

**Complete Water Analysis for City of Princeton**  
2014

**Coliform Bacteria**

Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest No. of Positive	Fecal Coliform or E. Coli Maximum Contaminant Level	Total No. of Positive E. Coli or Fecal Coliform Samples	Violation	Likely Source of Contamination
0	1 positive monthly sample	0	0	0	No	Naturally present in the environment.

NOTE: Reported monthly tests found no fecal coliform bacteria. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present.

**Regulated Contaminants**

Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Total Haloacetic Acids (HAA5)	2013	28	26.2-29.7	No goal for the total	60	ppb	No	By-product of drinking water chlorination.
Total Trihalomethanes (THM)	2013	35	34.2-35.2	No goal for the total	80	ppb	No	By-product of drinking water chlorination.

NOTE: Not all sample results may have been used for calculating the Highest Level Detected because some results may be part of an evaluation to determine where compliance sampling should occur in the future.

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Antimony	2013	Levels lower than detect level	0-0	6	6	ppb	No	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder; and test addition.
Arsenic	2013	1.21	0.00-1.21	0	10	ppb	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes.
Barium	2013	0.04	.04-.04	2	2	ppm	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Beryllium	2013	Levels lower than detect level	0 - 0	4	4	ppb	No	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries.
Cadmium	2013	Levels lower than detect level	0 - 0	5	5	ppb	No	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints.
Chromium	2013	0.96	0.00-0.96	100	100	ppb	No	Discharge from steel and pulp mills; erosion of natural deposits.
Fluoride	2013	0.76	0.36-0.76	4	4	ppm	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Mercury	2013	Levels lower than detect level	0 - 0	2	2	ppb	No	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland.
Nitrate (measured as Nitrogen)	2013	0.8	0.56-0.80	10	10	ppm	No	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits.

**Nitrate Advisory:** Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care provider.

Selenium	2013	3.45	2.83-3.45	50	50	ppb	No	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.
Thallium	2013	Levels lower than detect level	0 - 0	0.5	2	ppb	No	Discharge from electronics, glass, and leaching from ore-processing sites; drug factories.

Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Beta/positron emitters	#####	4.4	4.4 - 4.4	0	50	pCi/L	No	Decay of natural and man-made deposits.
Gross alpha excluding radon and uranium	#####	Levels lower than detect level	0 - 0	0	15	pCi/L	No	Erosion of natural deposits.
Radium	NA	NA	NA	0	5	pCi/L	No	Erosion of natural deposits.

Synthetic organic contaminants including pesticides and herbicides	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
2, 4, 5 - TP (Silvex)	2011	Levels lower than detect level	0 - 0	50	50	ppb	No	Residue of banned herbicide.
2, 4 - D	2013	Levels lower than detect level	0 - 0	70	70	ppb	No	Runoff from herbicide used on row crops.
Alachlor	2013	Levels lower than detect level	0 - 0	0	2	ppb	No	Runoff from herbicide used on row crops.
Atrazine	2013	0.4	0.36-0.40	3	3	ppb	No	Runoff from herbicide used on row crops.
Benzo (a) pyrene	2013	Levels lower than detect level	0 - 0	0	200	ppt	No	Leaching from linings of water storage tanks and distribution lines.
Carbofuran	2013	Levels lower than detect level	0 - 0	40	40	ppb	No	Leaching of soil fumigant used on rice and alfalfa.
Chlordane	2013	Levels lower than detect level	0 - 0	0	2	ppb	No	Residue of banned termiticide.
Dalapon	2013	Levels lower than detect level	0 - 0	200	200	ppb	No	Runoff from herbicide used on rights of way.
Di (2-ethylhexyl) adipate	2013	0.74	0 - 0.74	400	400	ppb	No	Discharge from chemical factories.
Di (2-ethylhexyl) phthalate	2013	Levels lower than detect level	0 - 0	0	6	ppb	No	Discharge from rubber and chemical factories.
Dibromochloropropane (DBCP)	2013	Levels lower than detect level	0 - 0	0	0	ppt	No	Runoff / leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards.
Dinoseb	2013	Levels lower than detect level	0 - 0	7	7	ppb	No	Runoff from herbicide used on soybeans and vegetables.
Endrin	2013	Levels lower than detect level	0 - 0	2	2	ppb	No	Residue of banned insecticide.
Ethylene dibromide	2013	Levels lower than detect level	0 - 0	0	50	ppt	No	Discharge from petroleum refineries.
Heptachlor	2013	Levels lower than detect level	0 - 0	0	400	ppt	No	Residue of banned termiticide.
Heptachlor epoxide	2013	Levels lower than detect level	0 - 0	0	200	ppt	No	Breakdown of heptachlor.
Hexachlorobenzene	2012	Levels lower than detect level	0 - 0	0	1	ppb	No	Discharge from metal refineries and agricultural chemical factories.
Hexachlorocyclopentadiene	2013	Levels lower than detect level	0 - 0	50	50	ppb	No	Discharge from chemical factories.
Lindane	2013	Levels lower than detect level	0 - 0	200	200	ppt	No	Runoff / leaching from insecticide used on cattle, lumber, and gardens.
Methoxychlor	2013	Levels lower than detect level	0 - 0	40	40	ppb	No	Runoff / leaching from insecticide used on fruits, vegetables, alfalfa, and livestock.
Oxamyl [Vydate]	2013	Levels lower than detect level	0 - 0	200	200	ppb	No	Runoff / leaching from insecticide used on apples, potatoes, and tomatoes.
Pentachlorophenol	2013	Levels lower than detect level	0 - 0	0	1	ppb	No	Discharge from wood preserving factories.
Simazine	2013	0.18	0.18-0.18	4	4	ppb	No	Herbicide runoff.
Toxaphene	2013	Levels lower than detect level	0 - 0	0	3	ppb	No	Runoff / leaching from insecticide used on cotton and cattle.

