

## INTRODUCTION

To comply with State Regulations, the City of Jamestown Board of Public Utilities annually issues a report describing the quality of your drinking water. The purpose of the report is to raise your understanding of drinking water and to raise awareness of the need to protect your water sources. In 2007, your tap water met all New York State drinking water health standards. We are proud to report that your system did not violate a maximum contaminant level or any other water quality statement. This report provides an overview of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to State standards.



*Annual Drinking Water Quality Report  
Year 2007  
City of Jamestown  
Board of Public Utilities  
92 Steele Street  
Jamestown, NY 14701  
Public Water Supply ID#NY0600366*

If you have any questions about this report or concerning your drinking water, please contact the Communications Coordinator, at (716)661-1666. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled meetings of the Board of Public Utilities. The meetings are held the first (noon) and third (3 p.m.) Tuesday of each month in the BPU Board Room at 92 Steele Street. We encourage public interest in our community's decisions affecting drinking water.

### WHERE DOES OUR WATER COME FROM?

In general, 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 animal or human activities. Contaminants that may be present in source water include: microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants. In order to ensure that tap water is safe to drink, the State and the EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The State Health Department's and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Our water source consists of seven artesian wells in the Cassadaga aquifer and four artesian wells in the Conewango aquifer. Aquifers are areas where enough groundwater (water contained in the soil and rock material below the surface of the earth) exists to supply wells and springs. The Jamestown aquifers are confined or sandwiched between layers of relatively impermeable materials such as clay and shale. The BPU operates seven wells, which draw water from the Cassadaga aquifer, having a watershed of 140 square miles. The BPU also operates four wells in Poland Center drawing water from the Conewango aquifer, which has a watershed of 290 square miles.

The water is collected in a receiving tank, then pumped by a high-pressure mechanical delivery process through the transmission and distribution system. If the water is not used within the day, it back feeds into storage at a 10,000, 000 gallon reservoir for future distribution.. Two underground reservoirs in the city can store approximately 12,000,000 gallons of finished water (water treated with chlorine for disinfection and with fluoride for tooth decay prevention). The Lakewood water tank contains 2,000,000 gallons of finished water. Two above ground storage tanks in the Jamestown system each hold an additional 500,000 gallons of raw water (water without chlorine and fluoride.) During 2007, our system did not experience any restriction of our water source. The water is treated with chlorine and fluoride prior to distribution.

### SOURCE WATER ASSESSMENT PROGRAM (SWAP) SUMMARY

The New York State Department of Health has completed a source water assessment for the BPU system, based on available information. Possible and actual threats to this drinking water source were evaluated. The New York State source water assessment includes a susceptibility rating based on the risk posed by each potential source of contamination and how easily contaminants can move through the subsurface to the wells. The susceptibility rating is an estimate of the potential for contamination of the source water, it does not mean that the water delivered to consumers is, or will become contaminated. While nitrates (and other inorganic contaminants) were detected in BPU water, it should be noted that all drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants from natural sources. The presence of contaminants does not necessarily indicate that the water poses a health risk. All detected contaminants are within normal background levels found in the County. See the section "Are there contaminants in our drinking water?" for a list of the contaminants that have been detected. The source water assessments provide resource managers with additional information for protecting source waters into the future.

As mentioned before, BPU water is derived from 11 drilled wells, 7 in the Cassadaga well field, and 4 in the Poland Center well field. The source water assessment has rated the wells in both well fields as having a medium-high susceptibility to microbials, viruses, and nitrates, and a medium susceptibility to industrial solvents, and other industrial contaminants. The ratings for the Cassadaga well field are due primarily to the close proximity of permitted septic systems or other wastewater treatment systems to the wells, a facility listed on the State's Toxic Release Inventory, and oil and gas well drilling in the area. In addition, the wells draw water from a confined aquifer (an aquifer bounded above and below by geology that restricts the passage of ground water), the aquifer recharge area (the section of land that receives precipitation and allows it to infiltrate into the aquifer) is considered vulnerable to potential sources of contamination.

While the source water assessment rates BPU wells as being susceptible to microbials, please note that BPU water is disinfected to ensure that the finished water delivered into your home meets New York State's drinking water standards for microbial contamination. A copy of the assessment, including a map of the assessment area, can be obtained by contacting us, as noted above.

The BPU designed its water supply emergency plan according to guidelines recommended by the NYS Department of Health. The plan was subsequently submitted to and approved by the New York State Department of Health.

