



# City of Powder Springs Annual Water Quality Report January 2009 – December 2009

## *Why This Report?*

The Powder Springs Water System is committed to delivering to you, our customer, water that meets or exceeds federal and state quality standards. We are pleased to announce that this 2009 Water Quality Report shows we are doing that. Our priority is to deliver safe water to your home or business each day. We make significant efforts to protect our water resources for both existing needs and future generations. The following pages provide the drinking water analysis summary results of a continuous testing program. This analysis demonstrates the meeting or exceeding of the goals set by federal and state agencies to protect public health. Important definitions are provided to help further clarify the information. For additional information, you may contact our office at 770-943-8010. The bottom line is we provide safe, quality drinking water to you 24 hours a day, seven days a week, 365 days a year, because we know that safe, good drinking water is vital to the health and well being of our community.

## *Who Provides My Water?*

You are a customer of the Powder Springs Water System. We distribute treated water to you and collect wastewater in a manner safe to your families and to the environment. The City of Powder Springs purchases water from the Cobb County-Marietta Water Authority (CCMWA), a utility providing treated drinking water on a wholesale basis to other cities and counties in the region. CCMWA treats drinking water using state-of-the-art equipment and ensures water quality through continued monitoring and testing. Tap water is delivered to more than 6300 customer accounts representing approximately 16,000 people in the Powder Springs Water System's service area. During 2002, the CCMWA, and the Atlanta Regional Commission (ARC), completed a comprehensive source water assessment of potential sources of water pollution to our surface drinking water supplies. Additionally, a wellhead protection plan of our groundwater supply was completed by the Georgia Environmental Protection Division. The resulting information is important for understanding the potential for contamination of drinking water sources. For more information on this project, visit the Source Water Assessment website at [www.atlantaregional.com/swap](http://www.atlantaregional.com/swap) or request information by mail from the ARC at: Atlanta Regional Commission, 40 Courtland St., NE, Atlanta, GA 30303; Attn: Matthew Harper, Environmental Planning Division.

## *Where Does My Drinking Water Come From?*

Your water comes from one of three sources. Most of the water is drawn from the Chattahoochee River and Lake Allatoona. In recent years, a supplemental groundwater (well) source has been tapped during peak demand times. These sources are located entirely in Georgia. The CCMWA has two plants that treat millions of gallons per day of drinking water fed from the two bodies of surface water. Quarles Treatment Division treats the Chattahoochee River water and Wyckoff Treatment Division treats Lake Allatoona water. After treatment at the CCMWA plants, the finished water is fed to the Powder Springs Water System's distribution lines and finally to your home or business.

## *How Is My Water Treated?*

The process begins by pumping untreated water from the river or lake into sedimentation basins where large particles are removed and the water is disinfected. The water is then directed to a process called *floculation*, which is a gentle mixing of the water with a coagulant. This allows particles, called "floc", to form and settle, clarifying the water. Next the water is put through a filtration system where water flows through sand filters, trapping even smaller particles. After filtration, chemicals are added for final disinfection. Except for chlorine and fluoride, every chemical used in the treatment process is removed before the finished water is distributed to you.

## *Why Are There Contaminants?*

The sources of drinking water (both tap 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, and in some cases radioactive material and can pick up substances resulting from the presence of animals or human activity. There are contaminants that may be present in raw (untreated) water including: **Microbial Contaminants**, such as viruses and bacteria, which come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife

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

**Pesticides and Herbicides**, including synthetic (man-made) and volatile organics, which are by-products of industrial processes and petroleum production, or waste from gas stations, urban storm water runoff, and septic systems

**Radioactive Contaminants**, occurs naturally or resulting from gas and oil production and mining activities

When there are contaminants, the U.S. Environmental Protection Agency (EPA) has set treatment methods to reduce them to levels that protect human health. CCMWA's laboratory continuously monitors water quality to be sure it is properly treated to EPA standards. In addition, over 15 water samples throughout the Powder Springs distribution system are taken randomly each month and tested.

In order to ensure tap water is safe to drink, the EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) 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 contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects may be obtained by calling the EPA's Safe Drinking Water Hotline at 1-800-426-4791.

## *Notice To People With Health Concerns*

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-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. 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* are available from the EPA's Safe Drinking Water Hotline at 1-800-426-4791.

### *What Exactly Are Cryptosporidium and Giardia?*

*Cryptosporidium* and *Giardia* are microscopic parasites found in surface waters (rivers, lakes, streams, or ponds) especially when these waters contain a high amount of sewage or animal waste. If ingested through food or drink, they can cause symptoms that include diarrhea, nausea, or stomach cramps. As other conditions can cause these same symptoms, a special laboratory test is needed to confirm the cause. Your tap water is continually tested and treated to prevent exposure to these parasites. *Cryptosporidium* and *Giardia* have never been found in our treated drinking water.

