

**KINGSTON WATER DEPARTMENT
TOWN OF KINGSTON
2014 ANNUAL WATER-QUALITY REPORT
PWS ID# 4145000**

We are pleased to present a summary of the quality of the water provided to you during the past year. The Safe Drinking Water Act (SDWA) requires that utilities issue an annual “Consumer Confidence” report to customers, in addition to other notices that may be required by law. This report details where our water comes from, what it contains, and the risks our water testing and treatment are designed to prevent. Kingston Water Department is committed to providing you with the safest and most reliable water supply. Informed consumers are our best allies in maintaining safe drinking water.

We are pleased to report that the water provided by the Kingston Water Department meets or exceeds established water-quality standards.

Questions?...Our Board of Water Commissioners meet on the second and fourth Tuesday of each month or you may also contact our Water Superintendent, Matt Darsch, at 781-585-0504 or 585-0516. The Water Department is located at 22 Elm St. and is open from 7:00 a.m. to 3:30 p.m. Monday – Friday. Our mailing address is: 26 Evergreen St., Kingston, MA 02364. Or email us at mjdarsch@comcast.net.

Overview...In 2014 the Kingston Water Department pumped 461,082,600 gallons of water to its consumers, an increase of 3.5% from the previous year. The department appreciates the efforts of consumers to conserve. A flushing program, designed by department consulting engineers as an important health maintenance activity, continues in the spring and fall. The Kingston Water Department is proud to be a participant in the Greenscapes Outreach Project sponsored by the North and South Rivers Watershed Association. For more information, please visit www.greenscapes.org.

Water Source...The Kingston Water Department receives its water from seven gravel packed wells.

1. **South Street Pumping Station...**This facility was brought on line in February of 1951. The well is a 94 foot deep gravel packed well. In 1990, a new 60 horsepower motor and 800 g.p.m. pump was installed. In 1998 an L.P. generator was installed. The well was cleaned in 2013. Also on this site are the George D. Cravenho Lime Treatment Facility that serves this site, as well as Millgate Pumping Station and Soule’s Pond Pumping Station.

2. **Millgate Pumping Station...**Operation of this station began in March of 1975. The 73’ deep gravel packed well was cleaned in 2002 and a new 40 horsepower motor and 500 g.p.m. pump was installed. An 8 cylinder L.P. gas engine provides auxiliary power through a right angle gear drive. This site is located on Millgate Rd. - off South St.

3. **Soule’s Pond Pumping Station...**The 62’ deep well was installed in August of 1976. The well was cleaned in June of 2000 and a new 20 horsepower motor and 250 g.p.m. pump was installed. This well is also located on Millgate Rd.

4. **Grassy Hole Pumping Station...**In September 1981 this 90’ deep gravel packed well with 60 horsepower motor that pumps 800 gpm came on line. The well was cleaned in 2003. This site also has a lime treatment facility for pH control. In 1993 an L.P. gas generator was installed. This site is located across from the Independence Mall.

5. **Richard W. Loring Trackle Pond Pumping Station...**This station was brought on line in June of 1997. The 110’ deep gravel packed well pumps 900 gpm with a 60 horsepower motor. This station has a generator for backup power. The well was cleaned in 2009. This site is located on Bishop’s Highway (Route 80). The **Trackle Pond Manganese Treatment Facility** was added in November 2014.

6. **Winthrop St. Pumping Station...**This pumping station became part of the water system in November of 1964. The 500 g.p.m. gravel packed well with 50 horsepower motor is 48 feet deep. It is located on Winthrop St. and is active but not in use at this time.

7. **Well Site 1-86** became active in November of 2010. It is 89’ deep, has 30 horsepower motor, a propane generator and pumps 570 gpm. It is connected to the lime treatment facility at Grassy Hole Well and is located across from the Independence Mall.

An Explanation of the Water-Quality Data Table...This report is based upon tests conducted in the year 2014 by the Kingston Water Department. Terms used in the Water-Quality Table in other parts of this report are defined here.

Maximum Contaminant Level or 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 or 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: The concentration of a contaminant that, if exceeded, triggers treatment or other requirements, which a water system will follow.

90th Percentile: Out of every 10 homes, 9 were at or below this level.

