

Kinnelon Water Department
Annual Water Quality Report for 2019
PWSID# 1415002
Issued June 2020

Dear Consumer:

During calendar year 2019, the Borough of Kinnelon water supply was tested for over 80 contaminants that might be found in water. These tests included items ranging from taste and odor to bacteriological and chemical contaminants. The United States Environmental Protection Agency (USEPA) and the New Jersey Department of Environmental Protection (NJDEP) set health and safety standards for public water supplies. We are pleased to inform you that your water meets or exceeds the health and safety standards put forth.

This annual Consumer Confidence Report (CCR), required by the Safe Drinking Water Act (SDWA), provides additional information on our sources of supply and the quality of the water we deliver. For more information on this report or about the next opportunity for public participation in decisions concerning drinking water, please contact;

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The Kinnelon Water Department is a division of local government working under the direction of the Mayor and Council. All meetings of the Mayor and Council are advertised in advance in the legal section of the local newspaper. The Kinnelon Water Department will notify consumers as required by the NJDEP if water quality fails to meet the standards.

General Information

Rivers, lakes, streams, ponds, reservoirs, springs and wells are sources for both tap water and bottled water. As water travels over the surface of land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and picks up substances resulting from the presence of animals or from human activity.

Contaminants 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 the result from urban storm water runoff, and residential uses.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- 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 storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

General Information - continued

In order to ensure that tap water is safe to drink, the EPA prescribes regulations which 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. However, the presence of a contaminant does not necessarily indicate that the water poses a health risk.

Disinfection By-Product Results: The NJDEP requires all water systems to monitor their distribution systems for disinfection byproducts including four Trihalomethanes (THM4) and five Haloacetic Acid (HAA5) compounds.

Health and Educational Information

Special Considerations Regarding Children, Pregnant Women, Nursing Mothers, and Others

Children may receive a slightly higher amount of a contaminant present in the water than do adults, on a body weight basis, because they may drink a greater amount of water per pound of body weight than do adults. For this reason reproductive or developmental effects are used for calculating a drinking water standard, especially if these effects occur at lower levels than other health effects of concern. If there is insufficient toxicity information for a chemical (for example, lack of data on reproductive or developmental effects), an extra uncertainty factor may be incorporated into the calculation of the drinking water standard, thus making the standard more stringent, to account for the additional uncertainties regarding these effects. In the case of lead and nitrate, effects on infants and children are the health endpoints upon which the standard is based.

ADDITIONAL SPECIAL NOTICE ON LEAD

If present, elevated levels of lead can cause serious health problems, especially for pregnant woman and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The borough of Kinnelon 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 house, 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. Adults who drink this water with elevated levels of lead over many years could develop kidney problems and high blood pressure.

Additional information is available from the SAFE DRINKING WATER HOT LINE (1-800-426-4791) or at <http://www.epa.gov/safewater/lead>

Sources of Supply

The Kinnelon water supply obtains its entire water supply from the Butler Water Company. The Source of the Butler Water Company supply is from the Kakeout Reservoir and Bubbling Brook Road in the Borough of Kinnelon, Morris County.

Table of Contaminants

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Some people may be more vulnerable to contaminants 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 about drinking water from their health providers. EPA/CDC guidelines on the appropriate means to lessen the risk of infections by cryptosporidium and other microbial contaminants are available from the EPAs Safe Drinking Water Hotline at 800-426-4791.

Microbiological Contaminants

Regulated Contaminant	Units	COMPLIANCE ACCHIEVED	MCLG	MCL	Highest Level	Source of Contamination
Total Coliform Bacteria	# per 100 ml	Yes*	0	1 positive sample per month	1	Coliform are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful bacteria may be present.

*The Kinnelon Water Department collects 2 routine total coliform samples per month. Kinnelon Water recorded a single positive sample for total coliform in the month of May. That sample was negative for e-coli. In conformance with the rules a repeat sample was collected from the same location and 2 additional check samples were taken upstream and downstream of the location of the positive sample within 24 hours and retested. All repeat and check samples were negative therefore the system remained in compliance.

