A close-up photograph of water droplets falling from a faucet, creating a series of vertical lines of water. The background is a soft, out-of-focus light blue. The droplets are in various stages of falling, some are large and spherical, while others are elongated and teardrop-shaped. The overall color palette is a monochromatic teal and light blue.

ANNUAL WATER
QUALITY
REPORT

WATER TESTING PERFORMED IN 2016

Presented By
Borough of Wallington

We've Come a Long Way

Once again we are proud to present our annual water quality report covering the period between January 1 and December 31, 2016. In a matter of only a few decades, drinking water has become exponentially safer and more reliable than at any other point in human history. Our exceptional staff continues to work hard every day—at any hour—to deliver the highest quality drinking water without interruption. Although the challenges ahead are many, we feel that by relentlessly investing in customer outreach and education, new treatment technologies, system upgrades, and training, the payoff will be reliable, high-quality tap water delivered to you and your family.

Community Participation

You are invited to participate in our public forum and voice your concerns about your drinking water. We meet the 3rd Thursday of each month beginning at 7:30 p.m. at Council Chambers, 54 Union Blvd, Wallington, N.J.



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. PVWC sampled the Passaic and Pompton rivers where cryptosporidium was detected at 0.4 Oocysts/L and 0.857 Oocysts/L, respectively. 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 doctors 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.

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 that 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.

Important Information About Your Drinking Water

Monitoring and Reporting Violations: 2017-2016, 2017, 2018, 2019, and 2020

As a result of an administrative oversight and change in personnel in the beginning of 2016, we neglected to submit reports from February-June, 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. All samples were collected and analyzed on time by a Certified Laboratory, as required by the NJDEP. To ensure that all reporting requirements are met in the future, Wallington has hired a Drinking Water Professional who is licensed by the NJDEP for both Water Treatment and Water Distribution.

Monitoring and Reporting Violation: 2017-21

As a result of an administrative oversight and change in personnel in the beginning of 2016, we neglected to submit the Annual Consumer Confidence Report to all of our customers by July 1st, 2016. 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, Wallington has hired a Drinking Water Professional who is licensed by the NJDEP for both Water Treatment and Water Distribution.



Where Does My Water Come From?

The Borough of Wallington Water Company's customers are fortunate because we enjoy an abundant water supply from the Passaic Valley Water Treatment Plant (PVWC), which draws water from a surface water supply (reservoir). The Passaic Valley Water Treatment Plant was constructed in 2004. Our treatment facilities provide roughly 3.5 billion gallons of clean drinking water every year.

Our water supply is part of the Passaic Valley Watershed, which covers an area of roughly 1,000 square miles. Most of the watershed is covered by forest growth, with agricultural and urban development accounting for less than one-third of watershed use. To learn more about our watershed on the Internet, go to the U.S.EPA's Surf Your Watershed at www.epa.gov/surf.

Sodium in Drinking Water

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 (RUL) may be a concern to individuals on a sodium-restricted diet. PVWC's finished water was above New Jersey's RUL of 50 ppm for sodium in 2016. Possible sources of sodium include natural soil runoff, roadway salt runoff, upstream wastewater treatment plants, and a contribution coming from chemicals used in the water treatment process.

Benefits of Chlorination

Disinfection, a chemical process used to control disease-causing microorganisms by killing or inactivating them, is unquestionably the most important step in drinking water treatment. By far the most common method of disinfection in North America is chlorination.

Before communities began routinely treating drinking water with chlorine (starting with Chicago and Jersey City in 1908), cholera, typhoid fever, dysentery, and hepatitis A killed thousands of U.S. residents annually. Drinking water chlorination and filtration have helped to virtually eliminate these diseases in the U.S. Significant strides in public health are directly linked to the adoption of drinking water chlorination. In fact, the filtration of drinking water plus the use of chlorine is probably the most significant public health advancement in human history.

How chlorination works:

Potent Germicide Reduction in the level of many disease-causing microorganisms in drinking water to almost immeasurable levels.

Taste and Odor Reduction of many disagreeable tastes and odors like foul-smelling algae secretions, sulfides, and odors from decaying vegetation.

Biological Growth Elimination of slime bacteria, molds, and algae that commonly grow in water supply reservoirs, on the walls of water mains, and in storage tanks.

Chemical Removal of hydrogen sulfide (which has a rotten egg odor), ammonia, and other nitrogenous compounds that have unpleasant tastes and hinder disinfection. It also helps to remove iron and manganese from raw water.

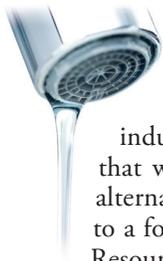
QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call the Wallington Water Department Superintendent at (973) 777-0318.

