

Special Recognition

In 2000, the City of Portsmouth Water Division received an award from New England Water Works Association for having the best Consumer Confidence Report (this water quality report) of all medium-sized water systems in New England.

Community Participation

You are invited to express your opinions about your drinking water at any regularly scheduled City Council meeting. Meetings are held twice each month, on Monday evenings at 7 p.m., at Portsmouth City Hall, 1 Junkins Ave., Portsmouth, NH. Call (603) 431-2000 for the date of the next meeting.



Information on the Internet

The City of Portsmouth welcomes you to visit our Web site (www.cityofportsmouth.com) for

information on all city departments and programs. The U.S. EPA Office of Water (www.epa.gov/watrhme) 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 New Hampshire Department of Environmental Services hosts a Web site (www.des.state.nh.us) that has complete and current information on water in our own state.



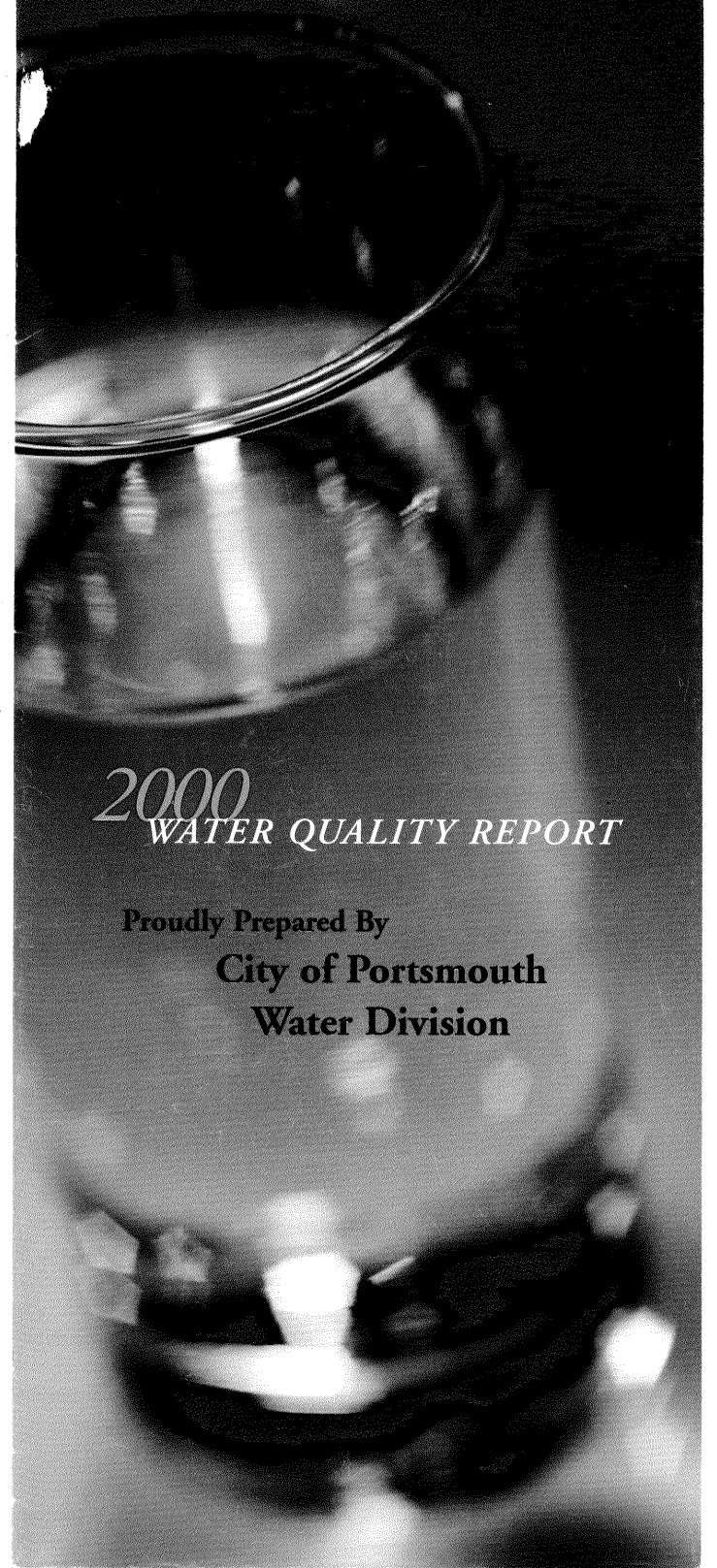
Questions?