REGULATED DISINFECTANTS and DISINFECTION BYPRODUCTS

Stage 2 Disinfection Byproducts, Note: Stage 2 DBP compliance is based on the locational running annual average (LRAA) calculated at each monitoring location. The LRAA for Stage 2

Regulated Contaminant	UNIT	COMPLIANCE ACCHIEVED	LRAA Maximum of all Sites	LRAA Range of all Averages	Source of Contamination/ and Comments
Total Trihalomethanes (TTHM) Stage 2	PPB	Yes	71	63 – 71	Byproduct of water disinfection. / TTHM compliance is based on Locational Running Annual Average with a limit of 80 PPB.
Haloacetic Acids (HAA5) Stage 2	PPB	Yes	4	2 - 4	Byproduct of water disinfection. / HAA5 compliance is based on Locational Running Annual Average With a limit of 60 PPB

Disinfectants: Limit is based upon the Running Annual Avg. (RAA) reported quarterly.

Regulated Contaminant	Units	COMPLIANCE ACCHIEVED	MRDLG	MRDL	Highest Detected	Range Detected	Source of Contamination
Chlorine as CL2 (Running avg.)	PPM	Yes	4	4	0.6	0.2 – 0.6	Chlorine is used as a drinking water disinfectant.

Lead and Copper Rule

Regulated Contaminant	Units	COMPLIANCE ACCHIEVED	MCLG	Action Level	90 th Percentile Result	Source of Contamination
Lead	PPB	Yes	0	15	0 (1 out of 21 samples exceeded AL Jan-Jun)	Corrosion of household plumbing systems
					0 (0 out of 21 samples exceeded AL Jul-Dec)	
Copper	PPM	Yes	1.3	1.3	0.0886 (0 out of 21 samples exceeded AL Jan-June)	Corrosion of household plumbing systems
					0.0896 (0 out of 21 samples exceeded AL Jul-Dec)	

LEAD AND COPPER. COMPLIANCE WITH THE LEAD AND COPPER RULE IS BASED ON THE 90TH PERCENTILE RESULT FROM POINTS OF USE IN THE DISTRIBUTION SYSTEM COLLECTED IN 2019. KINNELON WATER IS ON A MONITORING SCHEDULE OF TWENTY SAMPLES EVERY SIX MONTHS.

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated contaminants, a person would have to drink two liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

ADDITIONAL INFORMATION

The Safe Drinking Water Act regulations allow monitoring waivers to reduce or eliminate monitoring requirements for asbestos, volatile organic chemicals and synthetic organic chemicals. Our system received monitoring waivers for asbestos and we are not required to monitor for synthetic organic chemicals.

Table 2
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TEST RESULTS (Data for 2019)							
Contaminant	Violation? Y/N	Date of Sample	Level Detected	Units of Measurement	MCLG	MCL	Possible Source
Microbiological Contaminants:							
Turbidity	N	continuous	99.95% < 0.3 NTU Highest Detect = 0.65 NTU	NTU	N/A	TT = % of samples < 0.3 NTU	Soil runoff
Total Organic Carbon	N	1/month	Running Annual Average = 1.10	ppm	N/A	TT = % of removal	Naturally present in the environment
Radiological Contaminants:							
Gross Alpha	N	7/23/2014	1.15	piCu/L	0	15	Erosion of natural deposits
Combined Radium	N	7/23/2014	0.52	piCu/L	0	5	Erosion of natural deposits
Inorganic Contaminants: Note: RUL is the Recommended Upper Limit							
Barium	N	8/19/2019	0.0087	ppm	2	2	Discharge of drilling wastes or metal refineries
Chloride	N	8/19/2019	55.6	ppm	N/A	RUL = 250	Agricultural runoff; road salting
Cadmium	N	8/19/2019	4.27	ppb	5	5	Discharge from steel and pulp mills
Nickel	N	8/19/2019	0.612	ppb	N/A	N/A	Erosion of natural deposits
Sodium	N	8/19/2019	29.2	ppm	N/A	RUL = 50	Erosion of natural deposits
Sulfate	N	8/19/2019	6.98	ppm	N/A	RUL = 250	Erosion of natural deposits

Susceptibility Ratings for Butler Water Department Sources

The table below illustrates the susceptibility ratings for the seven contaminant categories (and radon) for each source in the system. The table provides the number of wells and intakes that rated high (H), medium (M), or low (L) for each contaminant category. For susceptibility ratings of purchased water, refer to the specific water system's source water assessment report. The seven contaminant categories are defined at the bottom of this page. DEP considered all surface water highly susceptible to pathogens, therefore all intakes received a high rating for the pathogen category. For the purpose of Source Water Assessment Program, radionuclides are more of a concern for ground water than surface water. As a result, surface water intakes' susceptibility to radionuclides was not determined and they all received a low rating.

