

ACRONYMS AND DEFINITIONS

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.

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.

Secondary Maximum Contaminant Level (SMCL): Any contaminant in drinking water which may adversely affect the taste, color, odor, or appearance of such water, or which may adversely affect the public welfare.

Maximum Residual Disinfectant Level (MRDL): 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.

Maximum Residual Disinfectant Level Goal (MRDLG): 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 contamination.

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

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

Variations and Exceptions: State or EPA permission not to meet a MCL or a treatment technique under certain conditions.

ppm: Concentration in parts per million or milligrams per liter (mg/L); this is equivalent to \$0.01 of \$10,000.

ppb: Concentration in parts per billion or micrograms per liter (µg/L); this is equivalent to \$0.01 of \$10,000,000.

pCi/L: Picocuries per liter; a measure of radioactivity.

NLE: No Level Established

NTU: Nephelometric turbidity units (units describing how cloudy a water sample appears).

MFL: million fibers per liter.

<: When seen in the table, it usually refers to below detectable levels.

≤: Less than or equal to; when seen in the table, it usually refers to below or equal to detectable levels.

Contaminant: Anything found in water (including microorganisms, minerals, chemicals, radionuclides, etc.) that may be harmful to human health.

Raw Water: Water in its natural state prior to any treatment for drinking.

Source Water: Water in its natural state originating from the watershed that supplies a water system with its raw water.

Watershed: The land area from which water drains into a stream, river, or reservoir.

Treated Water: Water to be used by a public water system that has received the application of approved water treatment chemicals.

Drinking Water: Water that has been treated to comply with EPA regulations and is pumped to the water customer for use.

Turbidity: Turbidity is a measure of the cloudiness of the water, which is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.

FOOTNOTES

- Trenton Water Works was granted a reduction in sampling frequency in accordance with 40 CFR 141.86(d)4. Minimum 50 samples are collected every three years as required. Data presented was from 54 samples collected and analyzed in 2011. TWW will be required to conduct lead and copper sampling again in 2014.
- Stage 1 Disinfectants and Disinfectant Byproducts Rule (DBPR) monitoring is no longer required and is superseded by Stage 2 DBPR after the first quarter of 2012. Stage 2 DBPR monitoring began April 1, 2012 based on new regulations in the Safe Drinking Water Act. Data presented was sampled quarterly in 2013.
- The regulations require that the highest Locational Running Annual Average (LRAA) for TTHM and HAA5 must be reported. If more than one monitoring location exceeds the TTHM or HAA5 MCL, the LRAAs for all locations that exceed the MCL shall be included. LRAA means the 4-quarter average for each specific sampling site location. LRAAs calculated in 2013 started with quarterly measurements from 2nd quarter of 2012.
- Data presented is the range of sample results (not LRAA) for all monitoring locations using the 2013 quarterly results.
- Compliance is determined based on a LRAA. TTHM was in violation before the 2nd quarter of 2013 for Site TTHM-2. The TTHM compliance for Site TTHM-2 was achieved in the 3rd quarter of 2013.
- Number of routine samples required is 120 per month. Average number of monthly samples that collected in 2013 is 152. For systems that collect ≥ 40 samples per month, 5% of monthly samples are positive for highest level allowed (EPA MCL).
- Turbidity is a measure of the cloudiness of the water. 99.7% of the turbidity readings in 2013 were below the treatment technique requirement of 0.3 NTU.
- Sample frequency is 1 sample per 9 year period. The current compliance period is 2011-2019.
- Value is taken from drinking water watch - inorganics reporting.
- NJDEP standard.
- Trenton Water Works was granted an SOC waiver by the NJDEP for compliance period 2011-2013. Data presented was sampled from the Delaware River and it does not represent a value for the potable water. Two samples were collected in 2012.
- Sampling frequency is 1 sample per 9 year period. Data presented was sampled quarterly in 2006. TWW will be required to conduct sampling again in 2014.

