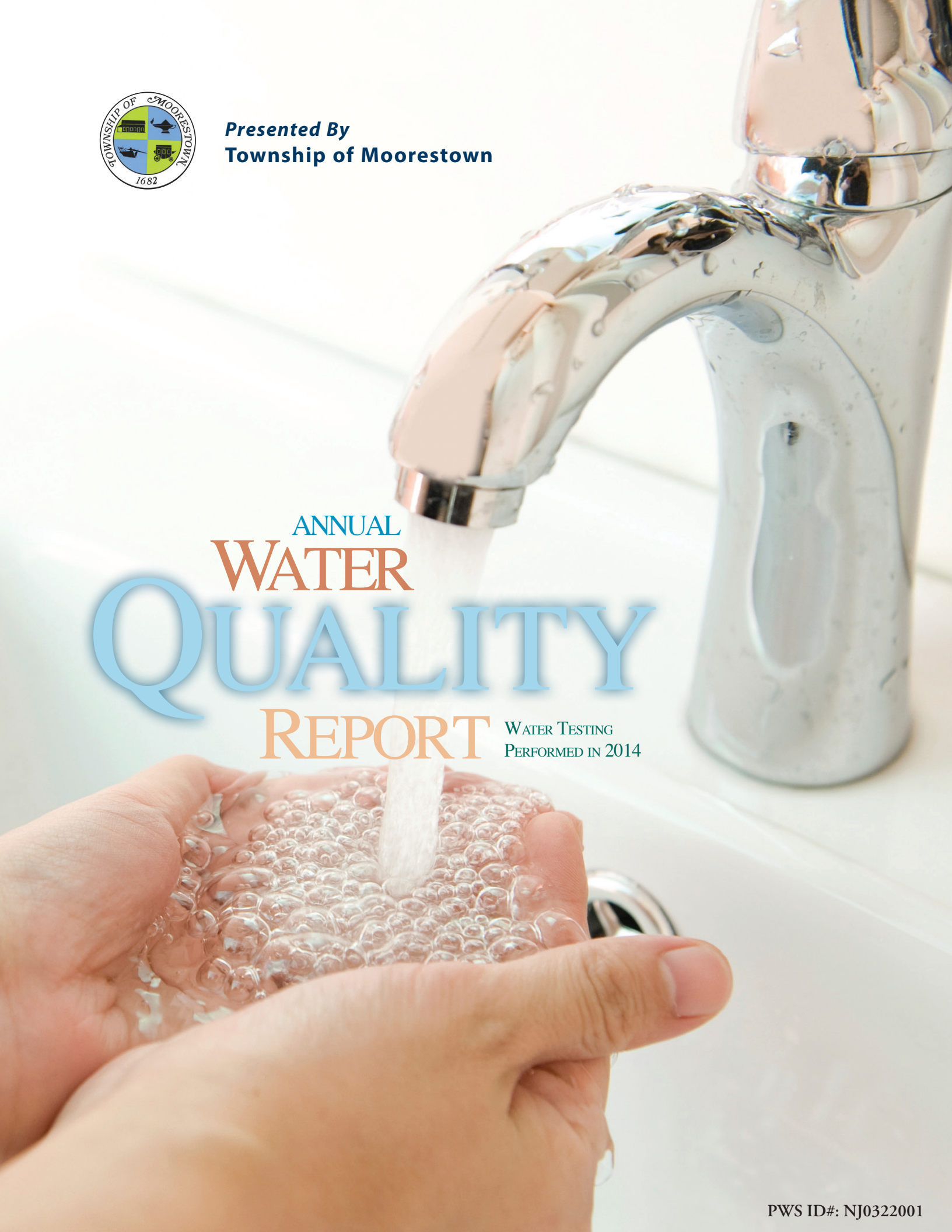

Presented By
Township of Moorestown

ANNUAL WATER QUALITY REPORT

WATER TESTING PERFORMED IN 2014

PWS ID#: NJ0322001

Our Mission Continues

We are proud to present once again our annual water quality report covering all testing performed between January 1 and December 31, 2014. Most notably, last year marked the 40th anniversary of the Safe Drinking Water Act (SDWA). This rule was created to protect public health by regulating the nation's drinking water supply. We celebrate this milestone as we continue to manage our water system with a mission to deliver the best quality drinking water. By striving to meet the requirements of SDWA, we are ensuring a future of healthy, clean drinking water for years to come.