The CCMWA participated in a major drinking water quality testing program called the Supplemental Information Collection Rule (SICR). The U.S. Environmental Protection Agency is working to resolve several scientific issues that will allow it to set *Cryptosporidium* and *Giardia* safety standards. The table below lists the occurrences of both parasites in the 1999 testing of raw (untreated) water at the Chattahoochee River raw water intake north of Johnson Ferry Rd. These were detected in raw water prior to treatment. Our treatment technique is designed and optimized to remove these contaminants, therefore, no precaution about our drinking water is currently needed for the general public. During the same period, none were detected in the are of Lake Allatoona raw water intake.

| <b>Cryptosporidium Occurrences</b> | <b>Giardia Occurrences</b> |
|------------------------------------|----------------------------|
| 6/16/99 – 1 oocyst/10L             | 9/28/99 – 19 cysts/10L     |
| 6/29/99 – 1 oocyst/10L             | 10/12/99 – 9 cysts/10L     |
| 9/28/99 – 1 oocyst/10L             | 10/25/99 – 10 cysts/10L    |
| 11/8/99 – 2 oocyst/10L             | 11/8/99 – 10 cysts/10L     |
|                                    | 11/22/99 – 6 cysts/10L     |

As a result of monthly monitoring undertaken in 2005, to comply with an upcoming federal regulation, CCMWA has been monitoring for these parasites in raw water from both Cobb County intakes. No *Cryptosporidium* oocysts were detected at either source. *Giardia* cysts were detected in two of the twelve samplings at the Chattahoochee River intake. These were detected prior to treatment. There were none at the Lake Allatoona intake.

| <b>Giardia Occurrences</b> |                       |
|----------------------------|-----------------------|
| 1/14/05 – 2 cysts/10L      | 02/14/05 – 1 cyst/10L |

The levels detected were not a violation and caused no health threat to the population. CCMWA's treatment process removes this contamination, so there was no need for precaution with our drinking water.

### *How To Read This Report*

The Drinking Water Analysis Table shows the results the water quality analyses. Every regulated contaminant that CCMWA detected in the water, even in the minutest traces, is listed here. The table contains the name of each substance, the highest level allowed by regulation (MCL), the ideal goals for public health (MCLG), the usual sources of such contamination, footnotes explaining our finding, and a key to units of measurement. Definitions below are important.

The Georgia Environmental Protection Division (GaEPD) has determined that the concentrations of certain water quality monitoring parameters do not change frequently with our system; therefore, some of the data presented in this report may be greater than one year old.

#### **Definitions**

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

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

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

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

**Maximum Residual Disinfectant Level (MRDL):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbiological contaminants.

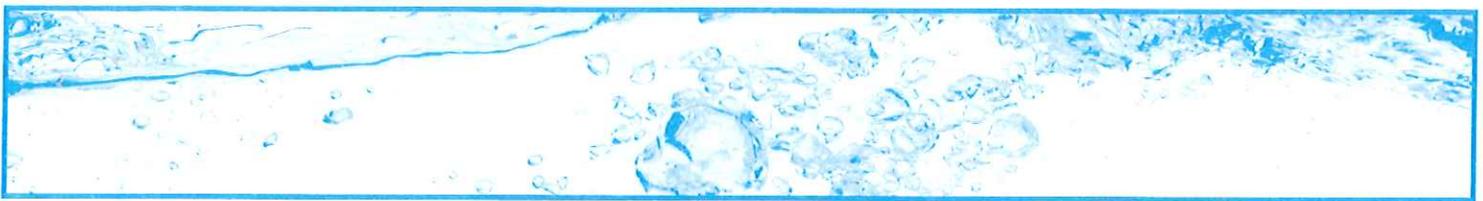
**Maximum Residual Disinfectant Level Goal (MRDLG):** The level of a drinking water disinfectant below which there is no know or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.

#### **Key to Table**

|  |  |
|--|--|
| AL - Action Level                                | Ppm – parts per million or milligrams per liter (mg/L) |
| MCL – Maximum Contaminant Level                  | Ppb – parts per billion or micrograms per liter (µg/L) |
| MCLG – Maximum Contaminant Level Goal            | TT – Treatment Technique                               |
| NTU – Nephelometric Turbidity Unit               | n/a – not applicable                                   |
| MRDL – Maximum Residual Disinfectant Level       | n/d – not detected                                     |
| MRDLG – Maximum Residual Disinfectant Level Goal | BDL – Below Detection Limits                           |

#### **En Español**

Este informe contiene información muy importante.  
Tradúzcalo o hable con un amigo quien lo entienda bien.