Drinking Water Quality Results								
METALS – TESTED AT CUSTOMERS’ TAPS ^a								
	Units	EPA’s Action Level at 90%	Ideal Goal (EPA MCLG)	90% of samples were less than or equal to for 2011	2011 Number of Samples Exceeding Action Level	Violation Y/N	Source	
Lead	ppm	15	0	0.003	0 out of 54	N	Corrosion of household plumbing; erosion of natural deposits.	
Copper	ppm	1.3	1.3	0.07	0 out of 54	N	Corrosion of household plumbing; erosion of natural deposits.	
DISINFECTION BYPRODUCTS (DBP) – STAGE 2 ^b								
Sampling Sites (total eight sites)	Units	Highest Annual Average Allowed (EPA MCL)	Ideal Goal (EPA MCLG)	2013 Highest LRAA ^c	2013 Range of Values ^d	2013 Violation Y/N	Source	
Total Trihalomethanes (TTHM) ^e								
Site TTHM-2	ppb	80	N/A	95	51 – 73	Y	Byproduct of drinking water disinfection	
All other seven sites	ppb	80	N/A	72	23 – 67	N	Byproduct of drinking water disinfection	
Five Haloacetic Acids (HAA5)								
All eight sites	ppb	60	N/A	40	3 – 44	N	Byproduct of drinking water disinfection	
BACTERIA IN TAP WATER								
		Highest Level Allowed (EPA MCL)	Ideal Goal (EPA MCLG)	2013 Highest Monthly Result	2013 Violation Y/N	Source		
Total Coliform Bacteria ^f		Presence of coliform bacteria 5% of monthly samples	0	1 positive sample out of 154 (0.65%)	N	Naturally present in the environment; their presence indicates potential contamination		
Fecal coliform and E. coli		A routine sample and repeat sample if total coliform positive, and if one fecal or E. coli positive	0	0	N	Humans and animal fecal waste		
CLARITY CHARACTERISTICS – TESTED AT WATER TREATMENT PLANT								
	Units	Highest Level Allowed (EPA MCL)	Ideal Goal (EPA MCLG)	Highest Reported 2013 Constituent Level	2013 Range of Values	2013 Average Value	2013 Violation Y/N	Source
Turbidity ^g	NTU	TT=1 NTU	0	0.80	0.04–0.80	0.10	N	Soil runoff; river sediment.
		95% of monthly samples must be at or below 0.3 NTU	N/A	99.7% of samples ≤ 0.3 NTU	N/A	N/A	N	
INORGANIC CONTAMINANTS								
	Units	Highest Level Allowed (EPA MCL)	Ideal Goal (EPA MCLG)	Reported 2013 Constituent Level	2013 Violation Y/N	Source		
Asbestos ^h	MFL	7	7	<0.09	N	Decay of asbestos cement water mains; Erosion of natural deposits.		
Fluoride ⁱ	ppm	4	2	1.34	N	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.		
Nitrate (as Nitrogen)	ppm	10	10	0.804	N	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.		
Sodium ^j	ppm	50 (SMCL)	NLE	16.1	N	Naturally present in the environment.		
Sulfate ^j	ppm	250 (SMCL)	NLE	14.6	N	Naturally present in the environment.		
Hardness ^j (as CaCO₃)	ppm	250 (SMCL)	NLE	112	N	Erosion of natural deposits		
Chloride ^j	ppm	250 (SMCL)	NLE	45.2	N	Naturally present in the environment and road salt.		
Mercury	ppb	2	2	0.036	N	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland		
SYNTHETIC ORGANIC COMPOUNDS (SOC) ^k								
	Units	Highest Level Allowed (EPA MCL)	Ideal Goal (EPA MCLG)	2012 Highest Result	Violation Y/N	Source		
Di (2-ethylhexyl) phthalate	ppb	6	0	0.31	N	Discharge from rubber and chemical factories		
TOTAL CHLORINE RESIDUAL								
	Units	EPA MRDL	MRDLG	2013 Annual Average	2013 Highest Result	2013 Violation Y/N	Source	
Total Chlorine	ppm	4.0 as Cl ₂	4	0.74	1.24	N	Water additive used to control microbes.	
RADIOACTIVE CONTAMINANTS IN TAP WATER ^l								
	Units	Highest Level Allowed (EPA MCL)	Ideal Goal (EPA MCLG)	2006 Highest Result	2006 Range of Values	Violation Y/N	Source	
Alpha Emitters	pCi/L	15	0	2.24	0.35–2.24	N	Erosion of natural deposits.	
Combined Radium	pCi/L	5	0	1.12	0.05–1.12	N	Erosion of natural deposits.	

TABLE NOTES

- The NJDEP has waived requirements to sample for SOC (primarily pesticides) for the compliance period 2011-2013 because surface-water testing results indicate that they are not expected to occur in surface-water supplies in this area. Data presented was analyzed for raw water samples from the Delaware River by the New Jersey Department of Health and Senior Services in 2012.
- The NJDEP allows Trenton Water Works to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than once year old. The data the does not represent the current sampling year: 1) lead and copper; 2) synthetic organic compounds; 3) radioactive contaminants.

