

**CITY OF GARFIELD
WATER SYSTEM
CONSUMER CONFIDENCE REPORT - 2018**

(Issued: Summer 2019)

This contains important information about the water in your community. Translate or speak to someone who understands it well.

El informe contiene informacion importante sobre la calidad del agua en su comunidad. Traduzcalo o hable con alguien que lo entienda bien.

La relazione contiene importanti informazioni su la qualita del acqua de la Comunita. Tradurlo o parfame con un amico che lo comprenda.

Sprawozdanie zawiera wazne informacje na temat jakosci wody w Twojej miejscowosci. Popros kogos o przetiumaczenie go lub porozmawiaj z osoba ktora je dobrze rozumie.

Dear Consumer:

During 2018, the City of Garfield Water Department conducted tests on water samples for over 97 contaminants that might be found in the water. These tests included items ranging from taste and odor, to bacteriological, radiological and chemical constituents. The United States Environmental Protection Agency (EPA) and the New Jersey Department of Environmental Protection (NJDEP) sets health and safety standards for water quality.

This annual Consumer Confidence Report, required by the Safe Drinking Water Act (SDWA), provides additional information on our sources of supply and the quality of the water that 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 City of Garfield does not have regularly scheduled meetings regarding the Garfield Water Department. All meetings of the Mayor and Council are advertised in advance in the legal section of the local newspaper. The Garfield Water Department will notify consumers as required by the NJDEP if water quality fails to meet the standards.

General Information

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 bacterial, which may come from wastewater 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, 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 projection, 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 stormwater runoff, agriculture and septic systems.
- Radioactive contaminants, which can be naturally occurring, or can be the result of oil and gas production and mining activities.

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. The Food and Drug Administration (FDA) 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.

Sources of Supply

The NJDEP permits the Garfield Water Department to operate fifteen (15) production wells, of which thirteen are active. Eleven (11) are located at the Garfield Waterworks Well Field. The wells are sunk deep below the ground - approximately 250 feet - into an underground source of water. The Garfield Waterworks Well Field is located at 219 Boulevard in Elmwood Park, Bergen County, New Jersey.

The Garfield Water Department supplements its well water supply with treated water purchased in bulk from the Passaic Valley Water Commission (PVWC). Based upon 2018 data, approximately **69.89%** of the city's water demand was supplied by the Garfield Wells. The primary source of water for PVWC is the Pompton and Passaic Rivers, as well as, water supplied by the North Jersey District Water Supply Commission (NJDWSC).

Garfield's well water and water purchased from PVWC are blended at the Belmont Hill Tank. The north end of the City of Garfield receives mostly well water, the south end receives mostly PVWC water, and the area in between receives mostly blended water.

Source Water Assessment Program (SWAP)

In 2004, the NJDEP completed and issued a source Water Assessment Report and summary for this 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 NJDEP source water assessment performed on our well sources determined the following:

Source	Pathogens			Nutrients			Pesticides			Volatile Organic Compounds			Inorganics			Radio-nuclides			Radon			Disinfection Byproducts Precursors			
	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	
Wells ¹		12	6	11	7			11	7	18			18			9	9		18				18		

DEP utilized the following ratings: high (H), medium (M), or low (L) for each contaminant category.

¹ Eighteen (18) wells were reviewed for each contaminant category.

If a system is 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 the 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 swap@dep.state.nj.us or 609-292-5550.

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

Nutrients: Compounds, minerals and elements that aid growth, that are both naturally occurring and man-made. Examples include nitrogen and phosphorus.

Pesticides: Man-made chemicals used to control pests, weeds and fungus. Common sources include land application and manufacturing centers of pesticides. Examples include herbicides such as atrazine, and insecticides such as chlordane.

Volatile Organic Compounds: Man-made chemicals used as solvents, degreasers and gasoline components. Examples include benzene, methyl tertiary butyl ether (MTBE), and vinyl chloride.

Inorganics: Mineral-based compounds that are both naturally occurring and man-made.

Radionuclides: Radioactive substances that are both naturally occurring and man-made. Examples include radium and uranium.