Key to Table:

AL=Action Level

ND= None Detected

MCL=Maximum Contaminant Level

MCLG=Maximum Contaminant Level Goal

MFL=million fibers per liter

mrem/year = millirems per year (a measure of radiation absorbed by the body)

NTU=Nephelometric Turbidity Units

pci/L=picocuries per liter (a measure of radioactivity)

ppm=parts per million, or milligrams per liter (mg/l)

ppb=parts per billion, or micrograms per liter (ug/L)

ppt=parts per trillion, or nanograms per liter

ppq=parts per quadrillion, or picograms per liter

TT=Treatment Technique

Contaminant	Unit	MCL	MCGL	Highest Detected	Range of Detection	Major Sources	Violations
Nitrate	ppm	10	10	1.9	.14 – 1.9	Runoff from septic tanks, sewage	NO
Tetrachloroethylene	ppm	5	0	1.2	ND – 1.2	Leachate from vinyl lined a.c pipe, factories and dry cleaners	NO
Perchlorate	ug/L	2	N/A	.181 ug/L	ND - .181 ug/L	Rocket propellants, Fireworks, munitions, flares, blasting agents	NO

Contaminant	Action level	MCLG	90 th Percentile	# of sites found above the Action Level	Major Sources	Violations
Lead (ppb)	15	0	3	0 out of 30 sites	Corrosion of household plumbing systems; Erosion of natural deposits	NO
Copper (ppm)	1.3	1.3	.024	0 out of 30 sites	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives	NO

Source Water Assessment and Protection Program (SWAP) assess the susceptibility of public water supplies to potential contamination by microbiological pathogens and chemicals. **What is my System's Ranking?** A susceptibility ranking of high was assigned to this system using the information collected during the assessment by the DEP. **Where Can I see the SWAP Report?** The complete SWAP report is available at the Kingston Water Department. For more information, call Matt Darsch at the Water Department 781-585-0504.

Corrosion Control Through pH Adjustment:

Many drinking water sources in New England are naturally corrosive (i.e. they have a pH of less than 7.0). So, the water they supply has a tendency to corrode and dissolve the metal piping it flows through. This not only damages pipes but can also add harmful metals, such as lead and copper, to the water. For this reason it is beneficial to add chemicals that make the water neutral or slightly alkaline. This is achieved by adding one or a combination of several approved chemicals. The Kingston Water Department adds hydrated lime to its water. This adjusts the water to a non-corrosive pH. Testing through the water system has shown that this treatment has been effective at reducing lead and copper concentrations.

Unregulated or Secondary Contaminant	Date Collected	Result or Range Detected	Average detected	SMCL	ORSG or Health Advisory	Possible Sources
Manganese (ppb)	6/30/2014	14 - 257	69	50	300*	Erosion of natural deposits
Sodium	6/14/12	9.7 – 31	18.1	N/A	20	Road run-off

***US EPA and Mass DEP have established public health advisory levels for manganese to protect against concerns of potential neurological effects.**

Required Additional Health Information

Manganese is a nutrient that is part of a healthy diet. Drinking water may naturally have manganese, and when concentrations are greater than 50ug/L, the water may be discolored and taste bad. Over a lifetime, the EPA recommends that people drink water with manganese levels less than 300 ug/L and over the short term, EPA recommends that people limit their consumption of water with levels over 1000 ug/L, primarily due to concerns about possible neurological effects. Children up to 1 year of age should not be given water with manganese over 300 ug/L, nor should formula for infants be made with that water for longer than 10 days.

In order to ensure that tap water is safe to drink, the Department and EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) and the Massachusetts Department of Public Health regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

Drinking water, including bottled water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's safe drinking water hot Line (800-426-4791).

The sources of drinking water (both tap 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 human activity. Contaminants that may be present in source water include:

A. Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.

B. Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic waste water discharges, oil and gas production, mining or farming.

C. Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff and residential uses.

D. Organic chemical contaminants, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production and can also come from gas stations, urban storm water runoff and septic systems.

E. 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 which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Some people may be more vulnerable to contaminants in drinking water than is 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 about drinking water from the health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hot Line (800-426-4791).

Concerning Lead in Our Water

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Kingston Water Department 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 or at <http://www.epa.gov/safewater/lead>.

Concerning Copper in Our Water

Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

National Primary Drinking Water Regulation Compliance - Other Monitoring:

In addition to testing we are required to perform, our water system voluntarily tests for hundreds of additional substances to make certain our water is safe and of high quality. If you are interested in a more detailed report, call the water department at 781-585-0504. If you have questions or would like additional information concerning this report, call Superintendent Matt Darsch at 781-585-0504 or email us at mjdarsch@comcast.net. Water Quality Data for community water systems throughout the United States is available at www.waterdata.com. Member: New England Water Works Association (NEWWA)