

ANNUAL WATER QUALITY REPORT

WATER TESTING PERFORMED IN 2017



Presented By
**Township of
Cedar Grove**

Quality First

Once again we are pleased to present our annual water quality report. As in years past, we are committed to delivering the best-quality drinking water possible. To that end, we remain vigilant in meeting the challenges of new regulations, source water protection, water conservation, and community outreach and education, while continuing to serve the needs of all of our water users. Thank you for allowing us the opportunity to serve you and your family.

We encourage you to share your thoughts with us on the information contained in this report. After all, well-informed customers are our best allies. For more information about this report, or for any questions relating to your drinking water, please call Alex Palumbo, Township Engineer, at (973) 239-1410, ext. 280.

Community Participation

You are invited to participate in our public forum and voice your concerns about your drinking water. Regularly scheduled Town Council meetings are held the first Monday of each month, beginning at 8 p.m., in Townhall, Council Chambers, second floor, 525 Pompton Ave., Cedar Grove, NJ.

Where Does My Water Come From?

During 2017, the Township of Cedar Grove received approximately 82 percent of its water from the North Jersey District Water Supply Commission (NJDWSC) and 18 percent from the Passaic Valley Water Commission (PVWC). Although the Township receives water from two purveyors, the source of the water is the same. All of the Township's water is supplied from two sources; namely, the 29.6-billion-gallon Wanaque Reservoir and the 7-billion-gallon Monksville Reservoir, which are both part of the NJDWSC system and both are a surface water source. In addition, water can be pumped from both the Pompton River and Ramapo River to the Wanaque Reservoir when necessary. To ensure the safety of the water provided to the consumers, routine monitoring and testing of the rivers, lakes, and streams that supply its reservoir is conducted. Testing is performed at a NJDEP and U.S. EPA Certified Water Quality Laboratory.

Source Water Assessment

The New Jersey Department of Environmental Protection (NJDEP) has prepared Source Water Assessment reports and summaries for all public water systems. The Source Water Assessment and related questions for the Township of Cedar Grove (PWS 0704001), North Jersey District Water Supply Commission (PWS ID 1613001), and the Passaic Valley Water Commission (PWS ID 1605002) can be obtained by logging onto NJDEP's source water assessment Web site at <http://www.state.nj.us/dep/swap> or contacting NJDEP's Bureau of Safe Drinking Water at (609) 292-5550. If a system is rated highly susceptible for a contamination category, it does not mean a customer is—or will be—consuming contaminated 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.

The Source Water Assessment Plan is an assessment of the delineated area around our listed sources through which contaminants, if present, could migrate and reach our source water. It also includes an inventory of potential sources of contamination within the delineated area, and a determination of the water supply's susceptibility to contamination by the identified potential sources. According to the Source Water Assessment Plan, our water system had a susceptibility rating of medium.

Lead in Home Plumbing

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. We are 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 www.epa.gov/lead.



Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. 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 these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases, radioactive material, and 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, or wildlife; Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban storm-water 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 storm-water runoff, and residential uses; Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and may also come from gas stations, urban storm-water runoff, and septic systems; Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Water treatment is a complex, time-consuming process.

Testing for *Cryptosporidium*

Cryptosporidium is a microbial parasite found in surface water throughout the U.S. Although filtration removes *Cryptosporidium*, the most commonly used filtration methods cannot guarantee 100 percent removal. Monitoring of source water and/or finished water indicates the presence of these organisms. Current test methods do not allow us to determine if the organisms

are dead or if they are capable of causing disease. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immunocompromised people are at

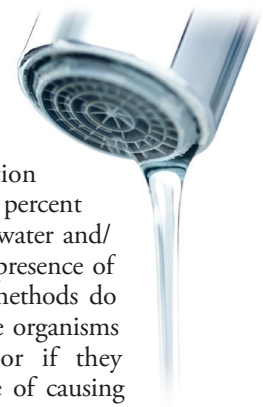
greater risk of developing life-threatening illness. We encourage immunocompromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. *Cryptosporidium* must be ingested to cause disease, and it may be spread through means other than drinking water.

PVWC and NJDWSC completed the second round of source water monitoring in accordance with the requirements of EPA's Long Term 2 Enhanced Surface Water Treatment Rule. The data collected in 2017 is presented in the Source Water Pathogen Monitoring table.

SOURCE WATER	CRYPTOSPORIDIUM	GIARDIA
NJDWSC	0-0.1	0-0.04
PVWC	0-01	0-0.04

How Long Can I Store Drinking Water?

The disinfectant in drinking water will eventually dissipate, even in a closed container. If that container housed bacteria prior to filling up with the tap water, the bacteria may continue to grow once the disinfectant has dissipated. Some experts believe that water could be stored up to six months before needing to be replaced. Refrigeration will help slow the bacterial growth.



Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule. The information in the data tables shows only those substances that were detected between January 1 and December 31, 2017. Remember that detecting a substance does not necessarily mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels. The State recommends monitoring for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

As a result of an administrative oversight in 2017, we submitted the reports late for TTHMs, HAA5, Iron, and Manganese as required by the National Primary Drinking Water Regulations. At no time did this incident pose a threat to public health and safety, nor did it have any impact on the high-quality drinking water provided to our customers. To ensure that all reporting requirements are met in the future, we have implemented a computerized scheduling system that will automatically notify us when reports are due to be submitted.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791.