Radon: Colorless, odorless, cancer-causing gas that occurs naturally in the environment. For more information, go to <http://www.nj.gov/dep/rpp/radon/index.htm> or call (800) 648-0394.

Disinfection Byproduct Precursors: A common source is naturally occurring organic matter in surface water. Disinfection byproducts are formed when the disinfectants (usually chlorine) used to kill pathogens react with dissolved organic material (for example leaves) present in surface water.

Water System Capital Improvements

The City of Garfield is dedicated to supplying its residents with a reliable water system with the highest quality water. The City of Garfield utilized a low interest loan to construct a new booster pumping station and reservoir at the Garfield Water Works facility in Elmwood Park and replace three (3) existing water storage tanks with one (1) new 1.2 Million Gallon water storage tank at the Belmont Hill site.

During 2012, the City of Garfield activated a newly drilled Well 8R replacing the existing Well #8 due to lowered production from many years of service. In the year 2012, we also completed construction and improvements associated with Well 8C which is located on Laurel Ave in Garfield. This newly activated well, which had been out of service for over 25 years, was placed online with a capacity of 400 gallons per minute. The added capacity of Garfield's own treated water greatly reduced our dependency in purchasing water from PVWC.

In late 2012, we started the preliminary work associated with the reactivation of the three existing Garfield wells at the corner of Midland Ave and Outwater Lane. That work has progressed into the year 2013-2015 and in May of 2015 Well 1A was reactivated after remaining offline for over 28 Years. **Well 1A had been producing up to 300 gallons per minute for the City of Garfield until small amounts of Tetrachloroethylene triggering an MCL violation. Public notification was completed and the well was removed from service.** A temporary activated carbon treatment system was installed and the well was reactivated during September 0f 2016. Well #1 was deemed unusable and was permanently sealed. Well #2 is under review to be redrilled and activated in association with the treatment plant at the existing Well 1A.

Treatment

The wells and the area around the wells are inspected regularly to ensure that no above ground pollution sources are present in these areas. Water from all wells is treated by chlorination for disinfection and aeration (where needed) by an air stripper or an activated carbon vessel to remove volatile organic compounds. Water treatment at PVWC includes pretreatment, sedimentation, filtration and disinfection.

The City of Garfield and PVWC Water Quality Tables found within this report list all the drinking water contaminants that were detected during calendar year 2018. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from January 1 through December 31, 2018. The NJDEP requires the City of Garfield to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old.

CITY OF GARFIELD WATER QUALITY TABLE

PRIMARY STANDARDS
(Directly related to the safety of drinking water)

<u>CONTAMINANT</u>	<u>MCLG</u>	<u>MCL</u>	<u>Garfield Result</u>	<u>Range of Results</u>	<u>Meets Std.</u>	<u>Likely Source of Contaminant</u>
<u>Inorganic Compounds</u>						
Lead ¹ (ppb)	-0-	AL=15 ²	5.08 ³	--	Yes	Household Plumbing.
Copper ¹ (ppm)	AL=1.3	AL=1.3 ²	0.173 ³	--	Yes	Household Plumbing.
Nitrates (ppm)	10	10		3.29 – 3.39	Yes	Natural Mineral.
Iron ⁴ (ppb)	-0-	0.3	< 0.10	--	Yes	
Manganese ⁴ (ppb)	-0-	0.05	< 0.50	--	Yes	
<u>Radionuclides</u>						
Gross Alpha Particles (pCi/l)	-0-	15		3.49 - 8.55 ⁶	Yes	Erosion of natural deposits.
Radium-228 (pCi/l)	-0-	5		0.17 -0.60 ⁶	Yes	Erosion of natural deposits.
<u>Microbiologicals</u>						
Total Coliforms ⁷ (# of detects per month)	-0-	1	See #7 Below	1/year	Yes	Naturally present in the environment.
<u>Organic Compounds</u>						
Total Haloacetic Acids Five ⁸ (HAA5) (ppb)	NS	60		2.3 –33.1	Yes	By-product of drinking water disinfection.
Total Trihalomethanes ⁸ (TTHM) (ppb)	NS	80		8.83 –108	Yes	By-product of drinking water disinfection.

