



BOROUGH OF PARK RIDGE BOARD OF PUBLIC WORKS ANNUAL WATER QUALITY REPORT JUNE 2017 (2016 SAMPLING DATA)

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The Park Ridge Water Department is pleased to present this year's Annual Water Quality Report. This report details the results of our water quality testing performed in 2016. It is designed to inform you about the quality of water and services we provide to you every day. Our goal is to provide you with a safe and dependable supply of potable drinking water.



Ridge and Woodcliff Lake. This has been the consistent goal since the water utility began its operation in the 1920's.

This publication is very important because informed customers are the best allies in maintaining safe drinking water. Regular meetings of the Park Ridge Board of Public Works occur on the first and third Wednesday of each month, at 8:00 PM at the

Park Ridge Utility Department, 15 Sulak Lane, Park Ridge. The public is welcome.

In 2016, we analyzed over 2,500 samples to ensure that the 765 million gallons of water that we pumped, treated, and delivered meet water quality standards. We are pleased to report that our water meets or surpasses federal and state drinking water standards.

If you have any questions about your water please call us at (201) 391-2113. Additional information is also available on the Borough's website at www.parkridgeboro.com. You may also call the Environmental Protection Agency safe drinking water hotline at (800) 426-4791 or find it on EPA's web site at www.epa.gov.

The Board of Public Works is committed to delivering a safe and reliable supply of drinking water to the 5,000 customers in Park

Where does our water come from?

Our water is supplied by groundwater from 18 active wells located throughout Park Ridge and Woodcliff Lake. This water is drawn from the Brunswick Aquifer. In addition, we have three water storage tanks and five booster stations which can transfer water between different parts of the distribution system.

IMPORTANT PHONE NUMBERS

Park Ridge Water Department Chris O'Leary - Licensed Operator	201-391-2113	NJDEP Bureau of Safe Drinking Water	1-609-292-5550
To report water emergencies during non-business hours	201-391-5400	New Jersey Board of Public Utilities	1-800-624-0241
New Jersey State Department of Environmental Protection (NJDEP)	1-609-292-3950	Environmental Protection Agency's Safe Drinking Water Hotline	1-800-426-4791

Drinking Water Quality Table

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 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 Hotline (800-426-4791).

Substance	Units	EPA Goal MCLG	EPA Standard MCL	NJDEP Standard MCL	*Park Ridge Detected Level	Park Ridge Range	Major Sources
<i>Inorganic Chemicals</i>							
Nitrate	ppm	10	10	10	3.1	1.4 - 3.1	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Arsenic	ppb	NA	10	5	4.35	ND - 4.35	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium	ppb	2,000	2,000	2,000	520	60 - 520	Discharge of drilling waste; discharge from metal refineries; erosion of natural deposits
Chromium	ppb	100	100	100	5.24	ND - 5.24	Discharge from steel and pulp mills; Erosion of natural deposits
Nickel	ppb	NA	NA	NA	6.40	ND - 6.4	Erosion of natural deposits
<i>(This category contains 11 additional constituents which were not detected)</i>							
<i>Microbiological</i>							
Total Coliform		0	2	2	1	0 - 1	Naturally present in the environment
Fecal Coliform/ <i>E. Coli</i> ***		0	0	0	0	0	Human and animal fecal waste
Over 180 samples were collected throughout the year from our distribution system.							
<i>Radionuclides (Well #17 and Well #20 tested in 2014. All other wells tested in 2011)</i>							
Alpha Emitters	pCi/L	0	15	15	5.9	0.6 - 5.9	Erosion of natural deposits
Combined Radium 226/228	pCi/L	0	5	5	4.4	0.2 - 4.4	Erosion of natural deposits
Radon (tested 6/28/99)	pCi/L	n/a	n/a	n/a	790	n/a	Erosion of natural deposits
<i>Organic Chemicals</i>							
cis 1,2 Dichloroethylene	ppb	70	70	70	4.07	ND - 5.13	Discharge from industrial chemical factories
Methyl Tertiary-Butyl Ether	ppb	70**	n/a	70	2.01	ND - 2.01	Leaking underground gasoline and fuel oil tanks, gasoline and fuel oil spills
Tetrachloroethylene	ppb	0	5	1	0.101	ND - 0.404	Discharge from factories and dry cleaners
Trichloroethylene	ppb	0	5	1	0.329	ND - 0.554	Discharge from metal degreasing sites and other factories
Total Trihalomethanes (TTHM)	ppb	n/a	80	80	13.2	2.52 - 18.39	By-product of drinking water disinfection
Five Haloacetic Acids (HAA5)	ppb	n/a	60	60	ND	ND	By-product of drinking water disinfection
* Park Ridge detected level shows the highest test results used to determine compliance for the year in 2016. For some contaminants, this level is the running annual average of data from the highest entry point. Park Ridge did not exceed any MCL during 2016.							
** NJDEP regulated chemical. MCLG is health-based number developed by the NJDEP.							
<i>(This category contains 23 additional constituents which were not detected)</i>							