Please let us know if you ever have any questions or concerns about your water.

Water Conservation

You can play a role in conserving water and saving yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.

Where Does My Water Come From?

Your drinking water comes from a blend of sources that may include groundwater from the Potomac-Raritan-Magothy Aquifer and surface water from the Delaware River. Moorestown Township purchases surface water from New Jersey American Water.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration 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. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases, radioactive material, and substances resulting from the presence of animals or from human activity. Substances that may be present in source water include:

Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses;

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Lead in Home Plumbing

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. We are 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 www.epa.gov/safewater/lead.

Source Water Assessment

SWAP (Source Water Assessment Program) is a program of the New Jersey Department of Environmental Protection (NJDEP) to study existing and potential threats to the quality of public drinking water sources throughout the state. Sources are rated depending upon their contaminant susceptibility.

DEP considered all surface water highly susceptible to pathogens; therefore, all intakes received a high rating for the pathogen category. For the purpose of the 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 a low rating was assigned.

For susceptibility ratings of purchased water, refer to the specific water system's source water assessment report. Source Water Assessment Reports, Definitions, and Summaries are available for public water systems at www.state.nj.us/dep/swap/ or by contacting the NJDEP's Bureau of Safe Drinking Water at (609) 292-5550.

If a system is rated highly susceptible for a contaminant 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 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 ratings.

Water Treatment Procedures

Kings Highway Treatment Plant: Aeration, Ph adjustment with hydrated lime, sedimentation, filtration and chlorine gas chlorination.

North Church Street Treatment Plant: Sequestration/Corrosion Control, aeration, ph adjustment with hydrated lime, chlorine gas chlorination.

Missed Monitoring

The Township was to monitor for nitrate for the North Church Street water treatment plant for the period 1/1/2014 through 12/31/2014. Our system was required to submit the samples between 1/1/2014 and 3/31/2014. The sample was collected on 2/12/2014 by the Township for analysis by our contract laboratory. Unfortunately, the laboratory lost the nitrate sample. The sample was retaken on 5/22/2014 with a result of 4.06 ppm.

Questions?

We want you to be informed about your drinking water. For more information about this report, or for any questions relating to your drinking water, please call Bill Butler at the Moorestown Township Department of Public Works at (856) 235-3520.

Sampling Results

During the past year we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. The state requires us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791.

REGULATED SUBSTANCES [1]

				Moorestown Township		Delaware River Regional WTP			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
1,1-Dichloroethane (ppb)	2014	50	NA	0.06	ND–0.06	NA	NA	No	Discharge from metal degreasing sites and other factories
1,1-Dichloroethylene (ppb)	2014	2	2	0.100	ND–0.100	NA	NA	No	Discharge from industrial chemical factories
1,2-Dichloropropane (ppb)	2014	5	0	0.160	ND–0.160	NA	NA	No	Discharge from industrial chemical factories
Alpha Emitters[2] (pCi/L)	2014	15	0	17.40	17.40–17.40	NA	NA	No	Erosion of natural deposits
Barium (ppm)	2014	2	2	0.0830	0.0310–0.0830	NA	NA	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Bromate (ppb)	2014	10	0	NA	NA	7	ND–7	No	By-product of drinking water disinfection
Chlorine (ppm)	2014	[4]	[4]	0.52	0.20–0.52	1.83[3]	0.52–1.83	No	Water additive used to control microbes
Chromium (ppb)	2014	100	100	NA	NA	1.8	0.8–1.8	No	Discharge from steel and pulp mills; Erosion of natural deposits
Combined Radium[4] (pCi/L)	2014	5	0	5.45	5.45–5.45	NA	NA	No	Erosion of natural deposits
Haloacetic Acids [HAA]–Stage 2 (ppb)	2014	60	NA	12.89	ND–12.89	NA	NA	No	By-product of drinking water disinfection
Nickel (ppb)	2014	100	NA	10.4	ND–10.4	NA	NA	No	Pollution from mining and refining operations; natural occurrence in soil
Nitrate (ppm)	2014	10	10	4.06	ND–4.06	1.14	1.14–1.14	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes]–Stage 2 (ppb)	2014	80	NA	35.5	ND–35.5	NA	NA	No	By-product of drinking water disinfection
Tetrachloroethylene (ppb)	2014	1	0	0.250	ND–0.250	NA	NA	No	Discharge from factories and dry cleaners
Total Organic Carbon (removal ratio)	2014	TT	NA	NA	NA	2.01	1.25–2.01	No	Naturally present in the environment
Trichloroethylene (ppb)	2014	1	0	0.72	0.59–0.72	NA	NA	No	Discharge from metal degreasing sites and other factories
Turbidity (NTU)	2014	TT	NA	NA	NA	0.13[5]	ND–0.13	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2014	TT=95% of samples <0.3 NTU	NA	NA	NA	100	NA	No	Soil runoff