Footnotes

- ¹ The Garfield Water Department collected 37 water samples during 2018 from residents previously selected in the distribution system. These samples were analyzed to determine the concentration of lead and copper. This data is used to determine if the water is corrosive, and it was found that it is not corrosive. Resampling will take place during the 2021 calendar year.
- 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 Garfield Water Department is responsible for providing high quality water, but cannot control the variety of materials used in plumbing components. When 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 is available from the Safe Drinking Water Hotline (800-426-4791) or at <http://www.epa.gov/safewater/lead>.
- ² This is the action level for lead and copper.
- ³ This is the 90th percentile level.
- ⁴ Iron & Manganese are not primary contaminants.
- ⁵ Radionuclides compliance is based on running annual average. The Garfield Water Department is permitted to test for Radium 228 every 6 years and Gross Alpha Particles every 9 years for compliance. These are the latest results.
- ⁶ 2014- 2018 sample results.
- ⁷ 363 samples were collected from the distribution system during 2018. One sample resulted in a positive level of total coliform bacteria and zero for e-coli. No more than 1 sample may test positive for total coliform.
- ⁸ Total Haloacetic Acids Five (HAA5) and Total Trihalomethanes (TTHM) compliance are based on highest running annual ave.

CITY OF GARFIELD WATER QUALITY TABLE (continued)

PRIMARY STANDARDS
(Directly related to the safety of drinking water)

<u>CONTAMINANT</u>	<u>MCLG</u>	<u>MCL</u>	<u>Well 8C Range</u>	<u>Well 1A Range</u>	<u>EP Wellfield Range</u>	<u>Meets Std.</u>	<u>Likely Source of Contaminant</u>
<u>Volatile Organic Compounds¹</u>							
1,2-Dichloroethane (ppb)	NS	2	OFF	<0.5	<0.5	Yes	Discharge from industrial chemical factories.
Cis-1,2-Dichloroethene (ppb)	NS	70	OFF	<0.5-1.80	<0.5-1.1	Yes	Discharge from industrial chemical factories.
Methyl-t-butyl Ether (MTBE) (ppb)	NS	70	OFF	<0.5	<0.5-1.71	Yes	Leaking underground gasoline & fuel oil tanks, spills and marine engine emissions.
Methylene Chloride (ppb)	NS	3	OFF	<0.5	<0.5	Yes	Discharge from industrial chemical factories.
Dibromochloromethane (ppb)	NS	NS	OFF	<0.5	<0.5-1.05	Yes	By-product of drinking water disinfection.
Tetrachlorethene (ppb)	1	1	OFF	<0.5	1.01 ³	Yes	Discharge from industrial chemical factories.
Trichloroethene (ppb)	1	1	OFF	<0.5	0.12 ³	Yes	Discharge from industrial chemical factories.

2018 UNREGULATED CONTAMINANTS FOR WHICH EPA REQUIRED MONITORING

Contaminant	Garfield (Range of Results)	Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. UCMR4 testing has started for the Year 2019
1,3 Dimethyl-2-Nitrobenzene, ppb	90.5-104	
Perfluorooctanoic - PFOA	3.67-37.4	
Perfluorononanoic - PFNA, ppb	2.01-3.58	
Benzo(a)pyrene-d12 (s), ppb	91.2-113	
Triphenylphosphate (s), ppb	101-109	
1,2-Butanol-D10 (s)	100-105	
Toluidine-9 (s)	89	
Quinoline-D7 (s)	103	

Footnotes

- ¹ Quarterly samples of treated water were collected and tested for 84 volatile organic compounds (VOCs).
- ² The Garfield Water System has been exempted from the requirement to sample for Synthetic Organic Compounds.
- ³ Running Annual Average rounds down from 1.5 to 1.0 and up to 2.0 at 1.51.