Definitions:

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.

MCL (Maximum Contaminant Level) - The highest level of contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

NJRUL - New Jersey Recommended Upper Limit.

ND (non-detects) - Laboratory analysis indicates that the constituent is not present.

ppm (parts per million) - One drop in 10 gallons, one minute in two years, or a single penny in \$10,000.

ppb (parts per billion) - One drop in 10,000 gallons, one minute in 2,000 years.

pCi/L (picocuries per liter) - Measure of the radioactivity in water.

Action Level - The concentration of a contaminant which, if exceeded, triggers a treatment or other requirements, which a water system must follow.

Drinking Water Quality Table (continued)

Lead and Copper (tested in 2016)

Substance	Units	Action Level	Number of Samples	90th Percentile	# Samples above the action level	Major Sources
Lead	ppb	15	30	0	0	Corrosion of household plumbing systems; erosion of natural deposits
Copper	ppb	1,300	30	337	0	Corrosion of household plumbing systems; erosion of natural deposits

Secondary Standards - related to aesthetic quality of drinking water

Substance	Units	NJ RUL	Highest Park Ridge Result	Average Park Ridge Result	Park Ridge Range	Major Sources
Chloride	ppm	250	208	106	53 - 208	Natural Mineral - Road Salt
Hardness	ppm	250	461	297	180 - 461	Natural Mineral
Manganese	ppm	0.05	0.018	0.002	ND - 0.018	Natural Mineral
Sodium	ppm	50	106.5	44.2	10.7 - 106.5	Natural Mineral - Road Salt
Sulfate	ppm	250	111	28	12.8 - 111	Natural Mineral
Zinc	ppm	5	0.0243	0.02	0.01 - 0.0243	Natural Mineral
Total Dissolved Solids	ppm	500	1000	516	272 - 1000	Erosion of Natural Mineral Deposits
pH		6.5 - 8.5	8	7.35	6.8 - 8	Natural Characteristic

Note: The State allows us to monitor 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.

Unregulated Compounds (2016)

Substance	Units	Standard	Average Park Ridge Result	Park Ridge Range	Major Sources
1,4 Dioxane	ppb	None	0.185	ND - 0.82	Cyclic aliphatic ether; used as a solvent or solvent stabilizer in manufacture and processing of paper, cotton, textile products, automotive coolant, cosmetics and shampoos.

Unregulated Contaminants Monitoring Rule (UCMR3 - tested in 2015)

During 2015, Park Ridge Water participated in the third phase of the Unregulated Contaminant Monitoring as required by the USEPA. Unregulated contaminants are those for which the USEPA has not established drinking water standards. Monitoring assists the USEPA in determining the occurrence of these compounds and whether or not future regulation is warranted. Detections from this monitoring are summarized in the following table, along with typical sources of these compounds. More information is available at <http://water.epa.gov/lawsregs/rulesregs/sdwa/ucmr/ucmr3>.