## Drinking Water Analysis Table

(Data in this report is furnished by the CCMWA)

| Inorganic Contaminants |             |      |          |        |                 |          |   |           |
|------------------------|-------------|------|----------|--------|-----------------|----------|---|-----------|
| Substance              | Date Tested | Unit | (MCL)    | (MCLG) | Amount Detected | Range    | Major Source(s)   | Violation |
| Fluoride*              | 12/05/09    | ppm  | 4        | 4      | 1.05            | 0.0-1.05 | Erosion of natural deposits; water additive which promotes strong teeth             | NO        |
| Lead**                 | 07/15/08    | ppb  | AL=15    | 0      | 9.7             | n/a      | Corrosion of household plumbing systems   | NO        |
| Copper***              | 09/03/08    | ppm  | AL = 1.3 | 0      | 0.032           | n/a      | Corrosion of household plumbing systems   | NO        |
| Nitrate/Nitrite****    | 06/03/09    | ppm  | 10       | 10     | 1.6             | 0.0-1.6  | Runoff from fertilizer use; leaching from septic tanks; erosion of natural deposits | NO        |

**NOTES:**

\*Fluoride is added to water to help in the prevention of dental cavities (caries) in children

\*\*Of the 50 sites tested, 3 exceeded the action level. The next round of testing is due in 2011.

\*\*\*Of the 50 sites tested, none exceeded the action level. The next round of testing is due in 2011.

\*\*\*\*Nitrate and Nitrite are measured together.

### Disinfection By-Products, By-Product Precursors and Disinfectant Residuals

| Contaminant                    | Date Tested | Unit | MCL      | MCLG      | Detected Level | Range       | Major Sources   | Violation |
|--------------------------------|-------------|------|----------|-----------|----------------|-------------|---|-----------|
| TTHM's (total Trihalomethanes) | 11/04/09    | ppb  | 80       | 0         | 45.0           | 9.9-97.5*   | By-products of drinking water disinfection  | NO        |
| HAA5's (haloacetic acids)      | 11/04/09    | ppb  | 60       | 0         | 26.0           | 11-42.2*    | By-products of drinking water disinfection  | NO        |
| TOC (total organic compounds)  | 03/03/09    | ppm  | TT       | n/a       | 2.2            | 1.0-2.2     | Decay of organic matter in the water withdrawn from sources such as lakes and streams | NO        |
| Chlorite                       | 11/02/09    | ppm  | 1.0      | 0.8       | 0.51           | 0.17-0.51   | By-product of drinking water disinfection   | NO        |
| Chlorine (free)                | 11/10/09    | ppm  | MDRL = 4 | MRDLG = 4 | 2.12           | BDL** -2.12 | Drinking water disinfectant   | NO        |

**NOTES:**

\*This contaminant is regulated by the average concentration over a period of a year.

\*\*Detection Limit for chlorine is 0.05 mg/L. Disinfection was confirmed by heterotrophic plate count. This is a method that measures total bacteria in a sample. The result was within acceptable limits.

### Turbidity

| Contaminant | MCL                                 | MCLG | Level Found | Range | Sample Data | Violation | Typical Source |
|-------------|-------------------------------------|------|-------------|-------|-------------|-----------|----------------|
| Turbidity*  | TT = 1 NTU                          | 0    | 0.29        | n/a   | 04/19/09    | NO        | Soil Runoff    |
|             | TT = percentage of samples <0.3 NTU |      | 100%        | n/a   |             |           |                |

**NOTES:**

\*Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.

### Microbiological Contaminants

| Contaminant                         | MCL   | MCLG   | Highest level detected (%) | Average level detected (%) | Violation |
|-------------------------------------|---|--|----------------------------|----------------------------|-----------|
| Total Coliform Bacteria             | <5% positive samples during a monthly sampling period | 0% positive samples during a monthly sampling period | 0.00%                      | 0.00%                      | NO        |
| Escherichia coli (E. coli bacteria) | <5% positive samples during a monthly sampling period | 0% positive samples during a monthly sampling period | 0.00%                      | 0.00%                      | NO        |

### *Saving Water Outdoors*

Raise the lawnmower blade to at least three inches, or to its highest level. A higher cut encourages grass roots to grow deeper, shades the root system and holds soil moisture. Use mulch to retain moisture in the soil. Mulch also helps control weeds that compete with landscape plants for water. Plant native and/or drought-tolerant grasses, ground covers, shrubs and trees. Once established, they do not need water as frequently and usually will survive a dry period without watering. They also require less fertilizer or herbicides. Group plants together based on similar water needs.

### *Saving Water Indoors*

Never pour water down the drain when there may be another use for it. Use it to water indoor plants or gardens. Make sure your home is leak-free. Check your water meter when you are certain that no water is being used. If the meter reading changes, you have a leak. Repair dripping faucets by replacing washers. One drop per second wastes 2,700 gallons of water per year. Place a bucket in the shower to catch excess water to water plants. In the shower, turn the water on to get wet; turn it off to lather up; then turn it back on to rinse off. Repeat when washing your hair. Operate automatic dishwashers and clothes washers only when they are fully loaded or set the water level for the size of load you are washing. Store drinking water in the refrigerator. Don't let the tap run while you are waiting for water to cool.



Questions?

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