Health/Educational Information

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 infections by cryptosporidium and other microbial contaminants are available from the EPA Safe Drinking Water Hotline at 800-426-4791.

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 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 additional uncertainties regarding these effects. In the cases of lead and nitrate, effects on infants and children are the health endpoints upon which the standards are based.

CITY OF GARFIELD
SECONDARY STANDARDS¹
(Related to the aesthetic quality of drinking water)

<u>Substance Name</u>	<u>Recommended Upper Limit</u>	<u>Well 8C¹ Result</u>	<u>Elmwood Park¹ Result</u>	<u>Well 1A Result</u>	<u>Meets Standard</u>
ABS/LAS	0.5	OFF	0.11	0.12	Yes
Alkalinity (ppm)	NS	OFF	158	217	NA
Aluminum (ppm)	0.2	OFF	0.0091	.0013	Yes
Chloride (ppm)	250	OFF	144.27	212.26	Yes
Color (ppm)	10	OFF	<5	<5	Yes
Copper (ppm)	1.3	OFF	.0092	.0499	Yes
Corrosivity ²	+/-1.0	OFF	+0.68	-0.06	Yes
Flouride (ppm)	1.2	OFF	<0.05	<0.05	Yes
Hardness (ppm) ³	50-250	OFF	356	436	No³
Iron (ppm)	0.3	OFF	<0.10	<0.10	Yes
Manganese (ppm)	0.05	OFF	<0.5	<0.5	Yes
pH (units)	6.5-8.5	OFF	8.04	7.28	Yes
Silver (ppm)	0.1	OFF	<0.05	<0.5	Yes
Sodium (ppm)	50	OFF	42.1	61.01	NO
Sulfate (ppm)	250	OFF	57.72	46.23	Yes
Total Dissolved Solids (ppm) ⁴	500	OFF	536.5	688	No
Zinc (ppm)	5.0	OFF	.0016	.0089	Yes

Footnotes

- ¹ Testing for Secondary Standards was conducted in 2017. The City of Garfield is required to routinely sample for Secondary Standards every three (3) years. Although not regulated, these items act as an indicator of the aesthetic quality of the available drinking water.
- ² See also section on inorganics and lead and copper testing in Primary Standards above.
- ³ The range of 50-250 mg/l is the recommended range for hardness. Hardness will cause scaling of pipe and is not a health concern.
- ⁴ An elevated total dissolved solids (TDS) concentration or Hardness is not a health hazard. The TDS concentration is a secondary drinking standard and therefore is regulated because it is more of an aesthetic rather than a health hazard.

Additional Monitoring Results (City of Garfield)

The City of Garfield has been listed as an EPA Superfund Site due to the fact of a chromium spill that has occurred in the groundwater many years ago. During the Fall of 2012 and again in the Fall of 2013, Willard Bierwas (the Licensed Operator), under the direction of the City Manager was instructed to test "from the taps" of Garfield Water Customers in the affected area to determine if there was any contamination of the Garfield Water System from the Chromium spill. School #7 and several customers' taps were tested weekly. At no time and at no levels did the Chromium show up in any of the drinking water samples. Additional information about the Chromium can be found at www.garfieldnj.org. All records and lab analysis are maintained in the Licensed Operators office at 413 Midland Ave.

Additional 1,4-Dioxane testing was performed at our wells and Points of Entry during the year 2016 - 2017. Ranges were from 0.00 to 0.80 Parts per Billion

The following three pages have been provided to Garfield by the Passaic Valley Water Commission and represent the portion of our water that is purchased in bulk from them.