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2014	1.3	1.3	0.0731	0/33	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2014	15	0	5.4	2/33	No	Corrosion of household plumbing systems; Erosion of natural deposits

SECONDARY SUBSTANCES - MOORESTOWN TOWNSHIP

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	RUL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	EXCEEDANCE	TYPICAL SOURCE
Manganese[6] (ppb)	2014	50	NA	116	ND–116	Yes	Leaching from natural deposits

UNREGULATED SUBSTANCES - MOORESTOWN TOWNSHIP

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
1,2,3-Trichloropropane (ppb)	2014	0.067	0.066–0.067	Halogenated alkane, used as an ingredient in paint, varnish remover, solvents and degreasing agents.
Bromodichloromethane (ppb)	2014	0.540	ND–0.540	By-product of drinking water disinfection
Bromoform (ppb)	2014	0.200	ND–0.200	By-product of drinking water disinfection
Chloroform (ppb)	2014	0.0800	ND–0.0800	By-product of drinking water disinfection
Dibromochloromethane (ppb)	2014	0.570	ND–0.570	By-product of drinking water disinfection

OTHER SUBSTANCES - DELAWARE RIVER REGIONAL WTP

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Hexavalent Chromium (ppb)	2013/2014	1.06	0.65–1.22	Naturally occuring element; used in making steel and other alloys; chromium-3 or 6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation.
Molybdenum (ppb)	2013/2014	1.46	1.2–1.8	Naturally occuring elemental found in ores and present in plants, animals and bacteria; commonly used from molybdenum trioxide used as a chemical reagent.
Strontium (ppb)	2013/2014	75.7	62.4–90.2	Naturally occuring element; historically commercial use of strontium has been in the faceplate glass of cathode-ray tube televisions to block x-ray emissions.

[1] Under a waiver granted on December 30, 1998, by the State of New Jersey Department of Environmental Protection, our system does not have to monitor for synthetic organic chemicals/pesticides because several years of testing have indicated that these substances do not occur in our source water. The SDWA regulations allow monitoring waivers to reduce or eliminate the monitoring requirements for asbestos, volatile organic chemicals and synthetic organic chemicals. Our system received monitoring waivers for synthetic organic chemicals and asbestos.

[2] Alpha Emitters – Increased risk of cancer. Erosion of natural deposits of certain minerals that are radioactive and may emit a form of radiation known as alpha radiation.

[3] Data represent the lowest and highest free chlorine residual entering the distribution system from our surface water treatment plant.

[4] Radium 226 & 228 (Combined) – Increased risk of cancer. Erosion of natural deposits.

[5] Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system. The turbidity rule requires that 95% or more of the monthly samples must be less than or equal to 0.3 NTU (no sample may exceed 1 NTU).

[6] The recommended upper limit for manganese is based on staining of laundry. Manganese is an essential nutrient, and toxicity is not expected from high levels which would be encountered in drinking water.

Definitions

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

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.

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. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NA: Not applicable

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

pCi/L (picocuries per liter): A measure of radioactivity.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

removal ratio: A ratio between the percentage of a substance actually removed to the percentage of the substance required to be removed.

RUL (Recommended Upper Limit): RULs are established to regulate the aesthetics of drinking water like taste and odor.

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