Substance	Units	Standard	Average Park Ridge Result	Park Ridge Range	Major Sources
1,4-Dioxane	ppb	None	0.10	ND - 0.19	Cyclic aliphatic ether; used as a solvent or solvent stabilizer in manufacture and processing of paper, cotton, textile products, automotive coolant, cosmetics and shampoos.
Chlorate	ppb	None	44.4	ND - 158	Agricultural defoliant or desiccant; disinfection byproduct and used in the production of chlorine dioxide.
Chromium	ppb	None	0.34	0.23 - 0.4	Naturally occurring element; used in making steel and other alloys; chromium -3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning and wood preservation.
Hexavalent Chromium	ppb	None	0.13	ND - 0.19	Naturally occurring element; used in making steel and other alloys; chromium -3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning and wood preservation.
Strontium	ppb	None	287	2.6 - 501	Naturally occurring element; historically, commercial use of strontium has been in the faceplate glass of cathode-ray tube televisions to block x-ray emissions.
Vanadium	ppb	None	0.46	ND - 1.1	Naturally occurring elemental metal; used as vanadium pentoxide which is a chemical intermediate and a catalyst.

Source Water Assessment Program

The New Jersey Department of Environmental Protection (NJDEP) has completed and issued the Source Water Assessment Report and Summary for our public water system, which is available at www.state.nj.us/dep/swap or by contacting the NJDEP, Bureau of Safe Drinking Water at 609-292-5550.

The Source Water assessment performed on 19 wells determined the following susceptibility ratings for each of the groundwater supply wells. This table illustrates the susceptibility rating for each individual well and contamination category.

Susceptibility Rating for Drinking Water Sources												
EPTDS ID	Source ID	Source Name	Location	Contaminant Category								
				Pathogens Rating	Nutrients Rating	Pesticides Rating	VOCs Rating	Inorganics Rating	Radionuclides Rating	Radon Rating	DBPs Rating	
006	007	Well 1	Park Avenue	M	M	L	H	H	H	H	M	
006	009	Well 2	Mill Road	M	M	L	H	H	M	H	M	
007	013	Well 3	Spring Valley Road	M	H	L	H	M	M	H	M	
008	015	Well 4	Oak Avenue	M	M	L	H	H	H	H	M	
009	019	Well 5	Sulak Lane	M	M	L	H	M	H	H	M	
009	020	Well 6	Sulak Lane	M	H	M	H	H	M	H	M	
009	021	Well 7	Sulak Lane	M	H	M	H	H	M	H	M	
009	022	Well 8	Sulak Lane	M	H	L	H	H	M	H	M	
016	025	Well 9	Werimus Road	M	H	L	H	M	M	H	M	
011	027	Well 10	Glen Road	M	H	M	H	M	H	H	M	
012	029	Well 11	Russett Place	M	M	L	H	M	M	H	M	
013	031	Well 12	Glendale Road	M	H	L	H	M	M	H	M	
014	033	Well 13	Wield Court	M	M	L	H	H	M	H	M	
015	035	Well 14	Turrett Street	M	H	M	H	H	M	H	H	
016	037	Well 15	Old Mill Road	M	H	L	H	M	M	H	M	
017	039	Well 16	Prospect Avenue	M	M	L	H	M	H	H	M	
018	041	Well 17	Glenbrook Drive	M	H	L	H	M	M	H	H	
020	045	Well 18	New Street	M	M	L	H	H	H	H	H	
021	048	Well 19	Ridge Avenue	M	M	L	H	M	M	H	M	

* The NJDEP has not yet performed the source water assessment for Well #20. The susceptibility ratings will be similar to Well #15

EPTDS: Entry Point to the Distribution System

L,M,H: Low, Medium and High susceptibility

Pathogens: Disease-causing organisms such as bacteria, protozoa, and viruses. Common sources are animal and human fecal wastes.

Nutrients: Common types of nutrients include nitrogen and phosphorous. Common sources include discharge from septic fields, areas where animal waste is stored, and runoff from agricultural and residential land where fertilizers were used.

Pesticides: Pesticides are manmade chemicals used to control bacteria, fungi, weeds, rodents, and insects. Common sources of pesticides include land applications (nonpoint source) and manufacturing/distribution centers of pesticides (point source).

Volatile Organic Compounds (VOCs): Man-made chemicals that are used as solvents, degreasers, and gasoline components. VOCs are the most common organic contaminants in groundwater in New Jersey.

