

**City of Byron**  
**Department of Public Works**

**104 New Dunbar Road**

**Byron, GA 31008**

**Phone: (478) 956-4483 Fax: (478) 956-2947**

**Water Quality Report**

**For Jan-Dec 2004**

**INTRODUCTION**

The City of Byron is pleased to report to you again this year that the drinking water we supply to you is safe to drink. The quality of our municipal drinking water surpasses federal and state mandates for drinking water. The Safe Drinking Water Act (SDWA) is the primary regulation that ensures the health and safety of the public as they consume our nation's drinking water. The SDWA Amendments of 1996 require water systems to prepare and distribute a Consumer Confidence Report (CCR)—otherwise known as an annual Water Quality Report. This report for 2004 is intended to let you, our customer, know how and what we are doing to provide you with healthy drinking water and the quality service you deserve.

We would like for you to understand more about your water system and hope this report answers questions you might have. We welcome your comments and invite you to visit us so we can show you our water pumping and treatment facilities. Our employees are involved in civic organizations and are pleased to offer information and speakers to the community on water protection, water treatment, and water conservation, as well as providing tours of our facilities. For more information about your water or this report, please call our primary contact, the City of Byron Public Works Director, Jeff Hooper, at (478) 956-4483.

**INFORMATION ABOUT YOUR WATER SYSTEM**

The City of Byron operates the Byron water system, GA Water System ID #2250000, under a permit issued by the Georgia Environmental Protection Division (EPD). Your water comes from three municipal groundwater wells that are over 460 feet deep. The water source is called the Cretaceous Sand Aquifer System and provides ample volumes of water for our community. Well # 1 is located on Thames Road, and its water tank has a storage capacity of 75,000 gallons of treated water. Well # 2 is located at the Public Works facility at 104 New Dunbar Road, and the tank can store 250,000 gallons of treated water. Well #3 is located on James E. Williams Industrial Drive; the treated water capacity of the tank is 500,000 gallons. The elevated storage tanks provide water pressure as well as storage for firefighting requirements. We perform treatment at each of these wells to include disinfection with chlorine to make the water biologically safe, fluoride to aid in the prevention of dental cavities, and lime to make the water non-corrosive, which protects metal pipes and fixtures. Our **Wellhead Protection Plan** helps us protect each well from activities that could potentially cause contamination of our valuable water source.

Additionally, the **Source Water Assessment** conducted on our three wells describes any potential pollution sources (PPS) to our water system. The susceptibility to pollution of our wells is minimal. Within the control zones a very slight susceptibility to pollution exists from fuels or other spills from vehicles parked there and from diesel powered generators at two of the wells. Attached to copies of the CCR displayed at City Hall and the Department of Public Works is a summary list of the potential pollution sources in both the control and management zones. To obtain a copy of this list, or the source water assessment, please call Jeff Hooper, at 478-956-4483.

Our water system continues to grow. Our last well was drilled in 1999, and became fully operational, along with treatment facilities and a 500,000-gallon water tower. These structures are located in the North Peach Industrial Park, adjacent to James E. Williams Industrial Drive. It is noteworthy that this water tank is painted to look like a peach, and is easily seen dominating the skyline on the east side of I-75. Addition of this well, with its 1000-gallon per minute pump, doubled our groundwater withdrawal capability. Since adding this third well, the City has installed over 3 miles of 12-inch diameter water mains. In the very near future, we plan to install more than two miles of additional water main.

## **DRINKING WATER INFORMATION**

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 can be obtained by calling the EPA's Safe Drinking Water Hotline, at 800-426-4791.

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 consult their health care providers concerning drinking water. 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).

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 and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

### **Contaminants that may be present in source water include the following:**

- *Microbial contaminants*, such as viruses and bacteria which may 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, or farming.

- *Pesticides and herbicides*, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

- *Organic chemical contaminants*, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

- *Radioactive contaminants*, which can be naturally occurring or be the result of oil and gas production and mining activities.

## **WATER QUALITY DATA**

The tables below list the drinking water contaminants that were detected during the 2004 **calendar year**. The presence of these contaminants in the water does not necessarily indicate the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done January 1 - December 31, 2004. EPD requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old.

### **TERMS & ABBREVIATIONS USED BELOW:**

**Maximum Contaminant Level Goal (MCLG):** 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.

**Maximum Contaminant Level (MCL):** 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.

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

**Sampling Waiver:** Must be issued by EPD. Waivers of sampling requirements are for specified contaminants and must be based on both a vulnerability assessment and the analytical results of previous sampling. The vulnerability assessment may be based on a determination that either the contaminant has not been used in the area or that the source water is not susceptible to contamination. Currently, Byron has been issued waivers for two inorganic compounds and 41 synthetic organic contaminants.