### FACTS AND FIGURES

Our water system serves 48,268 people in homes, businesses, industries and schools. The BPU now manages 16,581 service connections that carry the water to all its customers. The total number of gallons of water produced in 2007 was 1,757,951,000 with 1,312,952,000 gallons delivered to customers. Our highest single production day was October 7, 2007, at 7,667,000 gallons. An additional 444,999,000 gallons (25% of daily pumpage) was lost and unaccounted for due to flushing, leaks, fire fighting and leakage. The average daily production of raw water treated and pumped into the distribution system was 4,816,304 gallons. In 2007, water customers in Jamestown were charged \$1.66 per unit of water. A unit of water is equal to 100 cubic feet of water or 748 gallons.

### ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: total coliform, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, haloacetic acids, radiological and synthetic organic compounds. The table presented below depicts which compounds were detected in your drinking water. The State allows us to test for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old. An Annual Water Quality Report Supplement has been compiled in addition to the Table of Detected Contaminants. The Supplement contains testing results for individual sites and contaminants detected but not required to be reported by the State. Copies of the Supplement and this report are available upon request from the BPU Communications Coordinator at (716)661-1666 and appears on the utility's website at [www.jamestownbpu.com](http://www.jamestownbpu.com).

It should be noted that all drinking water, including bottled drinking water, may be reasonably 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 EPA's Safe Drinking Water Hotline (800-426-4791) or the Chautauqua County Health Department at (716)753-4481.

**TABLE OF DETECTED CONTAMINANTS**

Contaminant	Violation	Date of Sample	Level Detected (Max. Ave./Range)	Unit Measurement	Regulatory Limit (MCL, TT, or AL)	MCLG	Likely Source of Contamination
<b>INORGANICS NITRATE-NITRITE</b>							
Nitrate	No	6/14/ 07	3.04/ 2.88-3.04	Mg/l	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
<b>INORGANIC CONTAMINANTS</b>							
Fluoride	No	6/14/ 07	1.4/0.5-1.4	Mg/l	2.0	N/A	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Thallium	No	6/14/ 07	0.001/ 0-.001	Mg/l	0.002 (MCL)	0.5 ug/l	Leaching from ore-processing sites; discharge from electronics, glass and drug factories
Barium	No	05 09/ 06	0.37/ 0.24-0.37	Mg/l	2.0 (MCL)	N/A	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
<b>SECONDARY INORGANICS</b>							
Chloride	No	07/27/00	34/ 25-34	Mg/l	250 (MCL)	N/A	Naturally occurring or indicative of road salt contamination.
Sulfate	No	05/15/06	17/ 17-22	Mg/l	250 (MCL)	N/A	Naturally occurring.
Copper	No	08/2005	0.27 <sup>1</sup>	Mg/l	1.3 (AL)	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leading from wood preservatives
Lead	No	08/2005	0.005 <sup>2</sup>	Mg/l	0.015	0	Corrosion of household plumbing systems; erosion of natural deposits
Manganese	No	07/27/00	17/ 6-17	Ug/l	300 (MCL)	N/A	Naturally occurring; indicative of land fill contamination.
Sodium	No	07/27/00	14.9/ 11.8-14.9	Mg/l	N/A <sup>3</sup>	N/A	Naturally occurring; road salt; water softeners; animal waste
Total Trihalomethanes	No	8/29/07	20.1/ 0-20.1	Ug/l	80	N/A	By-products of drinking water chlorination needed to kill harmful organisms; TTHMs are formed when source water contains large amounts of organic matter.
Total Haloacetic Acids	No	8/29/07	30.1/ 0-30.1	Ug/l	60	N/A	By-products of drinking water chlorination needed to kill harmful organisms

**Notes:**

1-The level presented represents the 90th percentile of the 30 sites tested for copper. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the copper values detected at your water system. In this case, 30 samples were collected and the 90th percentile value was the 27th highest value 0.27. The action level for copper was not exceeded at any of the test sites.

2-The level presented represents the 90th percentile of the 30 sites tested. The action level for lead was exceeded at only one site. The homeowner was notified by letter and the new homeowner received a letter and a personal visit. The original homeowner died and the water in the house had not been used in six months, allowing lead to leach into the pipes.

3-Water containing more than 20 mg/L of sodium should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270 mg/L of sodium should not be used for drinking by people on moderately restricted sodium diets.