PASSAIC VALLEY WATER COMMISSION (PVWC) PWS ID NJ1605002- 2018 WATER QUALITY DATA

				Water Treatment Plant Results		
PRIMARY CONTAMINANTS	Compliance Achieved	MCLG	MCL	PVWC Little Falls WTP PWS ID NJ1605002	NJDWSC Wanaque WTP PWS ID NJ1613001	TYPICAL SOURCE
TURBIDITY AND TOTAL ORGANIC CARBON				Highest Result (Range of Results)	Highest Result (Average)	
Turbidity, NTU*	Yes	NA	TT = 1	0.36 (0.021 - 0.36)	0.41 (0.06 average)	Soil runoff.
	Yes	NA	TT = percentage of samples <0.3 NTU (min 95% required)	Lowest Monthly Percentage of Samples Meeting the Turbidity Limits		
				99.97%	99.9%	
* Turbidity is a measure of the cloudiness of the water, and is monitored as an indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.						
Total Organic Carbon, %	Yes	NA	TT = % removal; or removal ratio	Percent (%) Removal	Removal Ratio	Naturally present in the environment.
				49 - 80 (35 - 50 required)	1.1 (RAA) 1.0 - 1.3	
INORGANIC CONTAMINANTS				Highest Result (Range of Results)	Highest Result	
Barium, ppm	Yes	2	2	Less than 0.10	0.0145	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Fluoride, ppm	Yes	4	4	0.080 (ND - 0.080)	ND	Erosion of natural deposits.
Nickel, ppb	NA	NA	NA	2.39 (ND - 2.39)	ND	Erosion of natural deposits.
Nitrate, ppm	Yes	10	10	3.26 (ND - 3.26)	0.351	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Selenium, ppb	Yes	50	50	Less than 2	ND	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.

WAIVER INFORMATION

The Safe Drinking Water Act regulations allow monitoring waivers to reduce or eliminate the monitoring requirements for asbestos, volatile organic chemicals, and synthetic organic chemicals. NJDWSC was granted a monitoring waiver for synthetic organic chemicals for the 2017-2019 monitoring period by NJDEP. PVWC received a monitoring waiver for all of the synthetic organic contaminants except for the contaminant Di(2-Ethylhexyl)Phthalate for the 2017-2019 monitoring period.

SOURCE WATER ASSESSMENT

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), and NJDWSC system (PWS ID 1613001) can be obtained by accessing NJDEP's source water assessment web site at <http://www.nj.gov/dep/watersupply/swap/index.html> 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 assessments performed on the intakes for each system 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
PVWC 4 Surface Water	4-High	4-High	1-Medium, 3-Low	4-Medium	4-High	4-Low	4-Low	4-High
NJDWSC 5 Surface Water	5-High	5-High	2-Medium, 3-Low	5-Medium	5-High	5-Low	5-Low	5-High

SECONDARY PARAMETERS – TREATMENT PLANT EFFLUENT

Contaminant	N.J. Recommended Upper Limit (RUL)	PVWC Little Falls WTP PWSID NJ1605002		NJDWSC Wanaque WTP PWSID NJ1613001	
		Range of Results	RUL Achieved	Result	RUL Achieved
ABS/LAS, ppb	500	ND - 150	Yes	ND	Yes
Alkalinity, ppm	NA	40 - 70	NA	38	NA
Aluminum, ppb	200	ND - 39	Yes	60	Yes
Chloride, ppm	250	65 - 194	Yes	71	Yes
Color, CU	10	ND	Yes	2	Yes
Corrosivity	Non-Corrosive	Non-Corrosive	Yes	Non-Corrosive	Yes
Hardness (as CaCO ₃), ppm	250	92 - 160	Yes	52	Yes
Hardness (as CaCO ₃), grains/gallon	15	5 - 9	Yes	3	Yes
Iron, ppb	300	Less than 100	Yes	12	Yes
Manganese, ppb	50	Less than 50	Yes	2	Yes
Odor, TON	3	5 - 10	No	ND	Yes
pH	6.5 to 8.5 (optimum range)	7.7 - 8.4	Yes	8.0	Yes
Sodium, ppm	50	48 - 162	No*	40	Yes
Sulfate, ppm	250	42 - 68	Yes	8	Yes
Total Dissolved Solids, ppm	500	246 - 498	Yes	177	Yes
Zinc, ppb	5,000	Less than 50	Yes	16	Yes

* PVWC FINISHED WATER EXCEEDS SODIUM RUL

PVWC's finished water was above New Jersey's Recommended Upper Limit (RUL) of 50 ppm for sodium in 2018. 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. 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. If you have any concerns please contact your health care provider.