If a system is rated highly susceptible for a contaminant category, it does not mean a customer is or will be consuming contaminated drinking water. The rating reflects the potential for contamination of source water, not the existence of contamination. Public water systems are required to monitor for regulated contaminants and to install treatment if any contaminants are detected at frequencies and concentrations above allowable levels. As a result of the assessments, DEP may customize (change existing) monitoring schedules based on the susceptibility ratings.

Intake Susceptibility Ratings

Intakes	Pathogens	Nutrients	Pesticides	Volatile Organic Compounds	Inorganic Contaminants	Radio-nuclides	Radon	Disinfection Byproduct Precursors
Butler – 1 Surface Water	1-High	1-Low	1 – Low	1 - Medium	1 - Medium	1 – Low	1 – Low	1-High

Definitions

In the following table, you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms: we've provided the following definitions:

<u>Term</u>	<u>Description</u>
AL	<u>Action Level</u> : The concentration of contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
CU	<u>Color Unit</u> :
CDC	<u>Centers for Disease Control</u>
Disinfection By-Products Precursors	A common Source is naturally occurring organic matter in surface water. Disinfection by-products are formed when the disinfectants (usually chlorine) used to kill pathogens react with dissolved organic material present in surface water.
EPA	Environmental Protection Agency
Inorganic Contaminants	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. These contaminants may be present in source water.
MCL	<u>Maximum Contaminant Level</u> is the highest level of contaminant that is allowed in the drinking water. MCLs are set as close as to the MCLGs as feasible using the best available treatment technology.
MCLG	<u>Maximum Contaminant Level Goal</u> is the level of a contaminant in drinking water below which there is no known expected risk to health MCLGs allow a margin of safety.
Microbial Contaminants/ Pathogens	Disease causing organisms such as bacteria and viruses, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife. Common sources are animal and human fecal wastes. These contaminants may be present in source water.
MRDL	<u>Maximum Residual Disinfectant Level</u> is the highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
MRDLG	<u>Maximum Residual Disinfectant Level Goal</u> the level of disinfectant allowed in drinking water below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.
Mrem/yr.	<u>Millirems per year</u> is a measure of radiation absorbed by the body.
MFL	<u>Million fibers per liter</u> is a measure of the presence of Asbestos fibers that are longer than 10 micrometers.
NA	Not Applicable
ND	<u>Not Detected</u> is a term used when a laboratory analysis demonstrates that the constituent is not present.
NS	<u>No Standard</u>
NTU	<u>Nephelometric Turbidity Unit</u> is the measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
pC/L	<u>Picocuries per liter</u> is a measure of radioactivity in water.
PPB	<u>Parts per billion</u> or micrograms per liter equals one part per billion and corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.
POE	<u>Point of Entry</u> to the water distribution system
PPM	<u>Parts per Million</u> or milligrams per liter (mg/l) equals one part per million and corresponds to one minute in to years or a single penny in \$10,000.
Radioactive Contaminants/ Radionuclides	Radioactive substances that are both naturally occurring and man-made may be present in source water; result of oil and gas production and mining activities. Examples include radium and uranium.
RUL	<u>Recommended Upper Limit</u> : the highest level of a constituent of drinking water that is recommended in order to protect aesthetic quality.
SMCL	<u>Secondary Maximum Contaminant Level</u> is Federal drinking water measurements for substances that do not have an impact on health. These reflect aesthetic qualities such as odor, taste, or appearance. Secondary standards are recommendations, not mandates.
TT	<u>Treatment Technique</u> is a required process intended to reduce the level of contaminant in drinking water.