**Definitions:**

**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.

**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.

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

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

**Non-Detects (ND):** Laboratory analysis indicates that the constituent is not present.

**Milligrams per liter (mg/l):** Corresponds to one part of liquid in one million parts of liquid (parts per million - ppm).

**Micrograms per liter (ug/l):** Corresponds to one part of liquid in one billion parts of liquid (parts per billion - ppb).

**WHAT DOES THIS INFORMATION MEAN?** If present, elevated levels of lead can cause serious health problems, especially for pregnant women, infants, and young children. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. The BPU is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes 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, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (1-800-426-4791) or at <http://www.epa.gov/safewater/lead>.

**IS THE BPU WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?**

During 2007, our system was in compliance with applicable State drinking water operating, monitoring and reporting requirements.

**INFORMATION ON RADON**

Radon is a naturally-occurring radioactive gas found in soil and outdoor air that may also be found in drinking water and indoor air. Some people exposed to elevated radon levels over many years in drinking water may have an increased risk of getting cancer. The main risk is lung cancer from radon entering indoor air from soil under homes. In 2000, we collected 2 samples that were analyzed for radon. The two sites tested were Clay Pond Pump Station and Cassadaga Pump Station, one per quarter that were analyzed for radon. The average of the two samples was 250 picocuries/liter (pCi/l) and the range was 182-319 pCi/l. The current non-regulated standard (Maximum Contaminant Level) for radon is 3,000 pCi/l. The levels detected at the two pump stations were well below the level allowed by the State. For additional information call your state radon program (1-800-458-1158) or call EPA's Radon Hotline (1-800-SOS-Radon).

**DO I NEED TO TAKE SPECIAL PRECAUTIONS?**

Although our drinking water met or exceeded state and federal regulations, some people may be more vulnerable to disease causing microorganisms or pathogens in drinking water than the general population. Immuno-compromised 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 can be particularly at risk from infections. These people should seek advice from their health care provider about their drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium, Giardia and other microbial pathogens are available from the Safe Drinking Water Hotline (800-426-4791).

**INFORMATION FOR NON-ENGLISH SPEAKING RESIDENTS:** **Spanish** Este informe contiene información muy importante sobre su agua beber. Tradúzcalo ó hable con alguien que lo entienda bien. **French** Ce rapport contient des informations importantes sur votre eau potable. Traduisez-le ou parlez en avec quelqu'un qui le comprend bien.

**WHY SAVE WATER AND HOW TO AVOID WASTING IT?**

Although our system has an adequate amount of water to meet present and future demands, there are a number of reasons why it is important to conserve water: Saving water saves energy and some of the costs associated with both of these necessities of life; saving water reduces the cost of energy required to pump water and the need to construct costly new wells, pumping systems and water towers; and saving water lessens the strain on the water system during a dry spell or drought, helping to avoid severe water use restrictions so that essential fire fighting needs are met. You can play a role in conserving water by becoming conscious of the amount of water your household is using, and by looking for ways to use less whenever you can. It is not hard to conserve water. Conservation tips: automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity. Turn off the tap when brushing your teeth. Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year. Check your toilets for leaks by putting a few drops of food coloring in the tank, watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from one of these otherwise invisible toilet leaks. Fix it and you save more than 30,000 gallons a year. Use your water meter to detect hidden leaks. Simply turn off all taps and water-using appliances, then check the meter after 15 minutes. If the meter moved, you have a leak.

**FOR WATER CONSERVATION INFORMATION, PLEASE REFER TO THE FOLLOWING WEBSITES:** [www.jamestownbpu.com](http://www.jamestownbpu.com) and [www.h2ouse.org](http://www.h2ouse.org).

**SYSTEM IMPROVEMENTS**

In 2007, the BPU replaced 330' of 6" pipe on Butler Street, Jamestown, replaced 1000' of 6" pipe on Camp Street, Jamestown, and 241' of 8" pipe on Mason Drive in the Town of Ellicott. The BPU also laid 910 feet of new 6" pipe on Lakeside Boulevard, Town of Ellicott. In our continuing efforts to maintain a safe and dependable water supply it may be necessary to make improvements in your water system. The costs of these improvements may be reflected in the rate structure. Rate adjustments may be necessary in order to address these improvements.

**CLOSING**

Thank you for allowing us to continue to provide your family with quality drinking water this year. We ask that all our customers help us protect our water sources, which are the heart of our community. Please call the BPU Communications Coordinator's office if you have questions (716)661-1666.