# 2001 ANNUAL WATER QUALITY REPORT

The City of Greensboro has been providing water service for nearly one hundred years. Your Water Resources Department is proud to present you with the "Consumer Confidence Report" for 2001. We are committed to providing our customers with the best quality of water possible.

We are pleased to report that our testing shows the excellent quality of our water and that we meet or exceed all State and Federal drinking water standards.

GREENSBORO

120,000 copies of this document printed at a cost of $.06 each

## Our Commitment to you...

**Quality Drinking Water...**

WATER Resources
City of Greensboro

**P. O. Box 3136**
**Greensboro, NC 27402**

**PWSID # 02-41-010**

If you have questions about this report or concerning your water utility, please contact :

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**En Espanol**

**Este informe contiene informacion muy importante. Traduzcalo o hable con un amigo quien lo entienda bien.**

***WATER IS A PRECIOUS AND LIMITED RESOURCE. PLEASE HELP US CONSERVE OUR WATER SUPPLY.***

***WATER SAVING TIPS***

- Turn off the water while shaving, brushing your teeth, and washing the dishes.
- If your home was built before 1994, install a water-saving showerhead. Free water-saving showerheads are available at all Greensboro Public Libraries and Recreation Centers.
- If your toilet 'runs' when it's not in use, fix it! A leaky toilet wastes more than 50 gallons of water per day.
- Step on your grass to see if it needs water. If it springs back, it doesn't need to be watered.
- Consider planting less grass. Shrubs and ground covers require less maintenance and water. Use mulch around plantings to minimize evaporation.

***WATERWISE HOTLINE 373-7610***

WATER Resources
City of Greensboro


# Where Greensboro's Water Comes From . . .

All of our water comes from **surface sources** (impounded reservoirs) within a **protected watershed**. Our water sources are the **Lake Higgins, Lake Brandt** and **Lake Townsend Reservoirs** which are fed primarily by **Reedy Fork Creek**. We are in the **Upper Cape Fear River Basin.**

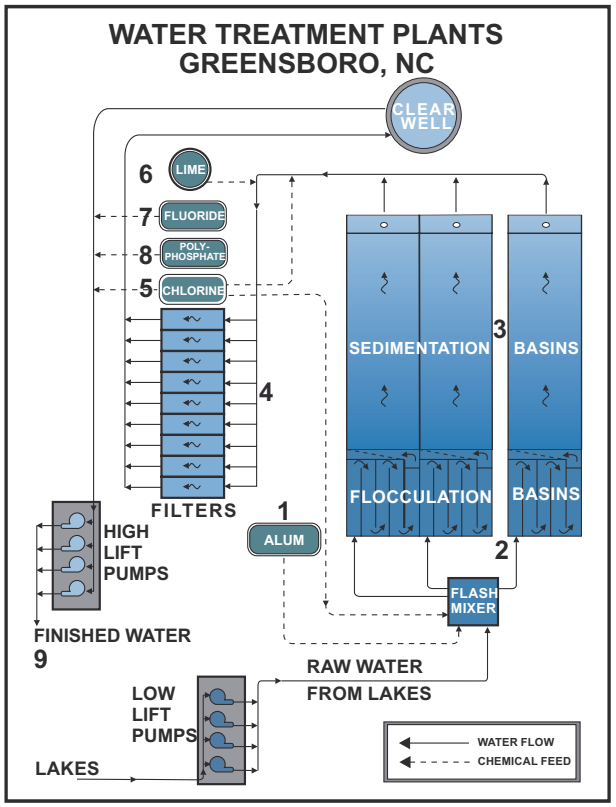
When full, Greensboro's 3 water reservoirs hold almost 8 billion gallons of water. Greensboro has 11 water storage tanks that hold a total of 15 1/2 million gallons of water. Finished Water Storage at the plants *and* Distribution system totals 34 Million Gallons.

As water travels over the land's surface or through the ground, it dissolves naturally occurring minerals and radioactive material, and can be polluted by animals or human activity. Contaminants that might be expected in untreated water include: biological contaminants, such as viruses and bacteria, inorganic contaminants, such as salts and metals; pesticides and herbicides, organic chemicals from industrial or petroleum use; and radioactive materials. All 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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the **Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791**. Customers with **Internet access** should visit the **EPA Website** at http://www.epagov/safewater/mcl.htm for additional information.

Citizens who wish to have public input regarding water quality issues may attend Greensboro City Council meetings, held at 6:00 p.m. on the first and third Tuesday of each month, at the Melvin Municipal Office Building, 300 W. Washington Street.

