THE CITY OF TRENTON IS PLEASED TO PRESENT THE

TRENTON WATER WORKS

2012 WATER QUALITY REPORT

Quality drinking water is an essential resource. The good news is that your tap water is top quality! Our water meets all state and federal standards.

YOUR DRINKING WATER:
It's High Quality. It's Reliable.

And we are continuing to make the necessary changes to keep it that way.

— *Tony F. Mack, Mayor*
Trenton Water Works

NOTICE TO LANDLORDS:
You are required by law to make this report available to all water consumers. Please post in a visible location or distribute to all tenants. Additional copies are available by calling 609.989.3208.

TRENTON WATER WORKS
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Trenton, NJ 08604-0528

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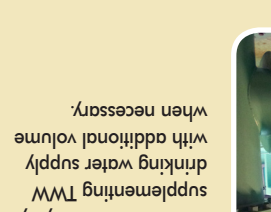
Trenton Water Works Licensed Operators

Trenton Water Works (TWW) is classified as a T4 treatment facility. The public water system (T) classification is determined by population served, volume of water produced and treatment processes. The T4 classification indicates the largest and most complex water systems and requires the most experienced licensed operators. The New Jersey Department of Environmental Protection (NJDEP) requires that a full time T4 licensed operator be employed by the water utility. There is currently one T4 and one T3 licensed operator employed in a supervisory role at Trenton Water Works. Trenton Water Works is striving to have NJDEP licensed operators engaged in day-to-day operations working at the Water Treatment Plant in addition to the supervisory staff. Becoming and continuing to be a Licensed Operator in New Jersey requires training, passing an exam and continuing education. Some operators have successfully completed the required training, hold T-1 licenses and are working towards advanced licenses. There are other operators who are currently scheduled to take the exam for the T-1 license. These licenses become more challenging to obtain as candidates approach the T4 level. Below are some statistics for the state wide pass rates in 2011:



- T1 approximately 120 tested with about a 50% pass rate
- T2 approximately 110 tested with about a 40% pass rate
- T2 approximately 40 tested with about a 40% pass rate
- T4 approximately 30 tested with about a 30 % pass rate

Trenton Water Works takes pride in the experienced and trained operations workforce and continues to advocate NJDEP licensing for its operators.

Reliability through Interconnections

Trenton Water Works has built reliability into the water supply system by having interconnections with other water purveyors for the transfer of water if additional supply is needed. TWW is a regional water supplier. Potable water is supplied to the City of Trenton, Hamilton Township, Lawrence Township, Ewing Township, and Hopewell Township. There are three major interconnections with two private water purveyors. Depending on the needs, these interconnections can allow water to either enter or leave the Trenton Water Works system. The picture below is of the largest interconnection which also includes pumping equipment to facilitate the transfer of water. The interconnections allow increased reliability by supplementing TWW drinking water supply with additional volume when necessary.

Source Water Assessment

Trenton Water Works draws its source water from the Delaware River through one intake. After an assessment of the source water was performed, the susceptibility of the Delaware River for possible contamination was determined. Eight contaminant categories were evaluated in the assessment. The Delaware River received a high susceptibility rating for pathogens, nutrients, inorganics, and disinfection byproducts (DBPs); a medium susceptibility rating for pesticides and volatile organic compounds (VOCs); and a low susceptibility rating for radionuclides and radon. All surface water sources in New Jersey are considered to be highly susceptible to pathogens and have a low susceptibility to radionuclides and radon.

If a system receives a high susceptibility rating for a contamination category, it does NOT mean a customer is or will be consuming contaminated drinking water. The rating reflects the potential for contamination of source water, NOT the existence of contamination. Public water systems are required to monitor for regulated contaminants and to install treatment systems if any contaminants are detected at frequencies and concentrations above allowable levels.

NJDEP found the following potential contaminant sources within the source water assessment area for our water source:

- Agriculture, residential, urban, and commercial/industrial land use
- Sewage treatment plants
- Known contaminated sites
- Solid waste landfills, solid waste resource recovery facilities, solid waste transfer facilities, compost facilities, and Class B recycling facilities
- NJPDES permitted facilities
- Underground storage tanks

Trenton Water Works also has access to purchased groundwater as an emergency water source. This water source was not evaluated during the source water assessment because it is only an emergency water source.

