	2	2	0.0045	NA	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chromium (ppb)	2004	100	100	6	NA	No	Discharge from steel and pulp mills; Erosion of natural deposits
Combined radium (pCi/L)	2002	5	0	0.37	NA	No	Erosion of natural deposits
Fluoride [3] (ppm)	2004	4	4	1.48	NA	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs] (ppb)	2004	60	0	40	NA	No	By-product of drinking water disinfection
Nitrate (ppm)	2004	10	10	1.78	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2004	80	0	50	NA	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	ACTION LEVEL	MCLG	AMOUNT DETECTED (90TH%TILE)	HOMES ABOVE ACTION LEVEL	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2001	1.3	1.3	0.46	0	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb)	2001	15	0	3	0	No	Corrosion of household plumbing systems; Erosion of natural deposits

Footnotes

[1] Action Level over 5 pCi/L requires testing for radium. Action Level over 15 pCi/L requires testing for radon and uranium.

[2] These arsenic values were adopted in October 2001, and will be effective January 23, 2006. Until then, the MCL is 50 ppb and there is no MCLG.

[3] Fluoride levels must be maintained between 1-2 ppm for those water systems that fluoridate the 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).