

Annual
WATER
QUALITY
REPORT

Reporting Year 2013



Presented By
Township of Cedar Grove

PWS ID#: NJ0704001

There When You Need Us

We are once again proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2013. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

Please remember that we are always available to assist you should you ever have any questions or concerns about your water.

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 pm, in Townhall, Council Chambers, Second Floor, 525 Pompton Ave., Cedar Grove.

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/safewater/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 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 may also come from gas stations, urban stormwater 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.

Where Does My Water Come From?

During 2013, the Township of Cedar Grove received approximately 87% of its water from the North Jersey District Water Supply Commission (NJDWSC) and 13% 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. 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.nj.gov/dep/watersupply/swap/creport.htm> 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.

This 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." If you would like to review the Source Water Assessment Plan, please visit <http://www.nj.gov/dep/watersupply/swap/creport.htm>. Once at the state WEB site, you will have to enter the county and city.

Water Treatment Process

The treatment process consists of a series of steps. First, raw water is drawn from our water source and sent to an aeration tank, which allows for oxidation of the high iron levels that are present in the water. The water then goes to a mixing tank where polyaluminumchloride and soda ash are added. The addition of these substances causes small particles to adhere to one another (called "floc") making them heavy enough to settle into a basin from which sediment is removed. Chlorine is then added for disinfection. At this point, the water is filtered through layers of fine coal and silicate sand. As smaller, suspended particles are removed, turbidity disappears and clear water emerges.

Chlorine is added again as a precaution against any bacteria that may still be present. (We carefully monitor the amount of chlorine, adding the lowest quantity necessary to protect the safety of your water without compromising taste.) Finally, soda ash (used to adjust the final pH and alkalinity), fluoride (used to prevent tooth decay), and a corrosion inhibitor (used to protect distribution system pipes) are added before the water is pumped to sanitized, underground reservoirs, water towers, and into your home or business.

QUESTIONS?

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.

Sampling Results

During the past year we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. The state requires us to monitor 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.

Water system in the U.S. participated in the 3rd stage of the EPA's Unregulated Contaminant Monitoring Regulation (UCMR3) program by performing additional tests on our drinking water. UCMR3 benefits the environment and public health by providing the EPA with data on the occurrence of contaminants suspected to be in drinking water, in order to determine if EPA needs to introduce new regulatory standards to improve drinking water quality. UCMR3 detections are shown in the data tables below.

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											
				Cedar Grove Water Department		North Jersey District Water Supply Commission		Passaic Valley Water Commission			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Barium (ppm)	2013	2	2	NA	NA	0.0104	NA	0.01	NA	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2013	[4]	[4]	NA	NA	0.96	NA	NA	NA	No	Water additive used to control microbes
Haloacetic Acids [HAA]–Stage 2 (ppb)	2013	60	NA	35.1	5.5–43.7	NA	NA	NA	NA	No	By-product of drinking water disinfection
Nitrate (ppm)	2013	10	10	NA	NA	0.214	NA	NA	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrite (ppm)	2013	1	1	NA	NA	NA	NA	0.21	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes]–Stage 2 (ppb)	2013	80	NA	59.6	42.7–83.2	NA	NA	NA	NA	No	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter.
Total Organic Carbon (% removal)	2013	TT	NA	NA	NA	35	28–41	NA	NA	No	Naturally present in the environment
Turbidity ² (NTU)	2013	TT=1 NTU	NA	NA	NA	0.59	0.3–0.59	NA	NA	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2013	TT=95% of samples <0.3 NTU	NA	NA	NA	99.9	NA	NA	NA	No	Soil runoff
Tap water samples were collected for lead and copper 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)	2013	1.3	1.3	0	0/33	No	Corrosion of household plumbing systems; Erosion of natural deposits				
Lead (ppb)	2013	15	0	1	1/33	No	Corrosion of household plumbing systems; Erosion of natural deposits				

SECONDARY SUBSTANCES											
				Cedar Grove Water Department		North Jersey District Water Supply Commission		Passaic Valley Water Commission			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	RUL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Aluminum (ppb)	2013	200	NA	NA	NA	40	NA	40	NA	No	Erosion of natural deposits; Residual from some surface water treatment processes
Chloride (ppm)	2013	250	NA	NA	NA	40.3	NA	40	NA	No	Runoff/leaching from natural deposits
Color (Units)	2013	10	NA	NA	NA	3	NA	3	NA	No	Naturally-occurring organic materials
Copper (ppm)	2013	1.0	NA	NA	NA	0.010	NA	NA	NA	No	Corrosion of household plumbing systems; Erosion of natural deposits
Hardness [as CaCO ₃] (ppm)	2013	250	NA	NA	NA	56.6	NA	57	NA	No	Naturally occurring
Iron (ppb)	2013	300	NA	56.8	NA	5	NA	NA	NA	No	Leaching from natural deposits; Industrial wastes
Manganese (ppb)	2013	50	NA	3.55	NA	2	NA	NA	NA	No	Leaching from natural deposits
pH (Units)	2013	6.5-8.5	NA	NA	NA	7.91	NA	7.9	NA	No	Naturally occurring
Sodium (ppm)	2013	50	NA	NA	NA	22.3	NA	22	NA	No	Naturally occurring
Sulfate (ppm)	2013	250	NA	NA	NA	8.84	NA	9	NA	No	Runoff/leaching from natural deposits; Industrial wastes
Total Dissolved Solids (ppm)	2013	500	NA	NA	NA	152	NA	152	NA	No	Runoff/leaching from natural deposits
Zinc (ppm)	2013	5	NA	NA	NA	0.015	NA	0.015	NA	No	Runoff/leaching from natural deposits; Industrial wastes

UNREGULATED CONTAMINANT MONITORING REGULATION 3 (UCMR3)							
		North Jersey District Water Supply Commission		Passaic Valley Water Commission			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	RANGE OF DETECTS LOW-HIGH		RANGE OF DETECTS LOW-HIGH		TYPICAL SOURCE	
Chlorate (ppb)	2013	36.3–95.1		0.36–0.95		By-product of drinking water disinfection	
Chromium (ppb)	2013	NA		ND–0.036		Erosion of natural deposits	
Chromium-6 (ppb)	2013	ND–0.035		NA		Erosion natural deposits	
Hexavalent Chromium (ppb)	2013	NA		ND–0.035		Erosion of natural deposits	
Strontium (ppb)	2013	39.6–46.0		40.0–46.0		Erosion of natural deposits	
Total Chromium (ppb)	2013	ND–0.36		NA		Erosion of natural deposits	

OTHER SUBSTANCES							
		North Jersey District Water Supply Commission		Passaic Valley Water Commission			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Alkalinity (ppm)	2013	36.2	NA	36	NA	No	Naturally present in the environment

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).

Definitions

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

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).

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

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