

**CITY OF GARFIELD
WATER SYSTEM
CONSUMER CONFIDENCE REPORT - 2009**

(Issued: Summer 2010)

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 2009, the City of Garfield Water Department conducted tests on water samples for over 80 contaminants that might be found in the water. These tests included items ranging from taste and odor, to bacteriological 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 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 2009 data, approximately 48.9 % of the city’s water demand was supplied by PVWC. 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 Tanks. 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:

Sources	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.

The 2004 source water assessment performed on Passaic Valley Water Commission (PVWC), PWSID 1605002, and North Jersey District Water Supply Commission (NJDWSC), PWSID 1613001, sources of water determined the following:

Sources	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
PVWC SWI -4	4			4				1	3		4		4					4			4	4		
NJDWSC SWI -5	5			5				2	3		5		5					5			5	5		

where SWI represents the number of surface water intakes.

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.

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.

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 water storage tank at the Belmont Hill site.

During 2009, the City of Garfield performed a hydrogeologic evaluation of Wells 1, 2, 4, 5, 10, 11, 12, 14, 16 & 17 and Wells 8 & 14 were rehabilitated. A new pump and piping system were installed for Well 1, which was placed on line. A new 12-inch water main has been constructed on Lanza Avenue which included a tie in to the existing 30-inch water main.

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 by an air stripper 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 2009. 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, 2009. 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.

Public Notice

During Monthly Coliform Testing for August 2009, one (1) out of thirty (30) samples resulted in positive levels of total coliform bacteria. Repeat samples were found to be negative. No more than one (1) of all monthly samples may test positive for total coliforms. Coliforms are bacteria which are naturally present in the environment. Coliforms are not a health threat in themselves, but are used to indicate whether other potentially harmful bacteria may be present. The City of Garfield Water Department is required to notify customers within one (1) year of the positive coliform sample result and this information shall serve as the Public Notice.

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	4 ³	--	Yes	Household Plumbing.
Copper ¹ (ppm)	AL=1.3	AL=1.3 ²	0.051 ³	--	Yes	Household Plumbing.
Nitrates (ppm)	10	10	1.0	ND-1.0	Yes	Natural Mineral.
Iron ⁴ (ppb)	-0-	0.3	0.05	--	Yes	
Manganese ⁴ (ppb)	-0-	0.05	0.003	--	Yes	
<u>Radionuclides</u> ⁵						
Gross Alpha Particles (pCi/l)	-0-	15	2.00 ⁶	0.77-2.87 ⁶	Yes	Erosion of natural deposits.
Radium-228 (pCi/l)	-0-	5	2.92 ⁶	0-1.88 ⁶	Yes	Erosion of natural deposits.
<u>Microbiologicals</u>						
Total Coliforms ⁷ (# of detects per month)	-0-	1	1	0 - 1	Yes	Naturally present in the environment.
<u>Organic Compounds</u>						
Total Haloacetic Acids Five ⁸ (HAA5) (ppb)	NS	60	19 ⁹	ND-24.2	Yes	By-product of drinking water disinfection.
Total Trihalomethanes ⁸ (TTHM) (ppb)	NS	80	37 ⁹	12.1-57.05	Yes	By-product of drinking water disinfection.

Footnotes

¹ The Garfield Water Department collected 30 water samples during 2009 from residents randomly 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.

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.

⁶ 2006 sample results.

⁷ 371 samples were collected from the distribution system during 2009. One (1) sample, August, resulted in positive levels of total coliform bacteria. No more than 1 sample may test positive for total coliforms.

Previous and subsequent samples collected at the original and nearby sites have been negative, and the water was and is safe to drink.

⁸ Total Haloacetic Acids Five (HAA5) and Total Trihalomethanes (TTHM) compliance are based on running annual average.

⁹ Highest running average.

For 2001, the MCL for TTHM was reduced from 100 to 80. The increase in concentration of these naturally occurring organics is related to the extended drought conditions in 2002. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys or central nervous systems, and may have an increased risk of getting cancer.