Volatile Organic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
1, 1, 1 - Trichloroethane	2013	Levels lower than detect level	0 - 0	200	200	ppb	No	Discharge from metal degreasing sites and other factories.
1, 1, 2 - Trichloroethane	2013	Levels lower than detect level	0 - 0	3	5	ppb	No	Discharge from industrial chemical factories.
1, 1 - Dichloroethylene	2013	Levels lower than detect level	0 - 0	7	7	ppb	No	Discharge from industrial chemical factories.
1, 2, 4 - Trichlorobenzene	2013	Levels lower than detect level	0 - 0	70	70	ppb	No	Discharge from textile-finishing factories.
1, 2 - Dichloroethane	2013	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from industrial chemical factories.
1, 2 - Dichloropropane	2013	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from industrial chemical factories.
Benzene	2013	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from factories; leaching from gas storage tanks and landfills.
Carbon Tetrachloride	2013	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from chemical plants and other industrial activities.
Chlorobenzene	2013	Levels lower than detect level	0 - 0	100	100	ppb	No	Discharge from chemical and agricultural chemical factories.
Dichloromethane	2013	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from pharmaceutical and chemical factories.
Ethylbenzene	2013	Levels lower than detect level	0 - 0	0	700	ppb	No	Discharge from petroleum refineries.
Styrene	2013	Levels lower than detect level	0 - 0	100	100	ppb	No	Discharge from rubber and plastic factories; leaching from landfills.

Tetrachloroethylene	2013	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from factories and dry cleaners.
Toluene	2013	Levels lower than detect level	0 - 0	1	1	ppm	No	Discharge from petroleum factories.
Trichloroethylene	2013	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from metal degreasing sites and other factories.
Vinyl Chloride	2013	Levels lower than detect level	0 - 0	0	2	ppb	No	Leaching from PVC piping; discharge from plastics factories.
Xylenes	2013	Levels lower than detect level	0 - 0	10	10	ppm	No	Discharge from petroleum factories; discharge from chemical factories.
cis - 1, 2 - Dichloroethylene	2013	Levels lower than detect level	0 - 0	70	70	ppb	No	Discharge from industrial chemical factories.
o - Dichlorobenzene	2013	Levels lower than detect level	0 - 0	600	600	ppb	No	Discharge from industrial chemical factories.
p - Dichlorobenzene	2013	Levels lower than detect level	0 - 0	75	75	ppb	No	Discharge from industrial chemical factories.
trans - 1, 2 - Dichloroethylene	2013	Levels lower than detect level	0 - 0	100	100	ppb	No	Discharge from industrial chemical factories.

### Turbidity

	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Contamination
Highest single measurement	1 NTU	0.82	No	Soil runoff.
Lowest monthly percentage (%) meeting limit	0.3 NTU	95.60%	No	Soil runoff.

NOTE: Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

### Maximum Residual Disinfectant Level

Disinfectant Type	Year	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Units	Source of Chemical
Chlorine Residual (Chloramines)	2013	1.54	0.55	4	4.0	<4.0	ppm	Disinfectant used to control microbes.
Chlorine Dioxide	2013	<0.10	0	0.12	0.8	0.8	ppm	Disinfectant.
Chlorite	2013	0.47	0.09	0.85	1.0	N/A	ppm	Disinfectant.

