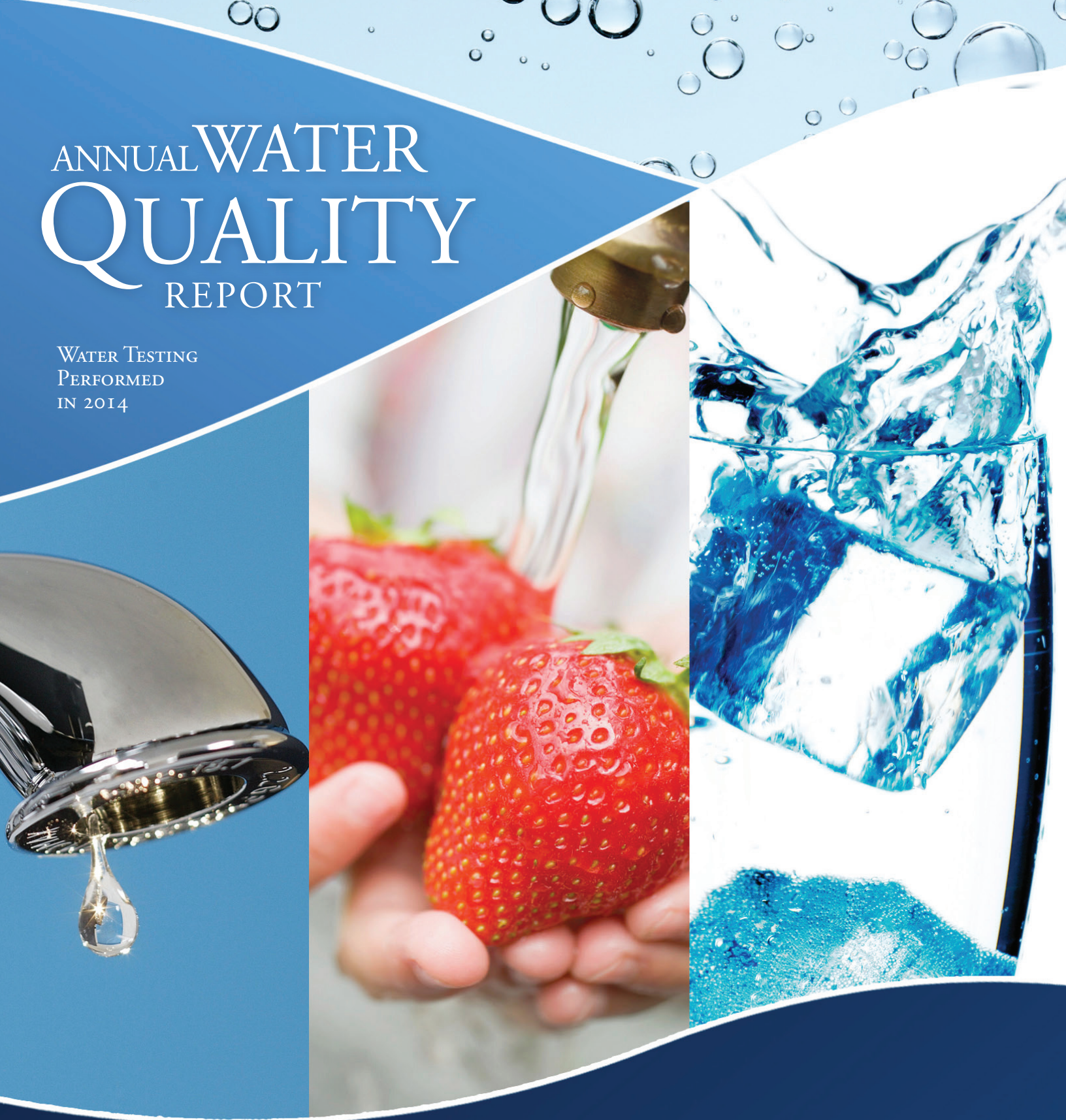


ANNUAL WATER QUALITY REPORT

WATER TESTING
PERFORMED
IN 2014



Presented By



PWS ID#: 0319015

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.

Information on the Internet

The U.S. EPA Office of Water (www.epa.gov/wat/home) and the Centers for Disease Control and Prevention (<http://www.cdc.gov/healthywater/drinking/>) Web sites provide a substantial amount of information on many issues relating to water resources, water conservation, and public health. Also, the nonprofit organization, Clean Water for North Carolina, has a Web site (www.cwfnc.org/community-news/your-drinking-water) that provides complete and current information on water issues in North Carolina, including valuable information about our watershed.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as those with cancer undergoing chemotherapy, those 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 or <http://water.epa.gov/drink/hotline>.