Call U.S. EPA's Safe Drinking Water Hotline at 1-800-426-4791

Portsmouth Water Division
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Portsmouth, NH 03801-5356

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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, or did better than, all state and federal drinking water requirements. For your information, we have compiled a list in the table below showing what substances were detected in our drinking water during 2000. 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.

REGULATED SUBSTANCES

SUBSTANCE (UNITS)	YEAR SAMPLED	MCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Arsenic (ppb)	2000	50	NA	8	1 - 8	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2000	2	2	0.013	0.005 - 0.013	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Nitrate (ppm)	2000	10	10	2.61	0.1 - 2.61	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total trihalomethanes] (ppb) ¹	2000	100	NA	89	40 - 109	No	By-product of drinking water chlorination
Turbidity (NTU) ²	2000	TT	NA	3.0	0.14 - 3.0	No	Soil runoff

UNREGULATED SUBSTANCES³

SUBSTANCE (UNITS)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Bromodichloromethane (ppb)	2000	3.4	2.4 - 5.1	By-product of drinking water chlorination
Chloroform (ppb)	2000	21	1 - 80	By-product of drinking water chlorination

¹Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their livers, kidneys, or central nervous system, and may have an increased risk of getting cancer.

²Turbidity is a measure of the cloudiness of water. We monitor it because it is a good indicator of the effectiveness of our filtration system. The turbidity regulation requires that filtered water shall be less than or equal to 0.5 NTU in 95% of the measurements taken each month and shall not exceed 5.0 NTU at any time. During the reporting year, a minimum of 96% of all samples taken to measure turbidity met water quality standards.

³Unregulated substances do not have MCLs or MCLGs. Monitoring of these substances helps EPA to determine where certain contaminants occur and whether the agency needs to regulate those contaminants.

Substances Expected to 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 and, in some cases, radioactive material, and can pick up 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, 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 production, and can also come from gas stations, urban stormwater runoff, and septic systems;

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

In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. 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 contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (800-426-4791).

Water Conservation Program

The Portsmouth Water Division has started a Water Conservation Program to help reduce the demand on our water sources - wells and reservoir. An effective water conservation program has delayed the need for the installation of additional sources of drinking water in other communities. We think it may help us as well. For more information, please call (603) 427-1530. Customers can start by doing the following:

- Repairing all faucet leaks at their homes and businesses
- Run your dishwasher only when full
- Plan and design your garden for efficient watering
- Place mulch around trees, plants and shrubs to retain moisture
- Don't leave the water running when you brush your teeth

Water System Master Plan

Portsmouth Water Division is currently working with an engineering firm on the Water System Master Plan. This plan will serve as a tool to guide future improvements and growth in the Portsmouth Water System. It will allow the City to program capital improvements over the next 20 years. One of the many benefits of this master plan is a mathematical computer model of the water system. This model will be used to assess the effects of new industrial, residential and com-

Lead & Copper Corrosion Control

Lead and copper were not detected in the drinking water sources (wells, and treatment plant). In 1992, the EPA instituted a law that required comprehensive testing for lead and copper at the home faucet. In 1992, the Portsmouth Water Division conducted a sampling program, which indicated a potential for corrosion of home plumbing fixtures. Lead and copper detected resulted from sampling houses with sweat copper fittings that use tin/lead solder in the joints. Lead-based solder was outlawed in 1986. What you can do: In the morning flush the water for 30 seconds prior to use. A trial program of adding phosphate to our water in 1997 proved successful in controlling corrosion in the water at the home faucet. This will also help to reduce the occurrence of rusty water in our system. Full implementation of corrosion control is presently under way.