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>Garfield Result</u>	<u>Range of Results</u>	<u>Meets Std.</u>	<u>Likely Source of Contaminant</u>
<u>Volatile Organic Compounds</u>¹						
Cis-1,2-Dichloroethene (ppb)	NS	70	0.52	ND-0.52	Yes	Discharge from industrial chemical factories.
Methyl-t-butyl Ether (MTBE) (ppb)	NS	70	1.56	ND-1.56	Yes	Leaking underground gasoline & fuel oil tanks, spills and marine engine emissions.
Methylene chloride (ppb)	NS	3	0.73	ND-0.73	Yes	Discharge from pharmaceutical and chemical factories.
<u>Unregulated Contaminant Monitoring</u>²						
Bromodichloromethane (ppb)	0	NS	0.565 ³	ND-1.07	Yes	By-product of drinking water disinfection.
Bromoform (ppb)	0	NS	0.485 ³	ND-1.06	Yes	By-product of drinking water disinfection.
Chloroform (ppb)	NS	NS	4.43 ³	ND-17.1	Yes	By-product of drinking water disinfection.
Dibromochloromethane (ppb)	60	NS	1.075 ³	ND-1.29	Yes	By-product of drinking water disinfection.

Footnotes

- ¹ Quarterly samples of treated water were collected during 2008 and tested for 95 volatile organic compounds (VOCs). The Garfield Water System has been exempted from the requirement to sample for Synthetic Organic Compounds.
- ² Unregulated contaminants monitoring helps the EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants.
- ³ 2009 average sample results.

Coliforms

Coliforms are bacteria, which are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms may be found in more samples than allowed and this serves as a warning of potential problems.

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>Garfield Result</u>	<u>Meets Std.</u>
ABS/LAS	0.5	0.1	Yes
Alkalinity (ppm)	NS	168	NA
Aluminum (ppm)	0.2	0.1	Yes
Chloride (ppm)	250	105	Yes
Color (ppm)	10	2	Yes
Copper (ppm)	1.0	0.17	Yes
Corrosivity ²	+/-1.0	+0.42	Yes
Flouride (ppm)	1.2	0.2	Yes
Hardness (ppm) ³	50-250	358	No
Iron (ppm)	0.3	0.05	Yes
Manganese (ppm)	0.05	0.01	Yes
Odor (TON)	3	1	Yes
pH (units)	6.5-8.5	8.01	Yes
Silver (ppm)	0.1	<0.03	Yes
Sodium (ppm)	50	18	Yes
Sulfate (ppm)	250	53	Yes
Total Dissolved Solids (ppm) ⁴	500	510	No
Langelier's Index	0.5	0.39	Yes
Zinc (ppm)	5.0	0.03	Yes

Footnotes

- ¹ Testing for Secondary Standards was conducted in 2008. 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 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)

In 2008, the NJDEP collected data as part of a preliminary study to determine the general occurrence of Perfluorooctanoic Acid (PFOA) and Perfluorooctanoic Sulfonate (PFOS) in surface and source waters in New Jersey. Currently, there is no drinking water standard for these compounds. Additional information can be found at <http://www.epa.gov/opptintr/pfoa/index.htm>.

<u>Substance</u>	<u>Result</u>
Perfluorooctanoic Acid (PFOA), (ppb)	0.027
Perfluorooctanoic Sulfonate (PFOS), (ppb)	0.039

PASSAIC VALLEY WATER COMMISSION - 2009 WATER QUALITY RESULTS

The following Table presents data on water produced by the Passaic Valley Water Commission and purchased by the City of Garfield. The following results represent compliance samples collected and reported to NJDEP in 2009. Some of the data, though representative of the water quality, is more than one year old.

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

<u>CONTAMINANT</u>	<u>MCLG</u>	<u>MCL</u>	<u>Results</u>	<u>Likely Source of Contaminant</u>
Turbidity ¹ (NTU)	NA	1 NTU	0.28	Soil run-off.
		% of samples < 0.3 NTU:	100%	
Total Organic Carbon (%)	NA	TT (% removal)	66 % (25-45% required)	Naturally present in the environment.
<u>Inorganic Contaminants</u>				
Barium (ppm)	2	2	0.02 (ND-0.02) ²	Discharge of drilling wastes, discharge from metal refineries and erosion of natural deposits.
Chromium (ppb)	100	100	3 (ND - 3) ²	Discharge from steel and pulp mills; Erosion of natural deposits.
Nickel (ppm)	NA	NA	0.004 (0.002-0.004)	Erosion of natural deposits.
Nitrate (ppm)	10	10	2.29 ³ (0.65-2.29)	Runoff from fertilizer use, leaching from septic tanks, sewage, erosion of natural deposits.
Selenium (ppb)	50	50	4 (ND - 4) ²	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.
<u>Organic Compounds</u>				
Haloacetic Acids (ppb)	NS	60	28 (4 - 28)	By-product of drinking water disinfection.
Total Trihalomethanes (ppb)	NS	80	20 (5 - 20)	By-product of drinking water disinfection.
Toluene (ppb)	1000	1000	0.2 (ND - 0.2) ²	Discharge from petroleum factories.
<u>Radionuclides⁴</u>				
Gross Alpha (pCi/L)	0	15	ND ²	Erosion of natural deposits.
Radium 228 (pCi/L)	0	5	ND ²	Erosion of natural deposits.
<u>Detected Secondary Analytes</u>				
Sodium (ppm) (unregulated)	NA	50	177 ⁵	Natural mineral, road salt.