If you have questions regarding the source water assessment report or summary, please contact the Bureau of Safe Drinking Water at Web site, www.nj.gov/dep/swap/askswap.htm, or by phone at 609.292.5550.

Safety

The safety of customers and employees is important to Trenton Water Works. Please proceed with caution when field staff are working in your area.

Susceptibility Ratings for Trenton Water Works Sources

The table below illustrates the susceptibility ratings for the seven contaminant categories (and radon) for each source in the system. The table provides the number of intakes that rated high (H), medium (M), or low (L) for each contaminant category. For susceptibility ratings of purchased water, refer to the specific water system's source water assessment report.

The seven contaminant categories are defined as the bottom of the page. NJDEP considered all surface water highly susceptible to pathogens, therefore all intakes received a high rating for the pathogen category. For the purpose of Source Water Assessment Program, radionuclides are more of a concern for ground water than surface water. As a result, surface water intakes' susceptibility to radionuclides was not determined and they all nearly received a low rating.

If a system is rated highly susceptible for a contaminent category, it does not mean a customer is or will be consuming contaminated drinking water. The rating reflects the potential for 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. As a result of the assessments, NJDEP may customize (change existing) monitoring schedules based on the susceptibility of ratings.

Susceptibility Ratings for Trenton Water Department Sources Table

	Pathogens			Nutrients			Pesticides			Volatile Organic Compounds			Inorganics			Radionuclides			Disinfection Byproduct Precursors		
Sources	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L
Surface Water Intakes (1 Total)	1			1			1			1			1			1			1		

- **Pathogens:** Disease-causing organisms such as bacteria and viruses. Common sources are 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. Examples include arsenic, asbestos, copper, lead and nitrate.
- **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 1.800.648.0394.
- **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 materials (for example, leaves) present in surface water.

Central Pumping Station Improvements

Ongoing Investments Ensure

High Performance Facilities

Trenton Water Works is investing to update and maintain the Central Pumping Station, an important link in the distribution system. The Central Pumping Station was originally placed into service in the early 1950s. This station transfers water to approximately 70% of the finished water customers. Trenton Water Works has contracted with PKF Mark III for approximately 7 million dollars to construct improvements to ensure future service of this facility and increase its reliability. The project includes the replacement of all electric motors. The new motors shall be more energy efficient and provide a reliable service. There will be two new natural gas driven generators installed that will supply electricity when power from the electrical utility has been interrupted. The original 26,400 kilo-volt electrical substation will be replaced with a secure enclosed unit with two separate electrical feeds. These and other improvements shall be completed in 2013.

100 years with

AWWA MEMBER

For More Information:

The City of Trenton values the water utility's customers and works hard to ensure their satisfaction. If you have questions or comments about this report, please call our Water Quality Office at 609.989.3216 between 8:00 a.m. and 3:00 p.m., or contact the following sources of information:

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION, BUREAU OF SAFE DRINKING WATER
Phone: 609.292.5550 | Web site: www.state.nj.us/dep/watersupply

U.S. ENVIRONMENTAL PROTECTION AGENCY, SAFE DRINKING WATER HOTLINE
Phone: 1.800.426.4791 | Web site: www.epa.gov/safewater
Servicio bilingüe está disponible.

Este informe contiene información importante acerca de su agua potable. Pida que alguien le traduzca este informe, o hable con alguien que lo entienda.

Understanding Quality

Drinking water
Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (1.800.426.4791).

About source water prior to treatment
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 bacteria, that may come from sewage treatment plants, septic systems, agricultural live stock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, that can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, that are byproducts of industrial processes and petroleum
  production and can also come from gas stations, urban stormwater runoff, and septic systems.
- Radioactive contaminants that can be naturally-occurring or the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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.
Variances 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).
<: 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.

Drinking Water Quality Results

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 people, and some 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 infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1.800.426.4791).

