

CITY OF REIDSVILLE WATER DEPARTMENT

2010 Water Quality Report

ABOUT OUR WATER

The amount of pollutants and contaminants in the drinking water are well below levels set by the Environmental Protection Agency (EPA) in all categories. More than 100 compounds were monitored during the year and all were found to be below the federal and state regulations. The results of the individual compounds are listed inside.

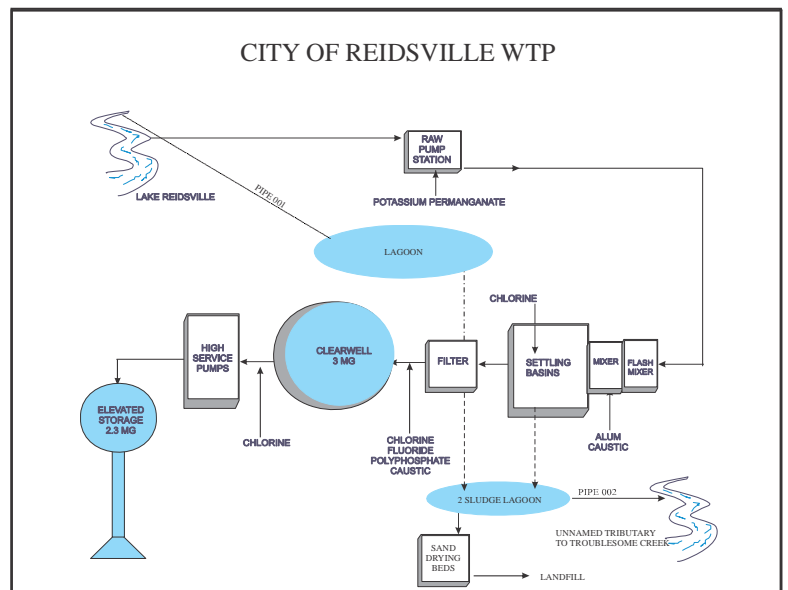
SAFEGUARDING OUR WATER

Water is found in the form of rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the ground or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material. In addition, it also comes in contact with substances resulting from the presence of animals or human activity. Contaminants that may be present in source water include: (A) *Microbial contaminants*, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife (B) *Inorganic contaminants*, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming (C) *Pesticides and herbicides*, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses (D) *Organic chemical contaminants*, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production.

Drinking water, including bottled water may be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not indicate that the water poses a health risk. What matters is what kind of contaminants that are in the water and how much. The Environmental Protection Agency regulates the amounts of contaminants that are acceptable in public drinking water through the Safe Drinking Water Act of 1974 and its amendments. More information about drinking water constitutes and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

ORIGIN AND TREATMENT OF OUR WATER

Our water comes from Lake Reidsville and is treated through the operation of the City of Reidsville Water Treatment Plant. Placed into operations in 1981, the City of Reidsville Water Plant is a multistage treatment conventional facility. It is designed to treat 9 million gallons of water per day and stores 3 million gallons of water on-site. Raw water is pumped from Lake Reidsville to the city's water treatment plant where chemicals are added to control taste and odor and to promote flocculation. The water then flows through a sedimentation system where the suspended particles are collected. Chlorine is added to the water for disinfection just prior to the filters. After filtration, more chlorine is added as well as fluoride which is a deterrent for tooth decay. In addition, corrosion control chemicals and a chemical for pH adjustment are introduced after filtration. The water is then stored and pumped to our customers as needed.



If you have any questions concerning this information, you may contact us at **(336) 349-1070**.

2010 WATER QUALITY REPORT, cont.

The City of Reidsville monitors over 100 different constituents in the water to ensure it is safe for you to use. We are pleased to report that our drinking water complies with all the state and federal regulations. Following is a summary of those regulated constituents that were detected in the water by the City.

Compound & Unit	Highest Level Allowed by Regulation (MCL)	Maximum Contaminant Level Goal (MGLG)	Maximum Detected by City of Reidsville	Range		Major Source of Compound
				High	Low	
Microbiological Contaminants				January through December 2010		
Turbidity, NTU*	TT = 5 NTU	N/A	0.451	0.451	0.017	Soil run off
	TT = percentage of samples <0.3 NTU	N/A	98.3%			
Inorganic Contaminants				January through December 2010		
Fluoride, mg/l	4.0	4.0	1.66	1.66	0.00	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories
Copper, mg/l (Sampled: September 2009)	AL = 1.3	1.3	0.075 90 th Percentile	0.166	<0.050	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead, mg/l (Sampled: September 2009)	AL = 0.015	0	<0.003 90 th Percentile	0.097	<0.003	Corrosion of household plumbing systems; erosion of natural deposits
Disinfectants/Disinfection By-Products				January through December, 2010		
Total Organic Carbon (TOC) – Raw Water, mg/l**	TT	N/A	5.65	5.65	4.05	Naturally present in the environment
Total Organic Carbon (TOC) – Treated Water, mg/l**	TT	N/A	2.70	2.70	1.65	Naturally present in the environment
TOC Removal Ratio**	TT	N/A	1.22***	1.39	0.96	
Chlorine, mg/l	MRDLG = 4.0	MRDL = 4.0	1.01***	2.20	0.21	Water additive used to control microbes
Total Trihalomethane, ppb	80	N/A	64.4***	163.0	37.0	By product of drinking water chlorination.
Total Haloacetic Acid, ppb	60	N/A	58.4***	94.9	27.1	By product of drinking water chlorination.