## HOW YOUR WATER IS TREATED...

**(1)** Liquid alum is added to the raw water and is rapidly mixed to cause coagulation. The water is conveyed to a **(2)** flocculation basin where the coagulated particles grow and the clarification of the water begins. **(3)** Sedimentation basins allow the coagulated material to settle and the clarified water is filtered through **(4)** sand and anthracite filters for removal of all remaining turbidity. **(5)** Sodium hypochlorite, a chlorine solution, is added for disinfection to guarantee bacteriologically safe water. **(6)** Lime is added for pH adjustment and **(7)** hydrofluosilicic acid is added as a fluoride source to retard dental decay. Finally a **(8)** phosphate is added to retard the corrosive nature of water. The product is the **(9)** finished water that is transported to your tap.



There were a total of **1826** microbiological compliance samples collected from Distribution monitoring points in 2001. There were **no detects (positive samples)** for either **Total** or **Fecal Coliform**.

**During 2001 the Water Resources Department monitored and tested for over 120 different regulated and unregulated substances in the water supply, including microbiological, radiological, inorganic, synthetic organic, and volatile organic contaminants.**

### *CRYPTOSPORIDIUM*

***Cryptosporidium*** is a microscopic organism that, when ingested, can result in diarrhea, fever and other gastrointestinal symptoms. The public can be protected by an effective treatment combination including sedimentation, filtration, and disinfection.

***Cryptosporidium Monitoring Last Sampled January – December 1998***

***Note:*** During 1998, ***monthly samples*** were taken at the ***raw (untreated water)*** intakes at the ***Lake Townsend*** and ***Lake Brandt*** reservoirs. These were analyzed for ***Cryptosporidium*** and ***Giardia llambia***. There were ***no detects*** above the ***minimum detection limits*** of the analytical technique. Since no organisms were detected in the ***untreated water***, testing of the treated water was not required.

For additional information visit the ***CDC Website*** at http://www.cdc.gov/ncidod/dpd/crypto.htm

This table shows the results of our monitoring for the period of January 1 to December 31, 2001 and the most recent test results of contaminants that were not due to be tested in 2001. **Only contaminants actually detected are listed.** Information on other monitored contaminants and the Water Resources Department's monitoring program may be obtained by calling the Townsend Water Laboratory at 375-2227.

## REGULATED

| Substance | Violation Y / N | Level Detected | Unit Measurement | MCL | Likely Source of Contamination |
|---|---|---|---|---|---|
| **Turbidity** | **no** | **T** 0.73<br>**M** 0.29 | **NTU** | TT = 5<br>Percentage of samples <0.5 NTU<br>M=100% T=99.8% | Soil runoff |

| Contaminant | Violation Y / N | Level Detected | Unit Measurement | MCLG | MCL | Likely Source of Contamination |
|---|---|---|---|---|---|---|
| **Radioactive Contaminants** | **Sampled 3-30-99 (Most recent analysis prior to 12-31-01)** | | | | | |
| **Gross Beta** | **no** | **T** 1.8<br>**M** 2.6 | **pCi/liter** | none | 50 | Decay of natural and man-made deposits |
| **Inorganic Contaminants** | **Sampled 3-21-01** | | | | | |
| **Barium** | **no** | **T** .022<br>**M** .019 | **ppm** | 2 | 2 | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits |
| **Fluoride** | **no** | **T** 1.03<br>**M** 0.76 | **ppm** | 4 | 4 | Erosion of natural deposits;Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories |
| **Volatile Organic Contaminants and Disinfection By-Products** | **2001 Annual Average** | | | | | |
| **TTHM** [Total trihalomethanes] | **no** | 42.8* | **ppb** | 0 | 80 | By-product of drinking water chlorination |
| Range: 2001 Maximum<br>2001 Minimum | | 70.7<br>23.7 | **ppb** | These results represent the **yearly running average (*), maximum** measured level and **minimum** measured level of **Total Trihalomethanes** from **eight** sampling points in our distribution system measured **quarterly.** | | |
| **Haloacetic Acids** [Total HAA] | **no** | 32.7* | **ppb** | 0 | 60 | By-product of drinking water chlorination |
| Range: 2001 Maximum<br>2001 Minimum | | 44.0<br>20.0 | **ppb** | These results represent the **yearly running average (*), maximum** measured level and **minimum** measured level of **Haloacetic Acids** from **eight** sampling points in our distribution system measured **quarterly.** | | |

| Lead and Copper Monitoring | Last Sampled June - September 2001 | | | |
|---|---|---|---|---|
| **Contaminant** | **90th Percentile** | **Action Level** | **Unit Measurement** | **Likely Source of Contamination** |
| **Lead** | ND | 15 | **ppb** | Customer plumbing and service connection |
| **Copper** | 0.117 | 1.3 | **ppm** | Customer plumbing and service connection |

**Note:** Samples for **Lead and Copper Monitoring** were collected from specific sample sites meeting the EPA criteria (single-family homes with lead-soldered copper plumbing built prior to 1987). The data indicate that our **corrosion control program is functioning effectively** in preventing lead and copper contamination from domestic plumbing.