METALS—TESTED AT CUSTOMERS' TAPS[a]

	Units	EPA's Action Level at 90%	Ideal Goal (EPA MCLG)	90% of TWW samples were less than or equal to	Number of Samples Exceeding Action Level	Violation	Source
Lead	ppm	15	0	0.003	0	NO	Corrosion of household plumbing; erosion of natural deposits.
Copper	ppm	1.3	1.3	0.07	0	NO	Corrosion of household plumbing; erosion of natural deposits.

DISINFECTION BYPRODUCTS IN TAP WATER[b]

	Units	Highest Annual Average Allowed (EPA MCL)	Ideal Goal (EPA MCLG)	Highest Annual Average in 2011	Range of Values	Violation	Source
Total Trihalomethanes (TTHMs)	ppb	80	0	65.1	24.9—132	NO	Byproduct of drinking water disinfection.
Haloacetic Acids (HAAs)	ppb	60	0	52.9	23.9—77.3	NO	Byproduct of drinking water disinfection.

BACTERIA IN TAP WATER

	Highest Level Allowed (EPA MCL)	Ideal Goal (EPA MCLG)	Highest Monthly Result	Violation	Source
Total Coliform Bacteria	Presence of coliform bacteria 5% of monthly samples	0	0	NO	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	NO	Human and animal fecal waste.

CLARITY CHARACTERISTICS—TESTED AT WATER TREATMENT PLANT

	Units	Highest Level Allowed (EPA MCL)	Ideal Goal (EPA MCLG)	Reported 2011 Constituent Level	Range	Average Value for the Year	Violation	Source
Turbidity	NTU	TT=1 95% of monthly samples must be at or below 0.3 NTU	0	0.61 99.3% of samples ≤ 0.3 NTU	0.00—0.61	0.12	NO	Soil runoff; river sediment.

INORGANIC CHEMICALS IN TAP WATER

	Units	Highest Level Allowed (EPA MCL)	Ideal Goal (EPA MCLG)	Reported 2011 Constituent Level	Violation	Source
Fluoride[c]	ppm	4.0	2.0	0.95	NO	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Nitrate (as Nitrogen)	ppm	10	10	0.75	NO	Runoff from fertilizer use; leaching of septic tanks, sewage; erosion of natural deposits.
Sodium[d]	ppm	50 (SMCL)	NLE	12.4	NO	Naturally present in the environment.
Sulfate[d]	ppm	250 (SMCL)	NLE	15.1	NO	Naturally present in the environment.
Hardness[d] (as $CaCO_3$)	ppm	250 (SMCL)	NLE	94.0	NO	Erosion of natural deposits.
Chloride[d]	ppm	250 (SMCL)	NLE	41.1	NO	Naturally present in the environment and road salt.

TOTAL CHLORINE RESIDUAL

	Units	EPA MRDL	MRDLG	2011 Annual Average	2011 Highest Result	Violation	Source
Total Chlorine	ppm	4.0 as CL_2	4	1.12	2.74	NO	Additive used for drinking water chlorination to control microbes.

RADIOACTIVE CONSTITUENTS IN TAP WATER[e]

	Units	Highest Level Allowed (EPA MCL)	Ideal Goal (EPA MCLG)	Highest Result	Range	Violation	Source
Alpha Emitters	pCi/L	15	0	2.24	0.35—2.24	NO	Erosion of natural deposits.
Combined Radium	pCi/L	5	0	1.12	0.05—1.12	NO	Erosion of natural deposits.

Footnotes and Table Notes

FOOTNOTES

a. Trenton Water Works was granted a reduction in frequency of sampling in accordance with 40 CFR 141.86(d)4. 50 samples were collected and analyzed in the year 2011 as required. TWW will be required to conduct lead and copper sampling again in 2014.
b. These chemicals are regulated based upon the annual average of quarterly samples.
c. Value is taken from drinking water analysis-in organics reporting.
d. NJDEP standard.
e. Data presented was sampled quarterly in 2006. TWW will be required to conduct sampling again in 2014.

TABLE NOTES:

1. The NJDEP has waived requirements to test for Synthetic Organic Compounds and pesticides because surface-water testing results indicate that they are not expected to occur in surface-water supplies in this area.
2. 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 one year old. The data that does not represent the current sampling year: a) radionuclides, b) lead and copper (sampled every three years).