REGULATED SUBSTANCES ¹

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	North Jersey District Water Supply Commission		Passaic Valley Water Commission		Township of Cedar Grove		VIOLATION	TYPICAL SOURCE
				AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH		
Barium (ppm)	2017	2	2	0.019	0.019–0.516	0.027	0.016–0.027	NA	NA	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2017	[4]	[4]	0.69	NA	NA	NA	NA	NA	No	Water additive used to control microbes
Fluoride (ppm)	2017	4	4	NA	NA	0.110	ND–0.110	NA	NA	No	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAA] (ppb)	2017	60	NA	NA	NA	NA	NA	1.65	5.8–25.0	No	By-product of drinking water disinfection
Nitrate (ppm)	2017	10	10	0.516	0.019–0.516	4.33	0.67–4.33	NA	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2017	80	NA	NA	NA	NA	NA	64.6	58.3–67.3	No	By-product of drinking water disinfection
Thallium (ppb)	2017	2	0.5	NA	NA	0.06	NA	NA	NA	No	Leaching from ore-processing sites; Discharge from electronics, glass, and drug factories
Total Organic Carbon (removal ratio)	2017	TT	NA	1.0	1.0–1.5	1.1	1.0–1.5	NA	NA	No	Naturally present in the environment
Turbidity (NTU)	2017	TT	NA	1 ²	<0.3–1	0.17 ^{2,3}	0.03–0.17 ³	NA	NA	No	Soil runoff
Turbidity (lowest monthly percent of samples meeting limit)	2017	TT = 95% of samples meet the limit	NA	99.5	NA	100 ³	NA ³	NA	NA	No	Soil runoff

Tap Water Samples Collected for Copper and Lead Analyses from Sample Sites throughout the Community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH% TILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2017	1.3	1.3	0.0793	0/34	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2017	15	0	2.2	0/34	No	Corrosion of household plumbing systems; Erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	North Jersey District Water Supply Commission				Passaic Valley Water Commission		Township of Cedar Grove		VIOLATION	TYPICAL SOURCE
		RUL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH		
Aluminum (ppb)	2017	200	NA	50	NA	50	NA	NA	NA	No	Erosion of natural deposits; Residual from some surface water treatment processes
Chloride (ppm)	2017	250	NA	104	NA	104	NA	NA	NA	No	Runoff/leaching from natural deposits
Color (Units)	2017	10	NA	2	NA	2	NA	NA	NA	No	Naturally occurring organic materials
Corrosivity (Units)	2016	Non-corrosive	NA	NA	NA	Corrosive	NA	NA	NA	No	Natural or industrially influenced balance of hydrogen, carbon, and oxygen in the water; Affected by temperature and other factors
Hardness [as CaCO ₃] (ppm)	2017	250	NA	89	NA	89	NA	NA	NA	No	Naturally occurring
Iron (ppb)	2017	300	NA	17	NA	17	NA	33.3 ³	NA ³	No	Leaching from natural deposits; Industrial wastes
Manganese (ppb)	2017	50	NA	<0.002	NA	ND	NA	3.29 ³	NA ³	No	Leaching from natural deposits
pH (Units)	2017	6.5–8.5	NA	8.1	NA	8.1	NA	NA	NA	No	Naturally occurring
Sodium (ppm)	2017	50	NA	45	NA	45	NA	NA	NA	No	Naturally occurring
Sulfate (ppm)	2017	250	NA	12.4	NA	12	NA	NA	NA	No	Runoff/leaching from natural deposits; Industrial wastes
Total Dissolved Solids (ppm)	2017	500	NA	129	NA	129	NA	NA	NA	No	Runoff/leaching from natural deposits
Zinc (ppm)	2017	5	NA	0.011	NA	0.011	NA	NA	NA	No	Runoff/leaching from natural deposits; Industrial wastes

¹ Under a waiver granted on December 30, 1998, by the State of New Jersey Department of Environmental Protection, our system does not have to monitor for synthetic organic chemicals/pesticides because several years of testing have indicated that these substances do not occur in our source water. The SDWA regulations allow monitoring waivers to reduce or eliminate the monitoring requirements for asbestos, volatile organic chemicals, and synthetic organic chemicals. Our system received monitoring waivers for synthetic organic chemicals and asbestos.

² Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system. The turbidity rule requires that 95% or more of the monthly samples must be less than or equal to 0.3 NTU (no sample may exceed 1 NTU).

³ Sampled in 2016.

Definitions

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

LRAA (Locational Running Annual Average): The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters. Amount Detected values for TTHMs and HAAs are reported as the highest LRAAs.

MCL (Maximum Contaminant Level): 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.

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.

MRDL (Maximum Residual Disinfectant Level): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant Level Goal): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NA: Not applicable.

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

removal ratio: A ratio between the percentage of a substance actually removed to the percentage of the substance required to be removed.

RUL (Recommended Upper Limit): RULs are established to regulate the aesthetics of drinking water like appearance, taste and odor.

TON (Threshold Odor Number): A measure of odor in water.

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