Footnotes

¹ Turbidity standard of 0.5 NTU is mandated for filtered surface water. Turbidity is measured at the treatment plant.

² ND represents none detected.

³ Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.

⁴ 2005 - 2006 Data.

⁵ 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.

**PASSAIC VALLEY WATER COMMISSION (PVWC)
2008 WATER QUALITY RESULTS
SECONDARY STANDARDS**

(Related to the aesthetic quality of drinking water)

<u>Substance Name</u>	<u>Federal/State</u>	<u>PVWC Result</u>	<u>Meets Std.</u>
Alkalinity (ppm)	NS	40 - 56	NS
Aluminum (ppm)	0.2	0.015-0.022	Yes
Chloride (ppm)	250	85 - 141	Yes
Color (CU)	10	ND	Yes
Copper (ppm)	1000	ND-0.002	Yes
Corrosivity	(+/- 1.0)	Non-corrosive	Yes
Hardness (ppm)	50-250	66 - 176	Yes
Iron (ppm)	0.3	ND - 60	Yes
Manganese (ppm)	0.05	5 - 20	Yes
Odor (TON)	3	ND	Yes
pH (units)	6.5-8.5	8.0 – 8.5	Yes
Sodium (ppm)	50	55 - 177	No ¹
Sulfate (ppm)	250	46 - 97	Yes
Total Dissolved Solids (ppm)	500	283 - 430	Yes
Zinc (ppm)	5	ND – 0.016	Yes

Footnotes:

¹ PVWC was above New Jersey's Recommended Upper Limit (RUL) for 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.

Additional Monitoring Results (Passaic Valley Water Commission)

The NJDEP collected data as part of a preliminary study to determine the general occurrence of Perfluorooctanoic Acid (PFOA) and Perfluorooctanoic Sulfonate (PFOS) in surface and source waters in New Jersey. Currently, there is no drinking water standard for these compounds. Additional information can be found at <http://www.epa.gov/opptintr/pfoa/index.htm>.

<u>Substance</u>	<u>PVWC Intake</u>	<u>PVWC Effluent</u>
Perfluorooctanoic Acid (PFOA), (ppb)	0.026 ¹	0.027 ¹
Perfluorooctanoic Sulfonate (PFOS), (ppb)	0.0062 ¹ (estimated value)	0.0049 ¹ (estimated value)

Footnotes:

¹ 2006 Data

MICROBIAL MONITORING OF SOURCE WATER

Cryptosporidium: *Cryptosporidium* is a protozoan cyst sometimes found in raw surface water and is generally removed at the Water Treatment Facility. *Cryptosporidium* has not been detected in PVWC finished water.

The Passaic and Pompton Rivers are the sources of raw water for the PVWC Little Falls Surface Water Treatment Plant.

**THE NORTH JERSEY DISTRICT WATER SUPPLY COMMISSION (NJDWSC)
2009 WATER QUALITY RESULTS**

The following Table presents data on water produced by the North Jersey District Water Supply Commission (NJDWSC) in 2009. Some of the data, though representative of the water quality, is more than one year old. The table lists all the drinking water analytes that were detected. The presence of these analytes in the water does not necessarily indicate that the water poses a health risk.

PRIMARY STANDARDS

(Directly related to the safety of drinking water)

<u>CONTAMINANT</u>	<u>MCLG</u>	<u>MCL</u>	<u>Results</u>	<u>Range of Results</u>	<u>Meets Std.</u>	<u>Likely Source of Contaminant</u>
Turbidity (NTU)	NS	1	0.15	(Highest Result)	Yes	Soil run-off
		% of samples < 0.3 NTU:		100 %		
Total Organic Carbon (%)	NA	TT = (% removal)	35 %	25 to 46 % (35% req.)	Yes	Naturally present in the environment.
<u>Inorganic Compounds</u>						
Arsenic (ppb)	0	5	0.20	ND-0.20	Yes	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Barium (ppm)	2	2	0.01	ND-0.01	Yes	Discharge of drilling wastes, discharge from metal refineries and erosion of natural deposits.
Fluoride (ppm)	4	4	0.029	ND-0.029	Yes	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Mercury (ppb)	2	2	0.038	ND-0.038	Yes	Erosion of natural deposits; Discharge from refineries or factories; Runoff from landfills; Runoff from cropland.
Nitrate (ppm)	10	10	0.21	ND-0.21	Yes	Runoff from fertilizer use, leaching from septic tanks, sewage, erosion of natural deposits.
<u>Organic Compounds</u>						
Haloacetic Acids (ppb)	NS	60	36	31-36	Yes	By-product of drinking water disinfection.
Total Trihalomethanes (ppb)	NS	80	80	53-80	Yes	By-product of drinking water disinfection.
<u>Radionuclides¹</u>						
Gross Alpha (pCi/L)	0	15	ND	-	Yes	Erosion of natural deposits.
Radium 228 (pCi/L)	0	5	ND	-	Yes	Erosion of natural deposits.