### Total Organic Carbon

	Collection Date	Highest Level Detected	Range of Levels Detected	Units	Likely Source of Contamination
Source Water	2013	5.61	4.59-5.61	ppm	Naturally present in the environment.
Drinking Water	2013	4.12	3.16-4.12	ppm	Naturally present in the environment.
Removal Ratio	2013	37.9%	19%-37.9%	% removal *	N/A

NOTE: Total organic carbon (TOC) has no health effects. The disinfectant can combine with TOC to form disinfection by-products. Disinfection is necessary to ensure that water does not have unacceptable levels of pathogens. By-products of disinfection include trihalomethanes (THMs) and haloacetic acids (HAA) which are reported elsewhere in this report.  
\* Removal ratio is the percent of TOC removed by the treatment process divided by the percent of TOC required by TCEQ to be removed.

### Lead and Copper

Contaminants	Collection Date	90th Percentile	# Sites over Action Level	Violation	MCL	MCLG	Units	Likely Source of Contamination
Lead	2013	2.44	0	No	15	15	ppb	Corrosion of customer plumbing. Action Level = 15
Copper	2013	0.407	0	No	1.3	1.3	ppm	By-product of drinking water disinfection. Action Level = 1.3

**ADDITIONAL HEALTH INFORMATION FOR LEAD:** 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 NTMWD is 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 <http://www.epa.gov/safewater/lead>.

### Cryptosporidium And Giardia

Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	Units	Likely Source of Contamination
Cryptosporidium	2013	0	0 - 0	(Oo) Cysts/L	Human and animal fecal waste.
Giardia	2013	0	0 - 0	(Oo) Cysts/L	Human and animal fecal waste.

Note- Taken on treated water samples.

### Unregulated Contaminants

Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	Units	Likely Source of Contamination
Chloroform	2013	14.30	13.3-14.3	ppb	By-product of drinking water disinfection.
Bromoform	2013	1.13	1.05-1.13	ppb	By-product of drinking water disinfection.
Bromodichloromethane	2013	12.30	12.0-12.3	ppb	By-product of drinking water disinfection.
Dibromochloromethane	2013	7.72	7.62-7.72	ppb	By-product of drinking water disinfection.

NOTE: Bromoform, chloroform, dichlorobromomethane, and dibromochloromethane are disinfection by-products. There is no maximum contaminant level for these chemicals at the entry point to distribution.

### Unregulated Contaminant Monitoring Rule 2 (UCMR2)

Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	Units	Likely Source of Contamination
N-nitrosodimethylamine (NDMA)	2009	0.0023	0 - 0.0023	ppb	By-product of manufacturing process.

NOTE: 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. Any unregulated contaminants detected are reported in this report. For additional information and data visit <http://www.epa.gov/safewater/ucmr/ucmr2/index.html>, or call the Safe Drinking Water Hotline at (800) 426-4791.

### Secondary and Other Constituents Not Regulated

Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	Units	Likely Source of Contamination
Bicarbonate	2013	102	82-102	ppm	Corrosion of carbonate rocks such as limestone.
Calcium	2013	53.2	50.3-53.2	ppm	Abundant naturally occurring element.
Chloride	2013	36.5	32.9-36.5	ppm	Abundant naturally occurring element; used in water purification; by-product of oil field activity.
Hardness as Ca/Mg	2013	146	142-146	ppm	Naturally occurring calcium and magnesium.
Iron	2013	Levels lower than detect level	0.00-0.00	ppm	Erosion of natural deposits; iron or steel water delivery equipment or facilities.
Magnesium	2013	4.07	3.99-4.07	ppm	Abundant naturally occurring element.
Manganese	2013	0.006	0.0011-0.006	ppm	Abundant naturally occurring element.
Nickel	2013	0.01	0.00-0.01	ppm	Erosion of natural deposits.
pH	2013	8.68	7.69-8.68	units	Measure of corrosivity of water.
Sodium	2013	44.4	34.6-44.4	ppm	Erosion of natural deposits; by-product of oil field activity.
Sulfate	2013	94	85.3-94	ppm	Naturally occurring; common industrial by-product; by-product of oil field activity.
Total Alkalinity as CaCO3	2013	149	82-149	ppm	Naturally occurring soluble mineral salts.
Total Dissolved Solids	2013	317	302-317	ppm	Total dissolved mineral constituents in water.
Total Hardness as CaCO3	2013	146	142-146	ppm	Naturally occurring calcium.
Zinc	2013	0.01	0.00-0.01	ppm	Moderately abundant naturally occurring element used in the metal industry.