Spinney Road Water Tank Project

Our water system has grown to the point of needing more water storage. The master plan identified a need to upgrade the Spinney Road Water Tank from 500,000 gallons to 1,000,000 gallons for better flows and fire protection. After bids were reviewed, it was determined economically feasible to build a composite water tank. This tank has a concrete

DEFINITIONS

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment 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.

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 allow for a margin of safety.

NA: Not applicable.

Nephelometric Turbidity Units (NTU):

Measurement of the clarity, or turbidity, of water.

Parts per billion (ppb): One part per billion (or micrograms per liter) is equivalent to one penny in \$10,000,000.

Parts per million (ppm): One part per million (or milligrams per liter) is equivalent to one penny in \$10,000.

Picocuries per liter (pCi/L): Measurement of the natural rate of radioactive disintegration.

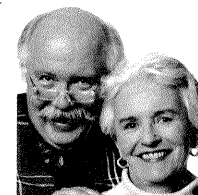
Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Radon

Radon is a radioactive gas that occurs naturally in some groundwater. It may pose a health risk when the gas is released from water into air, as occurs during showering, bathing, or washing dishes and clothes. Radon gas released from drinking water is a relatively small part of the total radon in air. Radon is released into homes and groundwater from soil. Inhalation of radon gas has been linked to lung cancer; however, the effects of radon ingested in drinking water are not yet clear. Water from groundwater systems can have relatively higher levels of radon than surface water sources. In 1998, we sampled our water for radon and found an average concentration of 885 pCi/L. Concentrations of 270,000 pCi/L are known to exist in public water supplies. For additional information on how to have your home tested, contact the EPA's Radon Hotline at (800) SOS-RADON.

Special Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised people such as people with cancer undergoing chemotherapy, people who have undergone organ transplants, people 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 (Centers for Disease Control) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).



Constitution Ave. to Congress St. Water Main Project

Our master plan has also determined that a new 20-inch water main from the water tank on Constitution Avenue to Congress Street would help improve fire protection and water quality in the downtown area as well the south end of Portsmouth. This new water main will be constructed in two phases. Phase I (Constitution Ave. to Greenleaf and Lafayette Rd.) will be installed during the summer 2001, with completion expected in late fall. Watch the City of Portsmouth's Web site at www.cityofportsmouth.com for updates on this project.

Haven Well Building

Presently Haven Well is located underground and faces confined space issues as well as water quality threats. New construction will bring all equipment above grade in a heated building that will also be equipped with auxiliary power to automatically operate in case of a power outage. This project is expected to be completed by fall 2001.

Mark of Excellence

Since the beginning, the goal of the City of Portsmouth has been to produce the highest quality drinking water for all our customers. We are proud of our history of quality service. To maintain our commitment to you, our analysts routinely collect and test water samples every step of the way - from the water sources right to your home - checking purity and identifying potential problems. Our treatment plant is constantly maintained, evaluated, and upgraded to stay current with advancements in technology, health science, and government regulations. Our water quality lab is the heart of our quality assurance program. Staffed by highly trained scientists and technicians, the lab has the latest, most sophisticated instruments, and can measure substances down to one part in a billion! With foresight and planning, efficiency in operations, and focus on excellence in customer service, we intend to provide you the best quality drinking water at an economical price well into the 21st century.

For more information about this report, or for any questions relating to your drinking water, please call David Allen, Deputy Public Works Director, at (603) 427-1530, Peter Armstrong, Chemist (603) 740-1431, or Thomas Cravens at (603) 427-1530.

What's Inside?