Community Participation

You are invited to participate in our public forum and voice your concerns about your drinking water. We meet the second and fourth Mondays of each month beginning at 7 p.m. at Town Hall, 635 East St., Pittsboro, North Carolina.

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 that 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 we 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.

Tap vs. Bottled

Thanks in part to aggressive marketing, the bottled water industry has successfully convinced us all that water purchased in bottles is a healthier alternative to tap water. However, according to a four-year study conducted by the Natural Resources Defense Council, bottled water is not necessarily cleaner or safer than most tap water. In fact, about 25 percent of bottled water is actually just bottled tap water (40 percent, according to government estimates).

The Food and Drug Administration is responsible for regulating bottled water, but these rules allow for less rigorous testing and purity standards than those required by the U.S. EPA for community tap water. For instance, the high mineral content of some bottled waters makes them unsuitable for babies and young children. Furthermore, the FDA completely exempts bottled water that's packaged and sold within the same state, which accounts for about 70 percent of all bottled water sold in the United States.

People spend 10,000 times more per gallon for bottled water than they typically do for tap water. If you get your recommended eight glasses a day from bottled water, you could spend up to \$1,400 annually. The same amount of tap water would cost about 49 cents. Even if you installed a filter device on your tap, your annual expenditure would be far less than what you'd pay for bottled water.

For a detailed discussion on the NRDC study results, check out their Web site at www.nrdc.org/water/drinking/bw/exesum.asp.

Water Conservation

You can play a role in conserving water and save 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.



QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call John Poreat, Public Works and Utilities Director, at (919) 542-2530, or Adam Pickett, Pittsboro Water Plant Superintendent, at (919) 542-3530.

Where Does My Water Come From?

The Town of Pittsboro's water is taken from the Haw River and treated at Pittsboro's Water Treatment Plant.

The water treatment process consists of a series of steps. First, raw water (untreated) is withdrawn from our Haw River water source and pumped to the water treatment plant. The raw water is then rapidly mixed with poly-aluminum chloride and ferric sulfate. The addition of these coagulants causes small particles and impurities in the water to stick together to form bigger particles called floc. After rapid mixing, the water flows into the flocculation basins where the velocity of water is reduced and the floc particles have time to increase in size. This makes them heavy enough to settle to the bottom of the sedimentation basin, from which the sediment is collected and removed. At this point, the clear water is filtered through layers of fine anthracite coal and silicate sand. The filters are used to remove any remaining microscopic particles and microorganisms. Then the water is disinfected to protect it against bacteria. The Pittsboro water system uses a combination of chlorine and ammonia called "chloramines" to disinfect the water. We carefully monitor the amount of chlorine, adding the lowest quantity necessary to protect the safety of the water without compromising taste. Lastly, sodium hydroxide (to adjust the final pH and alkalinity), fluoride (to support good dental health), and orthophosphate (a corrosion inhibitor that protects pipes and plumbing) are added before the water is delivered to the distribution system, water towers, and into your home or business.

How Long Can I Store Drinking Water?

The disinfectant in drinking water will eventually dissipate even in a closed container. If that container housed bacteria before it was filled with tap water, the bacteria may continue to grow once the disinfectant has dissipated. Some experts believe that water could be stored up to six months before needing to be replaced. Refrigeration will help slow the bacterial growth.

Source Water Assessment

A Source Water Assessment Plan (SWAP) is now available at our office. This plan is an assessment of the delineated area around our listed sources through which contaminants, if present, could migrate and reach our source water. It also includes an inventory of potential sources of contamination within the delineated area, and a determination of the water supply's susceptibility to contamination by the identified potential sources.

According to the Source Water Assessment Plan, our water system had a susceptibility rating of medium. If you would like to review the Source Water Assessment Plan, please feel free to contact our office during regular office hours.

Information About Your Wastewater Treatment System

This report covers the period of time from January 1, 2014, until December 30, 2014.

The Pittsboro plant is permitted to treat up to 750,000 gallons per day of wastewater. The collection system consists of an estimated 12 miles of sewer mains. The plant serves approximately 890 residential and commercial customers. Wastewater enters the plant and flows through a structure known as a bar screen, which catches large objects. The waste stream then enters a wet well, where it is pumped into two aeration basins, which help to raise the dissolved oxygen content in the water. Through use of an activated sludge process, the biochemical oxygen demand and other parameters are treated with the activated sludge. This treated water then enters advanced treatment by going through sand filtration and ultraviolet disinfection to meet the limits of our discharge permit issued by the State of North Carolina. The treated wastewater is discharged into Roberson Creek, which flows into Jordan Lake.