Inorganics: Mineral-based compounds that are both naturally occurring and manmade. Common sources include discharges from manufacturing plants, releases from contaminated sites, past land uses, and naturally occurring sources. Inorganics include arsenic, cadmium, copper, lead, mercury, and asbestos.

Radionuclides: Radioactive substances that are both naturally occurring and manmade, such as radium and radon. Common sources include the decay of naturally occurring minerals, leaching of subsurface material (for example rocks and sedimentary materials) into ground water, and improper disposal of radioactive waste.

Disinfection Byproduct (DBP) Precursors: Disinfection byproducts are formed when the disinfectants used to kill pathogens during treatment react with dissolved organic material present in the water.

If a source was rated highly susceptible for a contamination 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. If you have any questions regarding the source water assessment report or summary, please contact the Bureau of Safe Drinking Water at watersupply@dep.state.nj.us or 609-292-5550.

NJDEP & EPA HEALTH NOTES

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. 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 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.
- Lead: 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 Park Ridge 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 at <http://www.epa.gov/safewater/lead>.
- Arsenic: While your drinking water meets EPA's standard for arsenic, it does contain low levels of

arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

- Radon: Radon is a radioactive gas that you can't see, taste or smell. At high levels of exposure, it is a known carcinogen. Radon is found throughout the U.S. in soil and can move up through the ground and into a home through cracks and holes in the foundation. It can also get into indoor air when released from tap water used for showering and other household activities. Radon entering the home through tap water will in most cases be a small source of radon in indoor air. If you are concerned about radon in your home, have the air tested. It is inexpensive and easy. There are simple ways to fix a radon problem that are not too costly. Call the EPA Radon Hotline for more information at 1-800-SOS-RADON.
- Manganese: The recommended upper limit for manganese is based on staining of laundry. Manganese is an essential nutrient, and toxicity is not expected from levels which would be encountered in drinking water.
- Sodium: For healthy individuals, the sodium intake from water is not important, because a much greater intake of sodium takes place from salt in the diet. However, sodium levels above the recommended upper limit may be a concern to individuals on a sodium restricted diet.

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. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the 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 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 Hotline at 1-800-426-4791.

What Does The Drinking Water Quality Table Mean?

Our water is tested to ensure that it is safe. Major Sources shows where this substance usually originates. Range shows the highest and lowest results for the year. Definitions explain the abbreviations used in the table. We ran many analytical tests on our water. Only the listed substances in the table were detected.

The Safe Drinking Water Act regulations allow monitoring waivers to reduce or eliminate the monitoring requirements for certain contaminants. We received waivers for asbestos and synthetic organic chemicals because vulnerability assessments were performed and unambiguously showed that our system is not at risk of contamination from these contaminants.

The New Jersey Department of Environmental Protection (NJDEP) is the primary agency authorized by the United States Environmental Protection Agency (EPA) to regulate the quality of drinking water, and ensure that community water systems comply with State and Federal Regulations. The NJDEP determines the highest level of a contaminant that is allowed in the drinking water or the Maximum Contaminant Level (MCL).

Projects We Are Doing to Improve our Water System

- Well #21 “Test Well” was installed and tested in 2016. Plan to install permanent well in 2017 and obtain NJDEP pumping permit. Design and permit permanent pumping and treatment facility.
- Complete the upgrade to the Well #10 Treatment Facility and replace resin.
- Complete the rehabilitation of the Well #7 pumping facility.
- Pilot testing completed in 2016 for the removal of unregulated contaminant 1,4-Dioxane in Well 17. Purchase and install treatment system in 2017.
- Hire contractors to test and exercise street valves and perform semi-annual leak detection survey.

Park Ridge Water to Install Photo-Catalytic Treatment Device at Well 17

As reported in last year’s Annual Water Quality Report, in 2015 Park Ridge performed various tests of Unregulated Contaminants at representative locations in our water system as required by the US Environmental Protection Agency. One of these UMCR3 tests was for a substance known as 1,4-Dioxane (Dioxane), a man-made organic compound, which has shown up in a large number of wells located in NJ and other states. Dioxane has a number of uses including as an ingredient in common household care products.