ADDITIONAL PVWC TREATMENT PLANT MONITORING RESULTS

Detected Contaminants, ppb	Little Falls WTP Effluent Range of Results	
Chlorate	(102 - 475)	<p>Test results presented in this table were collected in 2018 as part of a study to determine the general occurrence of these contaminants. PVWC continues to participate in, and support these types of regulatory and research efforts to maintain a position of leadership in drinking water supply.</p> <p>There are currently no EPA drinking water standards in effect for these contaminants although EPA has established health advisory levels for some of these to provide an estimate of acceptable drinking water levels based on health effects information.</p> <p>EPA has published Health Advisory levels for Perfluorooctanoic acid, (PFOA) and Perfluorooctanesulfonic acid, (PFOS), of 0.070 parts per billion (ppb) combined.</p> <p>The results observed in 2018 were below EPA established health advisory levels.</p> <p>NJDEP adopted a maximum contaminant level (MCL) of 0.013 parts per billion (ppb) for Perfluorononanoic acid (PFNA) in September 2018 and is considering a maximum contaminant level of 0.014 ppb</p>
Perfluorobutanesulfonic acid (PFBS)	(0.0020 - 0.0051)	
Perfluoroheptanoic acid (PFHpA)	(0.0021 - 0.0049)	
Perfluorohexanesulfonic acid (PFHxS)	(0.0025 - 0.0053)	
Perfluorohexanoic acid (PFHxA)	(0.0042 - 0.012)	
Perfluorononanoic acid (PFNA)	(ND – 0.0021)	
Perfluorooctanesulfonic acid (PFOS)	(0.0049 - 0.012)	
Perfluorooctanoic acid (PFOA)	(0.0072 - 0.016)	

Health advisory levels are non-enforceable and non-regulatory and provide technical information to state agencies and other public health officials on health effects, analytical methodologies, and treatment technologies associated with drinking water contamination.

DEFINITIONS of TERMS and ACRONYMS

ABS/LAS: Alkylbenzene Sulfonate and Linear Alkylbenzene Sulfonate (surfactants)

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

CU: Color unit

Disinfection By-product Precursors: A common source is naturally-occurring organic material in surface water. Disinfection by-products are formed when the disinfectants (usually chlorine) used to kill pathogens react with dissolved organic material (DBP precursors) present in surface water.

EPA: United States Environmental Protection Agency

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.

Microbial Contaminants/Pathogens: Disease-causing organisms such as bacteria, protozoa, 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: 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. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contamination.

NA: Not applicable

ND: Not detected above the minimum reporting level.

NJDEP: New Jersey Department of Environmental Protection

NJDWSC: North Jersey District Water Supply Commission

NTU: Nephelometric Turbidity Unit

Nutrients: Compounds, minerals and elements that aid growth, which can be either naturally occurring or man-made. Examples include nitrogen and phosphorus.

ppb: parts per billion (approximately equal to micrograms per liter)

ppm: parts per million (approximately equal to milligrams per liter)

PWS ID: Public Water System Identification

PVWC: Passaic Valley Water Commission

RAA: Running Annual Average

Radon: Colorless, odorless, cancer-causing gas that occurs naturally in the environment.

RUL: Recommended Upper Limit; the highest level of a constituent of drinking water that is recommended in order to protect aesthetic quality.

RUL Achieved: A "YES" entry indicates the State-recommended upper limit was not exceeded. A "NO" entry indicates the State-recommended upper limit was exceeded.

TON: Threshold Odor Number

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

WTP: Water Treatment Plant

ADDITIONAL INFORMATIONAL RESOURCES

EPA Drinking Water website: www.epa.gov/safewater

NJDEP Water Supply website: www.nj.gov/dep/watersupply

American Water Works Association website: www.awwa.org

EPA Safe Drinking Water Hotline: 800-426-4791

NJDEP Bureau of Safe Drinking Water: 609-292-5550

AWWA New Jersey Section website: www.njawwa.org