**n/a:** not applicable - **n/d:** not detectable at testing limit - **ppb:** parts per billion or micrograms per liter - **ppm:** parts per million or milligrams per liter - **pCi/l:** picocuries per liter (a measure of radiation)

**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 known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

### Detected Inorganic Contaminants Table

<u>Parameter/Units</u>	<u>MCL</u>	<u>MCLG</u>	<u>Byron</u> Water System Results	<u>Range of detections</u>	<u>Sample Date</u>	<u>Violation No/Yes</u>	<u>Typical Source of Contaminant</u>
Fluoride (ppm)	4.0	4.0	0.8	0.47-1.13	2004	No	Water additive which promotes strong teeth, erosion of natural deposits
Nitrate (ppm)	10.0	10.0	0.99	0.58-0.99	2004	No	Erosion of natural deposits; Runoff from fertilizer use; Leaching from septic tanks, sewage

### Detected Organic Contaminants Table

<u>Parameter/Units</u>	<u>MRDL</u>	<u>MRDLG</u>	<u>Byron</u> Water System Results	<u>Range of detections</u>	<u>Sample Date</u>	<u>Violation No/Yes</u>	<u>Typical Source of Contaminant</u>
Chlorine (ppm)	4	4	0.6	0.6-0.6	2004	No	Water additive to control microbes

**Lead.** In 2004 (July and August) we collected draw samples from 20 sites for analysis of lead content, as well as copper. Two of the samples (10%) exceeded the action level for lead, as noted in the Lead and Copper Monitoring Results Table. This was not a violation of the regulations for lead content in drinking water (since the 90<sup>th</sup> percentile result was 13 ppb). Lead in drinking water that exceeds the action level can pose significant health effects for some: Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than that at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated levels of lead in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800-426-4791).

Lead may be found in household plumbing fixtures such as service lines, pipes, solders and fluxes, as well as brass and bronze fixtures. Lead is found throughout the environment in the air, soil, water, and household dust. Lead is also found in consumer products such as food, lead-based paint, pottery, porcelain and pewter.

**Copper.** For the 20 samples drawn in 2004, the 90<sup>th</sup> percentile result for copper was 1.5 ppm, which exceeds the action level of 1.3 ppm and is a **violation**. A total of four samples were over 1.3 ppm. Copper in drinking water exceeding the action level poses some health effects: Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor. In general, copper levels in Byron's water have been shown to be well below the action level.

Major sources of copper in drinking water are corrosion of household plumbing systems, erosion of natural deposits and leaching from wood preservatives. The results explained above are shown in the table below.

*As a result of the lead and copper test results, we have put increased emphasis on maintaining an adequately high pH in our drinking water by ensuring that a sufficient amount of lime is continuously injected.*

### Lead and Copper Monitoring Results

<u>Parameter/Units</u>	<u>Action Level</u>	<u>MCLG</u>	<u>Byron Water System Results</u>	<u># of sample sites found to be above the Action Level</u>	<u>Violation No/Yes</u>	<u>Sample Date</u>	<u>Typical Source of Contaminant</u>
Lead/ppb	15	0	13	2	No	Jul/Aug 2004	Corrosion of household plumbing
Copper/ppm	1.3	1.3	1.5	4	Yes	Jul/Aug 2004	Corrosion of household plumbing

The city draws a minimum of 50 samples a year for **microbiological contaminants**. All samples taken during the year were received at the lab on time and no traces of microbiological evidence were detected.

**Is our water system meeting other rules that govern our operations?** EPA and EPD require us to test our water on a regular basis to ensure its safety. For example, chlorine, fluoride, and pH levels are monitored every day, recorded, are reported to EPD monthly. During 2004, we had no deviations or infractions for any of these tests on our water. Protecting your water is a high priority for our operators. We are here to serve you—our valuable families, friends, neighbors, customers. Please let us know how we are doing. One thing you can do to help: **CONSERVE WATER**, one of the most precious of our resources.

### WATER CONSERVATION

Our water supplies, nationwide, are increasingly stressed, making all of us more susceptible to the impacts of drought. Conservation is the first line of defense against water shortages. Here are some things you can do to conserve water:

1. **Restrict outdoor water use.** Obey restrictions when imposed. In May 2004, the Environmental Protection Division (EPD), of the Georgia Department of Natural Resources, adopted new rules for outdoor water use. The City of Byron adopted the same rules, effective July 1, 2004. The outdoor water use schedule is as follows:

- (a) Odd-numbered addresses: outdoor water use is allowed on Tuesdays, Thursdays and Sundays.
- (b) Even-numbered addresses: outdoor water use is allowed on Mondays, Wednesdays and Saturdays.

Further restrictions will be imposed if drought conditions (drought response levels) are declared. Additionally, please don't water driveways, walkways, etc. Also, landscape with drought-resistant plants, shrubs and trees.

2. **Use indoor water more efficiently.** For example, fix leaks and don't use the toilet as a wastebasket.

Water shortages can occur with drought or without drought conditions (for example, pump breakdown). Please practice year-round conservation; it is the cheapest way to save our valuable drinking water. Ask for *Every Drop Counts*, a tri-fold brochure available at City Hall and Public Works.

**Individual copies of this report will not be mailed; however, copies are available upon request at Byron City Hall and at the Department of Public Works.** City Hall hours of operation are from 9:00 A.M. to 5:30 P.M. Monday, Tuesday, Thursday, and Friday and 9:00 A.M. to 12:00 P.M. on Wednesday. The Public Works Department hours of operation are 8:00 A.M. to 5:00 P.M. Monday through Friday. This Water Quality Report can also be found on the Internet at the City of Byron's website: <http://www.byronga.com/> [Click on "Consumer Confidence Report/Water Quality Report."]

Phone numbers – City Hall: 478-956-3600      Department of Public Works: 478-956-4483

Attachment:

PPS Summary List (To review this list, please contact the Public Works Department.)