Footnotes

¹ 2006 Data.

NJDWSC SECONDARY STANDARDS

(Related to the aesthetic quality of drinking water)

<u>Substance Name</u>	<u>Federal/State</u>	<u>NJDWSC Result</u>	<u>Meets Std.</u>
Alkalinity (ppm)	NS	30	NS
Aluminum (ppm)	0.200	0.025	Yes
Chloride (ppm)	250	46	Yes
Color (CU)	10	2	Yes
Hardness (ppm)	50-250	56	Yes
Iron (ppm)	0.3	0.011	Yes
Manganese (ppm)	0.05	0.0009	Yes
pH (units)	6.5-8.5	8.0	Yes
Sodium (ppm)	50	25	Yes
Sulfate (ppm)	250	11	Yes
Total Dissolved Solids (ppm)	500	131	Yes
Zinc (ppm)	5	0.009	Yes

DEFINITIONS

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

Maximum Contaminant Level Goal (MCLG) - 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.

Maximum Contaminant Level (MCL) - 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.

Primary Standards - Federal drinking water regulations for substances that are health-related. Water suppliers must meet all primary drinking water standards.

Secondary Standards - Federal drinking water measurements for substances that do not have an impact on health. These reflect aesthetic qualities such as taste, odor, and appearance. Secondary standards are recommendations, not mandates.

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

TERMS AND ABBREVIATIONS

ABS/LAS - Common major components of synthetic detergents. ABS is the abbreviation for sodium alkyl benzene sulfonate which has been largely replaced by linear alkyl sulfonate (LAS).

Color Unit (CU) - Dissolved organic material from decaying vegetation and certain inorganic matter cause color in water. While color itself is not a health risk, its presence is aesthetically objectionable and suggests that the water needs appropriate treatment.

Cryptosporidium - a microbial pathogen found in surface water throughout the U.S. Although filtration removes cryptosporidium, the most commonly-used filtration methods cannot guarantee 100 percent removal. Ingestion of cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people, infants and small children, and the elderly are at greater risk of developing life-threatening illness. Immuno-compromised individuals should 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.

Inorganic Compounds - Chemicals associated with minerals and metals.

Langelier's Index - An index reflecting the equilibrium pH of water with respect to calcium and alkalinity. Used in stabilizing water to control deposition of scale.

Microbiologicals - Microorganisms such as bacteria, viruses, and protozoa, which may be potentially harmful. These organisms may occur naturally or can be introduced into the environment from sewerage treatment plants, septic systems, and agricultural runoff.

ml - Milliliters.

NA - Not Applicable.

ND - Not Detected.

NJDWSC - North Jersey District Water Supply Commission.

NS - No Standard.

Nephelometric Turbidity Unit (NTU) - A measure of the clarity of water.

Organic Compounds - Chemicals associated with carbon or living matter.

Parts per billion (ppb) or micrograms per liter - One part per billion corresponds to a single penny in \$10,000,000.00. Concentration in parts per billion.

Parts per million (ppm) or milligrams per liter (mg/l) - One part per million corresponds to a single penny in \$10,000.00. Concentration in parts per million.

Picocuries per liter (pCi/l) - is a measure of radioactivity in water.

PVWC - Passaic Valley Water Commission.

Radionuclides - contaminants giving off ionizing radiation.

TON - Threshold Odor Number.

Total Trihalomethanes (TTHMs) - TTHMs are formed when organic compounds in water react with chlorine (used as a disinfectant). TTHMs may have harmful health effects.

Turbidity - in excess of 5 NTU is just noticeable to the average person. The clarity or amount of suspended material in water.

Variations and Exemptions - State (NJDEP) or EPA permission not to meet an MCL or a treatment technique under certain conditions.