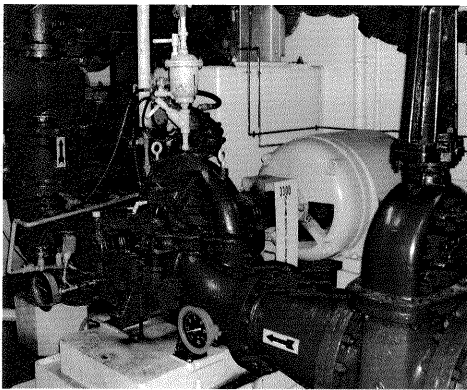
This report outlines the processes involved in delivering to you the highest quality drinking water available. In it, we will answer three important questions:

- Where does my water come from?
- How is my water treated and purified?
- What is in my drinking water?

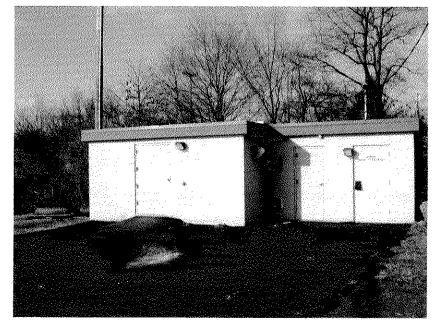
Also, we will provide you with information about available resources that will answer other questions on water quality and health effects.

Where Does My Water Come From?

The main source of Portsmouth's water is the Bellamy Reservoir in Madbury and Dover, N.H. The water is piped more than four miles to the Water Treatment Plant in Madbury where it is treated and filtered to remove contaminants, and then disinfected for storage, delivery, and consumption. From there the water is pumped under pressure to consumers in Madbury, Dover, and Durham and then to the Booster Pumping Station in Newington where the pressure is boosted up to city pressure. It is then pumped to consumers to Newington, Portsmouth, Greenland, Rye and New Castle. Many consumers are also served by additional groundwater sources: the Collins Well and Portsmouth Well #1 in Portsmouth, and the Greenland Well, located in Greenland. Pease International Tradeport property is served from the Haven and Smith wells exclusively.



Madbury Water Treatment Plant Finished Water Pump

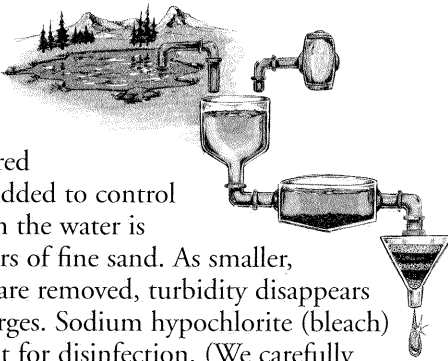


Portsmouth Well #1

How Is My Water Treated And Purified?

The treatment process consists of a series of steps.

First, raw water is drawn from the Bellamy Reservoir. The water then goes to a mixing tank where alum and sodium hydroxide are added. The addition of these chemicals cause small particles to adhere to one another (called "floc"), making them heavy enough to settle out of the water. Powdered activated carbon is added to control taste and odors; then the water is filtered through layers of fine sand. As smaller, suspended particles are removed, turbidity disappears and clear water emerges. Sodium hypochlorite (bleach) is added at this point for disinfection. (We carefully monitor the amount of sodium hypochlorite, adding the lowest quantity necessary to protect the safety of your water without compromising taste.) Finally, sodium hydroxide (used to adjust the final pH and alkalinity), fluoride (used to prevent tooth decay) are added before the water is pumped to sanitized, underground reservoirs, water towers and into your home or business.



FYI

Since 1992, the Portsmouth Water Division has been responsible for the operation and maintenance of the Pease International Tradeport Water System. We are distributing this report to Pease customers because we supplied water to the Pease system in 2000. At no time did we supply Portsmouth customers with water from the Pease Tradeport Water System.

Methyl t-Butyl Ether (MtBE), a gasoline additive, has recently begun to appear in water sources throughout New England. In 2000 we had two wells with trace detections of MtBE. While there is no state requirement yet, we have instituted quarterly sampling of all our sources to monitor this chemical. The results are added to the statewide database for addressing this problem.