## UNREGULATED

| Contaminant | Detect Y/N | Level Detected | Unit Measurement | Likely Source of Contamination |
|---|---|---|---|---|
| **Volatile Organic Contaminants** | **Sampled 3-15-01** | | | |
| **Chloroform** | **yes** | **T** 19.3<br>**M** 18.9 | **ppb** | By-product of drinking water chlorination |
| **Bromodichloromethane** | **yes** | **T** 5.1<br>**M** 6.7 | **ppb** | By-product of drinking water chlorination |
| **Chlorodibromomethane** | **yes** | **T** ND<br>**M** 0.83 | **ppb** | By-product of drinking water chlorination |

As you can see by the tables, our system had **NO VIOLATIONS**. We have learned through our monitoring and testing that some constituents have been detected. None of the detected contaminants were found in amounts exceeding the maximum contaminant level or action level established by the EPA. **We're proud that your drinking water meets or exceeds all Federal and State requirements.**

During 2001 the City of Greensboro purchased water from the City of Reidsville. The table below shows Reidsville's water quality test results. The City of Greensboro also purchased minimal amounts of water from the cities of Winston-Salem and High Point. To obtain Water Quality Reports from these systems please contact the **City of Winston-Salem Utilities Division at (336) 727-8418** and the **City of High Point Water Filtration Plant at (336) 883-3410**.

**CITY OF REIDSVILLE WATER QUALITY TESTING RESULTS**

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 during 2001 and the last test results of contaminants that were not due to be tested in 2001. For more information contact the **Reidsville Public Works Department at (336) 349-1070.**

| Compound & Unit | Highest Level Allowed By Regulation (MCL) | Maximum Contaminant Level Goal (MCLG) | Maximum Detected by City of Reidsville | Major Source of Compound |
|---|---|---|---|---|
| **Gross Beta, pCi/liter** | 50.0 | 0 | 1.71 | Naturally occuring |
| **Gross Alpha, pCi/liter** | 15.0 | 0 | 0.00 | Naturally occuring |
| **Fluoride, mg/l** | 4.0 | 4.0 | 1.00 | Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories |
| **Total Coliform, #positive Samples** | 5% | 0 | None | Human and animal fecal waste |
| **Turbidity, NTU** | TT | N/A | 0.88 | Soil runoff |
| **Total Trihalomethane, mg/l** | 0.100 | 0 | 0.0615** | By-product of drinking water chlorination |
| **Chloroform, mg/l** | * | * | 0.0800* | Component of Total Trihalomethane |
| **Bromodichloromethane, mg/l** | * | * | 0.0200* | Component of Total Trihalomethane |
| **Chlorodibromomethane, mg/l** | * | * | 0.0014* | Component of Total Trihalomethane |
| **Copper, mg/l** | AL = 1.3 | 0 | 0.274 90th percentile | Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives |
| **Lead, mg/l** | AL = 0.015 | 0 | 0.007 90th percentile | Corrosion of household plumbing systems; erosion of natural deposits |
| **Nitrate, mg/l** | 10 | 10 | <0.05 | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits |

* These compoounds are components of the Total Trihalomethanes. Therefore, no individual MCL has been established.
** Running Average

## DEFINITIONS

**T indicates Townsend Water Treatment Plant**
**M indicates Mitchell Water Treatment Plant**

**Action Level** - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

**Maximum Contaminant Level** - The "Maximum Allowed" (**MCL**) is the highest level of a contaminant that is allowed in drinking water.

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

**ND (Non-Detects)** - laboratory analysis indicates that the constituent is not present.

**NTU** - Nephelometric Turbidity Units; a measure for water clarity

**Parts per million (ppm) or Milligrams per liter (mg/l)** - one part per million

**Parts per billion (ppb) or Micrograms per liter** - one part per billion

**pCi/liter -** Picocuries per liter is a measure of the radioactivity in water

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

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. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health. Greensboro's water is regularly tested and monitored by highly skilled water treatment professionals.

### *SPECIAL INFORMATION AVAILABLE*

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)***.

For additional information visit the City of Greensboro website at www.ci.greensboro.nc.us/wateres/H2OSupply/supply.htm

WATER Resources
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