In June 2016, the Park Ridge Water Department completed a system-wide sampling all of its wells to test for the incidence of the Dioxane. One of our wells (#17) showed an incidence of Dioxane at a level of 0.82 parts per billion (ppb). There are no drinking water standards for this contaminant, and the New Jersey Department of Environmental Protection Agency advised us that we could continue to run the well. The Park Ridge Board of Public Works (BPW) decided to immediately shut it down, and authorized our groundwater hydrogeologist to investigate and recommend a treatment system for this well.

Although Dioxane is very difficult to treat using conventional water treatment methods, alternative methods were investigated and several pilot tests were performed. As a result of this analysis, the BPW selected a preferred treatment system that will utilize a photo-catalytic advanced oxidation treatment process. Earlier this year, the Borough held a public bid to received proposals for this device. The bid was awarded to a Canadian company called “Purifics” and the treatment device has now been ordered. The BPW expects to have the treatment system installed online by the early fall.



For additional up-to-date information on Park Ridge water quality, please visit the Park Ridge Borough website at the following link:
www.parkridgeboro.com/water

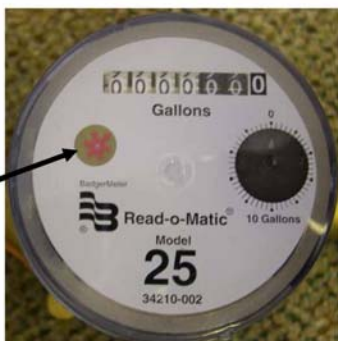
Water Conservation Tips

- ◆ Wash full loads in your washing machine, or adjust the water level to reflect the size of the load.
- ◆ Let your pots and pans soak instead of letting the water run while you clean them.
- ◆ Try planting drought-tolerant and regionally adapted plants in areas that are hard to water or that receive little use. This may include narrow strips near sidewalks or driveways and steep hills.
- ◆ Soaker hoses are better than sprays. Install drip-irrigation or soaker hoses for more efficient watering in planting beds and beneath shrubs and trees.
- ◆ Install ultra-low-flush toilets to reduce the amount of water used in each flush.
- ◆ Put dye tablets or food coloring in your toilet tank and wait to see if the color appears in the bowl (without flushing). If it does, you have a leak!
- ◆ Turn the faucet off while you shave, brush your teeth and lather up your hands.
- ◆ Take a short shower instead of a bath. While a five minute shower uses a 12 to 25 gallons, a full tub requires about 70 gallons.

How to Use Your Water Meter to Check for Leaks

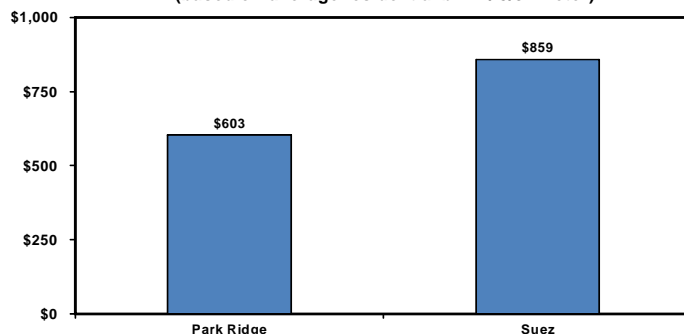
Most of Park Ridge's water meters have a "**LEAK INDICATOR**". The leak indicator will spin even if the smallest amount of water is passing through your meter. If you have all of the water turned off in the house and the leak indicator is moving, water is leaking somewhere.

LEAK INDICATOR
ROTATES FOR VERY
SMALL LEAKS



Another tip is to read your water meter at night and then first thing in the morning. If there is an increase in the reading, water is leaking in your home.

Annual Residential Water Cost Comparison
(based on average residential bill w/ 5/8" meter)



Park Ridge's rate is 30% less than Suez



*“When the well’s dry, we know the worth of water.”
- Benjamin Franklin*



Board of Public Works
Department of Public Utilities
Borough of Park Ridge
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