AL = Action Level is the concentration of a contaminant which triggers a treatment or other requirement which a water system must follow.

MCL = Maximum Contaminant Level

MCLG = Maximum Contaminant Level Goal is the level of a contaminant in drinking water below which there is no known or expected risk to health.

MRDLG = Maximum Residual Disinfectant Level Goal is the level of disinfectant in drinking water below which there is no known or expected risk to health

MRDL = Maximum Residual Disinfection Level is the highest level of a disinfectant allowed in drinking water.

mg/l = milligram per liter, or parts per million

NTU = Nephelometric Turbidity Units is a measure for water clarity

TT = Treatment Technique is a required process intended to reduce the level of a contaminant in drinking water.

* Turbidity is the measure of the cloudiness of the water. The City monitors Turbidity because it is a good indicator of the effectiveness of our filter treatment system. The turbidity rule requires that 95% or more of the monthly samples must be below 0.3 NTU.

** Our water system used the removal of Total Organic Carbon (TOC) as the method used to comply with disinfectants/disinfection by-product treatment technique requirements. The quarterly average of the TOC removal ratio is required to be greater than 1.0.

*** Running Annual Average

Special Warning

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised person such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune systems disorders, some elderly, and 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 (800-426-4791)

In addition to the compounds listed above, the water is tested for the following constituents which are indicator for appearance, taste, and odor.

Compound	Annual Average
Alkalinity, mg/l	19.1
Color, units	0.0
Hardness, mg/l	16.4
Iron, mg/l	0.02
Manganese, mg/l	0.018
Sodium	16.7
Sulfate	29.7
pH, Standard Units	8.0 to 6.4

Source Water Assessment

Everyone wants clean, safe drinking water and we assume this naturally resource will always be available to us. However, surface water sources (lakes, rivers, streams, reservoirs) can be threatened by many potential contaminant sources (PCS). These include urban storm water runoff, permitted wastewater discharges, runoff produced by agricultural activity and land clearing for development. The Public Water Supply Section of the NC Department of Environment and Natural Resources conducted a source water assessment of Lake Reidsville, our source water supply. The source water assessment is a determination of the susceptibility of Lake Reidsville's potential to become contaminated by potential contaminant sources. The susceptible rating is determined by combining the contaminant rating (number and location of PCSs within the assessment area) and the inherent vulnerability rating (i.e. characteristics or existing conditions of the watershed and its delineated assessment area). The susceptibility rating for Lake Reidsville is moderate. Please note that this rating does not imply poor water quality. This information was obtained from the SWAP report dated February 19, 2010. A complete copy of the Source Water Assessment can be viewed at <http://www.deh.enr.state.nc.us/pws/swap>. The SWAP results and reports are updated periodically, therefore the

results available on this we site may differ from the results that were available at the time this CCR was prepared.

To obtain a printed copy of the Assessment, please mail a written request to : SWAP, Public Water Supply Section, 1634 Mail Service Center, Raleigh, NC 27699-1634. Please indicate your system name, PWSID, and provide your name, mailing address and phone number. If you have any questions about the SWAP report, please contact the Source Water Assessment staff by phone at 919-715-2633.

Lead In Drinking Water

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 City of Reidsville 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>.

COMPLIANCE CORNER

	Yes	No
All required monitoring completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
All contaminant levels meet?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

During the 1st, 2nd, and 3rd quarter of the year, the City did not meet the Maximum Contaminate Level for Haloacetic Acids. These violations were not an immediate risk to

you. However, some people who drink water containing haloacetic acids in excess of the drinking water standard over **many** years may have an increased risk of getting cancer. As corrective actions, the City made some changes to the location of the chlorine injection site and adjusted the chlorine feed rate at each of the injection locations. In addition, other pH adjustment chemicals were incorporated in the treatment process.

Chloramination Conversion

In early summer Reidsville; along Greensboro, High Point, Burlington, Archdale, Randleman, Jamestown and PTRWA; will change their method of water disinfection to chloramination. Chloramines are formed by adding ammonia to chlorinated water and it is an alternative disinfectant that reduces the formation of the Total Trihalomethanes and Haloacetic Acids.

Chloraminated water is safe for drinking, cooking, bathing, and other daily water uses. There are, however, three groups of people who need to take special care with chlorinated water: kidney dialysis patients, fish pond and aquarium owners, and specialized businesses using the water in their processes. Chloramines are harmful when

they go directly into the bloodstream. Dialysis patients should check with their physicians for additional information. Aquarium and pond owners should check with their suppliers for additional information. Businesses are advised to contact their water treatment professionals to review their processes.

Approximately 2 months prior to the actual conversion the City of Reidsville will participate in an advertising campaign involving TV ads, newspaper ads, brochures and posters to further inform our customers of the impending conversion.

In addition to the reduced levels of disinfection byproducts in the water (TTHM & HAA) customers will likely notice improvements in the taste and odor of the water since the chlorine smell will be less apparent.