



# City of Morganton - Dept. of Water Resources

## 2009 Water Quality Report

Every year, The City of Morganton prepares this Consumer Confidence Report so that our customers receive important water quality data. This report contains information about the quality of your water as required by regulatory agencies, such as the EPA. We are happy to report that your water has met or exceeded all applicable standards related to State and Federal Drinking Water Regulations for 2009. We value the trust you place in us to provide you and your family with safe drinking water. Our Laboratory Analysts and Plant Operators perform over 16,000 tests each year on your water to ensure its quality. We perform numerous tests on the water from each phase of treatment and throughout the distribution system. This testing ensures that the water we treat meets and exceeds all current drinking water standards set by NCDENR and the EPA.

### Understanding our Treatment Process..

On average, we pump and treat over 8 Million Gallons per Day (MGD) from the Catawba River. The Plant's Operators add Poly-Aluminum Chloride and Caustic Soda to the incoming "raw" water to form clumps of "floc" that help to trap dirt and impurities found naturally in the Catawba. We then add Sodium Hypochlorite to neutralize any potential pathogens in the water before it is filtered. Shortly after filtration, several steps are performed; we adjust the pH (usually to 7.2) to prevent corrosion, Sodium Hypochlorite is then added to prevent re-growth of bacteria in the system, and then we add Fluoride to promote good dental health in community. Finally, the water is pumped from the Water Plant into the various Standpipes located throughout the Distribution System. The water is stored in the Standpipes until it is used by you, our customers.

### Source Water Assessment Program (SWAP) Summary

(The following information is provided by North Carolina Department of Environment and Natural Resources and is required to be included in this report. If you have any questions about this information call 919-715-2633)

The North Carolina Department of Environment and Natural Resources (DENR), Public Water Supply (PWS) Section, Source Water Assessment Program (SWAP) conducted assessments for all drinking water sources across North Carolina. The purpose of the assessments was to determine the susceptibility of each drinking water source to potential contaminant sources. The results of the assessment are available in SWAP Assessment reports. The relative susceptibility rating of each source for the City of Morganton was determined by combining the contaminant rating and the vulnerability rating or the existing conditions of the watershed. The assessment findings are summarized in the table below. It is important to understand that a susceptibility rating of higher does not imply poor water quality, only the systems' potential to become contaminated by potential contaminant sources in the assessment area. The complete SWAP Assessment report for Morganton may be viewed on the web at : <http://www.deh.enr.state.nc.us/pws/swap>. Please note that because SWAP results and reports are periodically updated by the PWS Section, the results available on this site may differ from the results that were available at the time this CCR was prepared. To obtain a printed copy send a written request to: Source Water Assessment Program- Report Request, 1634 Mail Service Center, Raleigh, NC 27699-1634 or email [swap@ncmail.net](mailto:swap@ncmail.net).

Source Name	Inherent Vulnerability Rating	Containment Rating	Susceptibility Rating
Catawba River	Higher	Moderate	Higher

### Information the EPA Wants You To Know

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some substances. The presence of these substances does not necessarily indicate that the water poses a health risk. All sources, both tap and bottled, are fed by water that passes over the surface of the land or under ground. The water dissolves naturally occurring minerals and, in some cases, radioactive material and can pick up substances resulting from the presence of animals or human activity.

Contaminants that may be present in raw (untreated) water include:

- Microbial - viruses and bacteria from human, agricultural or wildlife sources.
- Inorganic - salts and minerals naturally-occurring or result from urban runoff, industrial or domestic wastewater discharges, mining or farming.
- Pesticides and herbicides - may come from agricultural runoff or residential use.
- Organic chemicals - may come from industrial or domestic processes, oil and gas production, runoff and septic systems.
- Radioactive materials - can be naturally occurring or the result of mining or human activities.

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 Morganton 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 your 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>.

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, 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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

In order to ensure that tap water is safe to drink, the EPA prescribes regulations which limit the amount of certain substances in water provided by public systems. The U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791).

The Morganton City Council meets at 6 PM on the first Monday of each month to conduct City business including decisions relating to the water system. The City of Morganton is a member of NC One Call, a non-profit organization, that refers all requests for locating utility lines. Call (800) 632-4949 to locate buried water, sewer, electric, and cable lines in the City of Morganton.

This report is intended to comply with 90CFR, parts 141 and 142, Consumer Confidence Reports.

For additional information regarding this report please contact Jason Green, Water Treatment Superintendent, at 584-1460 or via email at [jgreen@ci.morganton.nc.us](mailto:jgreen@ci.morganton.nc.us). You can also contact us anytime via our website at <http://www.ci.morganton.nc.us>.