Source Water Assessment

The State of New Jersey Department of Environmental Protection (NJDEP) has prepared Source Water Assessment reports and summaries for all public water systems. The Source Water Assessment for the PVWC system [PWS ID 1605002] can be obtained by accessing NJDEP's source water assessment Website at <http://www.state.nj.us/dep/swap> or by 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 a source water, not the existence of contamination. Public water systems are required to monitor for regulated contaminants and to install treatment if any of those contaminants are detected at frequencies and concentrations above allowable levels. The source water assessment performed on the intakes list the following susceptibility ratings for a variety of contaminants that may be present in source waters:

INTAKE SUSCEPTIBILITY RATINGS	PATHOGENS	NUTRIENTS	PESTICIDES	VOLATILE ORGANIC COMPOUNDS	INORGANIC CONTAMINANTS	RADIONUCLIDES	RADON	DISINFECTION BYPRODUCT PRECURSORS
4 Surface Water	4-High	4-High	1-Medium, 3-Low	4-Medium	4-High	4-Low	4-Low	4-High



Tap vs. Bottled

Thanks in part to aggressive marketing, the bottled water industry has successfully convinced us all that water purchased in bottles is a healthier alternative to tap water. However, according to a four-year study conducted by the Natural Resources Defense Council, bottled water is not necessarily cleaner or safer than most tap water. In fact, about 25 percent of bottled water is actually just bottled tap water (40 percent, according to government estimates).

The Food and Drug Administration is responsible for regulating bottled water, but these rules allow for less rigorous testing and purity standards than those required by the U.S. EPA for community tap water. For instance, the high mineral content of some bottled waters makes them unsuitable for babies and young children. Furthermore, the FDA completely exempts bottled water that's packaged and sold within the same state, which accounts for about 70 percent of all bottled water sold in the United States.

People spend 10,000 times more per gallon for bottled water than they typically do for tap water. If you get your recommended eight glasses a day from bottled water, you could spend up to \$1,400 annually. The same amount of tap water would cost about 49 cents. Even if you installed a filter device on your tap, your annual expenditure would be far less than what you'd pay for bottled water.

For a detailed discussion on the NRDC study results, check out their Web site at <https://goo.gl/Jxb6xG>.

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 we 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.

Sampling Results

During the past year, we have taken hundreds of water samples to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The tables below show only those contaminants that were detected in the water. The state requires us to monitor for certain substances less often 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.

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]	AMOUNT DETECTED	RANGE (LOW-HIGH)	VIOLATION	TYPICAL SOURCE
Barium (ppm)	2016	2	2	0.024	0.015–0.024	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chromium (ppb)	2016	100	100	0.60	ND–0.60	No	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride (ppm)	2016	4	4	0.087	0.07–0.087	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs] (ppb)	2016	60	NA	31.30	17.06–31.30	No	By-product of drinking water disinfection
Nickel (ppb)	2016	100	NA	2.75	1.54–2.75	No	Pollution from mining and refining operations; Natural occurrence in soil
Nitrate (ppm)	2016	10	10	4.05	0.72–4.05	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Selenium (ppb)	2016	50	50	0.74	ND–0.74	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
TTHMs [Total Trihalomethanes] (ppb)	2016	80	NA	78.2	19.9–78.2	No	By-product of drinking water disinfection
Thallium (ppb)	2016	2	0.5	0.6	ND–0.6	No	Leaching from ore-processing sites; Discharge from electronics, glass, and drug factories
Total Organic Carbon (% removal)	2016	TT	NA	51-75	NA	No	Naturally present in the environment
Turbidity ² (NTU)	2016	TT	NA	0.17	0.03–0.17	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2016	TT = 95% of samples meet the limit	NA	100	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)	2015	1.3	1.3	0.1091	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2015	15	0	6.21	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	RUL	MCLG	AMOUNT	VIOLATION	TYPICAL SOURCE
				DETECTED RANGE (LOW-HIGH)		
ABS/L.A.S. (ppm)	2016	500	NA	ND-129	No	Common major components of synthetic detergents
Aluminum (ppb)	2016	200	NA	15-35	No	Erosion of natural deposits; Residual from some surface water treatment processes
Chloride (ppm)	2016	250	NA	102-146	No	Runoff/leaching from natural deposits
Hardness [as CaCO ₃] (ppm)	2016	250	NA	112-160	No	Naturally occurring
Manganese (ppb)	2016	50	NA	3-8	No	Leaching from natural deposits
Odor (TON)	2016	3	NA	4-14	No	Naturally occurring organic materials
pH (Units)	2016	6.5-8.5	NA	7.99-8.15	No	Naturally occurring
Sulfate (ppm)	2016	250	NA	43-89	No	Runoff/leaching from natural deposits; Industrial wastes
Total Dissolved Solids (ppm)	2016	500	NA	321-450	No	Runoff/leaching from natural deposits
Zinc (ppm)	2016	5	NA	2-5	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. We monitor it because it is a good indicator of the effectiveness of our filtration system. The turbidity rule requires that 95% or more of the monthly samples must be less than or equal to 0.3 NTU (and no sample may exceed 1 NTU).

Definitions

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

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.