The Wastewater Plant Supervisor, Randy Heard, can be reached at (919) 542-2444. The operator-in-charge of the wastewater treatment plant and the wastewater collection system is John Poteat, Public Works and Utility Director. He can be reached at (919) 542-2530.

Performance:

The Pittsboro wastewater treatment system (NPDES Permit #NC0020354) has performed well for the past year.

About Our Violation

The Town of Pittsboro is required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During the compliance period specified below, we did not complete all monitoring or testing for the contaminants listed and therefore cannot be sure of the quality of your drinking water during that time.

During the compliance period beginning April 1, 2014, we failed to monitor for synthetic organic chemicals. The samples have since been taken and the system is back in compliance.

NOTICE TO THE PUBLIC

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Violation Awareness Date: September 17, 2014

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During the compliance period specified in the table below, we [‘did not monitor or test’ or ‘did not complete all monitoring or testing’] for the contaminants listed and therefore cannot be sure of the quality of your drinking water during that time.

CONTAMINANT GROUP**	FACILITY ID NO./ SAMPLE POINT ID	COMPLIANCE PERIOD BEGIN DATE	NUMBER OF SAMPLES/ SAMPLING FREQUENCY	WHEN SAMPLES WERE TAKEN (Returned to Compliance)
SYNTHETIC ORGANIC CHEMICALS	PC1 / EP1	APRIL 1, 2014	1/QUARTER	

What should I do? There is nothing you need to do at this time.

What is being done? The sample was taken in September 2014

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

For more information about this violation, please contact the responsible person listed in the first paragraph of this report.
JOHN POTEAT
919-542-2530
PUBLIC AND UTILITY DIRECTOR

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 tables below show 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.

REGULATED SUBSTANCES							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Arsenic (ppb)	2014	10	0	0	0–5	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2014	2	2	0	0–2	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Cadmium (ppb)	2014	5	5	0	0–5	No	Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; Runoff from waste batteries and paints
Chloramines (ppm)	2014	[4]	[4]	3.2	2.6–3.5	No	Water additive used to control microbes
Fluoride (ppm)	2014	4	4	0.70	0.55–0.80	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs]–Stage 2 (ppb)	2014	60	NA	15 (Highest LRAA)	0–60	No	By-product of drinking water disinfection
Nitrate (ppm)	2014	10	10	0	0–10	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrite (ppm)	2014	1	1	0	0–1	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Simazine (ppb)	2014	4	4	0.00015	NA	No	Herbicide runoff
TTHMs [Total Trihalomethanes]–Stage 2 (ppb)	2014	80	NA	34 (Highest LRAA)	0–80	No	By-product of drinking water disinfection
Total Coliform Bacteria (# positive samples)	2014	1 positive monthly sample	0	0	NA	No	Naturally present in the environment
Total Organic Carbon [TOC] ¹ (ppm)	2014	TT	NA	1.6	0.85–2.7	No	Naturally present in the environment
Turbidity ² (NTU)	2014	TT=1 NTU	NA	0.20	0.02–0.20	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2014	TT=95% of samples <0.3 NTU	NA	100	NA	No	Soil runoff

SECONDARY SUBSTANCES							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Color (ppm)	2014	15	NA	2	0–10	No	Naturally occurring organic materials
Iron (ppb)	2014	300	NA	20	10–300	No	Leaching from natural deposits; Industrial wastes
Manganese (ppb)	2014	50	NA	0.012	0.005–0.050	No	Leaching from natural deposits
pH (Units)	2014	6.5–8.5	NA	7.5	7.2–7.9	No	Naturally occurring

¹ Depending on the TOC in our source water, the system must have a certain percent removal of TOC or must achieve alternative compliance criteria. If we do not achieve that percent removal, there is an alternative percent removal. If we fail to meet the alternative percent removal, we are in violation of a Treatment Technique.

² Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. The turbidity rule requires that 95% or more of the monthly samples must be less than or equal to 0.3 NTU.

Definitions

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

LRAA (Locational Running Annual Average): The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters under the Stage 2 Disinfectants and Disinfection By-products Rule.

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

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.

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).

SMCL (Secondary Maximum Contaminant Level): SMCLs 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.