## Analytical Results for Tests Performed in 2009

Contaminant	Your Water	MCLG	MCL	Likely Source
Alkalinity (mg/L)	16	N/A	N/A	Erosion of Natural Minerals
Antimony (ppb)	N/D	0.006	0.006	Fire Retardants; Solder; Electronics
Arsenic (ppb)	N/D	0	0.010	Natural Sources; Production Waste
Barium (ppm)	N/D	2.0	2.0	Metal Refineries; Natural Deposits
Beryllium (ppb)	N/D	0.004	0.004	Discharge from Coal Burning Facilities
Cadmium (ppb)	N/D	0.005	0.005	Erosion of Natural Deposits; Corrosion of Galvanized Pipes; Discharges by Refineries
Chromium (ppb)	N/D	0.1	0.1	Discharge from Steel or Pulp Mills; Natural Minerals
Copper (ppm)	0.07	1.3	A.L.=1.3	Erosion of Household Plumbing; Naturally Occurring
Cyanide (ppb)	N/D	0.2	0.2	Discharge from Steel, Plastic, or Fertilizer Factories
Fecal Coliforms	0	0	0	Human or Animal Fecal Waste
Fluoride (ppm)	1.19	4.0	4.0	Additive to support Strong Teeth; Erosion of Natural Deposits
Iron (ppb)	N/D	0.3	0.3	Corrosion of Household Plumbing
Lead (ppb)	N/D	0	A.L.=0.015	Corrosion of Household Plumbing; Erosion of Natural Deposits
Manganese (mg/L)	N/D	0.05	0.05	Erosion of Natural Deposits
Mercury (ppb)	N/D	0.002	0.002	Erosion of Natural Deposits; Runoff from Landfills; Discharges from Factories
Nitrate (ppm)	N/D	10	10	Runoff from Fertilizer Use; Erosion of Natural Deposits
Nitrite (ppm)	N/D	1	1	Runoff from Fertilizer Use; Erosion of Natural Deposits
pH	7.4	N/A	N/A	Erosion of Natural Deposits
Selenium (ppb)	N/D	0.05	0.05	Discharge From Petroleum Refineries; Erosion from Natural Deposits
Sulfate (mg/L)	N/D	250	250	Soil Runoff
Temperature (° C)	21	N/A	N/A	N/A
Thallium (ppb)	N/D	0.0005	0.002	Leaching from Ore-Producing Sites; Discharge from Electronics, Drug, or Glass Factories
Total Coliforms	0	0	>5% Month	Naturally Present in the Environment
Total Haloacetic Acids (ppb)	0.050	N/A	0.060	By-Product of Disinfection
Total Organic Carbons (mg/L)	1.2	N/A	N/A	Naturally Occurring Element
Total Trihalomethanes (ppb)	0.073	0	0.080	By-Product of Disinfection
Turbidity (NTU's)	0.221	>0.2	0.3	Soil Runoff

\*Turbidity Result was the highest recorded result from 2008. The reading was taken on 11/12/2009. Average Turbidity was 0.022 NTU's for 2009.

Disinfection By-Products      TTHM – Average : 41 ppb; Range: 21 ppb – 73 ppb; MCL 80 ppb

TOC– Average: 1.21 mg/L; Range: 0.0 - 1.4 mg/L      HAA5 – Average : 33 ppb; Range: 21 ppb – 50 ppb; MCL 60 ppb

### Glossary

**Action Level (AL)** - the concentration of a contaminant, which if exceeded, triggers additional treatment or other requirements, which a system must follow.

**Maximum Contaminant Level Goal (MCLG)** - The Goal (MCLG) is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG allow for a margin of safety.

**Maximum Contaminant Level (MCL)** - The Maximum Allowed (MCL) is the highest level of a contaminant that is allowed in drinking water. MCL are set as close to the MCLG as feasible using the best available technology.

**Non-Applicable (N/A)** - Information not applicable or required

**Non-Detects (N/D)** - laboratory analysis indicates that the contaminant is not present at the level of detection set for the particular methodology used.

**Parts per million (ppm)** - one part per million (milligrams per liter) corresponds to one minute in two years, or a single penny in \$10,000.

**Parts per billion (ppb)** - one part per billion (micrograms per liter) corresponds to one minute in two thousand years, or one penny in \$10 million.

**Nephelometric Turbidity Unit (NTU)** - a measure of the cloudiness of the water. Turbidity over 5 ntu is just noticeable to the average person. It is a good indicator of the effectiveness of our filtration system. Turbidity % - low levels are a goal for all substances except turbidity as a percentage. The turbidity rule requires that 95% or more of the monthly samples must be below 0.3 NTUs.

**Action Level (AL)** - the concentration of a contaminant, which if exceeded, triggers treatment or other requirements, which a system must follow.

**TT** - a treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

**Total Organic Carbon (TOC)** - has no health effects. However, TOC provides a medium for the formation of disinfection byproducts.