

AN IMPORTANT MESSAGE FROM YOUR WATER DEPARTMENT

The Jekyll Island Authority Water Department is pleased again to offer you this Water Quality Report for Jekyll Islands Public Water System I.D. No. 1270028. This report is a summary of the year 2007 laboratory testing results of Jekyll Island's drinking water. The United States Environmental Protection Agency and Georgia Environmental Protection Division have set high standards for the quality of water you use. These high standards require our water system to analyze over 150 different water quality parameters annually to ensure the quality and safety of the water we deliver to your homes daily.

This is the eleventh time we have produced this report, and we are proud of the fact that we have never had a permit violation for contaminant levels in the water we supply. The health and safety of your family will always be our top priority.

Contained within this report is information about the source of your water, treatment processes we use to treat and sanitize the water and the many tests we performed on your water last year (and some from prior years). Additional information including conservation measures and source water assessment has been added as State requirements have mandated. Our staff work diligently to assure that the water delivered to your home meets or surpasses standards set by the State and Federal Governments.

We are continuing our commitment to provide you with clean and safe drinking water. Please take the time to read this report and if you have any questions or comments on the contents, please call John Day at (912)635-4021. We have placed a copy of this report on our web site, <http://www.jekyllislandauthority.org/>. A copy of the Jekyll Island Water System Wellhead Protection Plan is also available upon request.

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 that 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 can be obtained by calling EPA's safe drinking water hotline (800-426-4791).

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 from human activities. Contaminants that may be present in source water include the following:

- Microbial contaminants, such as viruses and bacteria that 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 that 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.

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 risks of infection by cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Jekyll Island's water source is the Upper Floridan aquifer and is protected from most of these contaminants because of the depth of the wells (approx. 850 ft.) and the impermeability of the confining layers (various rock strata) above and below it. However, over pumping of the *Floridan Aquifer* in some coastal areas of the State has caused saltwater intrusion and the problem is a matter of current research and regulatory action. Due to the permeability of the surface soils in this part of the state, water bearing zones called Surficial Aquifers (above the major confining layers that protect the Brunswick and Floridan aquifers) are vulnerable to contamination. For this reason, the Environmental Protection Division's Georgia Wellhead Protection Plan for the Jekyll Island Authority has classified Jekyll Island to be a *1"Significant Recharge Area" and to be at a *2 "Higher Susceptibility" to pollution status.

The proximity of our wellheads relative to public roads, telephone poles, electrical transformers, and service roads (dirt roads leading to and from the water plants) theoretically places them at risk in the immediate proximity (10 ft. radius) of the wellheads (spills from vehicles, leakage, improper storage or disposal of chemicals etc). Many private residences (not served by public water systems in Glynn County) are at significant risk from surface pollution (as described above) because those wells are generally 180-200 ft deep...drawing water from the surficial aquifers.

Surface water entering the ground through the rock strata at or near "The Fall Line" (Columbus, Macon, and Augusta) feeds and re-charges the *Floridan Aquifer* water levels. Our water system withdraws water from five *Floridan Aquifer* wells for our drinking water supply. The raw groundwater is aerated to remove hydrogen sulfide (sulfur taste and odor) and chlorinated for disinfection before being pumped into each of the elevated storage tanks or into the system. Each of these wells is 750-850 feet deep. One well is located on the North end of the Island on Major Horton Road. Two more are located a short distance South on Bond Road. The other two wells are located on South Beachview Drive on the South end of the Island. The two *golf-ball and tee* shaped water towers #1 & #2 no longer have active wells but are filled from the system with water produced by the other wells and serve as elevated storage during high water demands and fire protection events. Jekyll Island's Water

System is flexible and can be extended to meet future needs. Presently we maintain over 40 miles of water mains on the Island.

The Jekyll Island Authority continues to explore and utilize alternate water sources. The golf courses, Summer Waves, Soccer Complex, and the Entrance Parkway have begun using the Miocene Aquifer for irrigation. In the near future, all of the golf courses irrigation will be from this source. This year, the Jekyll Island Authority has begun allowing the use of shallow residential wells for irrigation. Alternate source water use will help preserve the *Floridan Aquifer*, the high quality “drinking water aquifer.”

The Georgia Environmental Protection Division (EPD), the Pollution Prevention Assistance Division (P2AD) and the State Water Conservation Coordinator announced year-round conservation based outdoor water use restrictions that went into effect as of June 1, 2004.

The new measures referred to as “pre-drought restrictions” are an important part of the State Drought Management Plan adopted in March 2003, by the Board of the Georgia Department of Natural Resources.

As of May 6, 2008 we are currently under (Level 1) drought outdoor water use restrictions.

The Mandatory regional Level 1 restrictions are as follows:

- * No Friday watering.
- * Odd numbered addresses may only water Tuesdays, Thursdays, and Sundays
(12 mid-night till 10 AM and 4 PM until 12 midnight)
- * Even numbered and unnumbered addresses may only water Mondays, Wednesdays and Saturdays.
(12 mid-night till 10 AM and 4 PM until 12 midnight)

The exceptions to these restrictions expected to impact Jekyll Island water users are as follows:

- Irrigation for a personal food garden
- Irrigation of newly installed landscapes, commercial or private (In place less than 30 days)
(Irrigation under this exception allowed any day of the week for a period of thirty days following installation)
- Commercial uses including: Retail garden centers, sod, ornamental, fruit, and vegetable growers, Hydro seeding, power washing, construction site re-planting, car washes and other activities essential to daily business

Water may be used at any time under these excepted conditions.

Water Conservation

Along with the outdoor water use restrictions, here are a few ways to conserve water usage outside and inside your home.

- Check your water meter and bill to track your water usage.
- Locate the leak indicator (a small red triangular shaped dial located on the face of your water meter) that rotates as water passes through the meter. If it moves any at all when everything is turned off in the house and yard. There is a leak somewhere.
- Install a master water shut-off valve for maintenance and emergencies. This could save much water and prevent damage to your home in the event of a plumbing leak.
- Inspect your sprinkler system frequently while in operation for leaks and proper function. Adjust sprinklers so only your lawn is watered...not the house, sidewalk, or street.

- Install a rain shut-off device on your automatic sprinklers to eliminate unnecessary watering
- Minimize evaporation by watering during the early morning hours, when temperatures are cooler and winds are lighter.
- More plants die from over-watering than from under-watering be sure only to water when necessary.
- When doing laundry, match the water level to the size of the load.
- If your toilet was installed prior to 1980, place a toilet dam or bottle filled with water in your tank to cut down of the amount of water used for each flush Or, better still, replace the toilet with a modern water efficient toilet.
- Make sure your toilet flapper doesn't stick open after flushing.
- If your shower can fill a one-gallon bucket in less than 20 seconds, then replace it with a water efficient showerhead.
- Teach your children to turn the faucets off tightly after each use.
- The Jekyll Island Authority has issued water conservation tips through the brochure "Every drop Counts" produced by the Department of Community Affairs. Their website is www.dca.stste.ga.us/water_conservation.

County Extension Offices are also an excellent source of information on water conservation. In addition, there are many good websites that provide information on water conservation. Here are a few:

- www.georgiadrought.org
- www.watersmart.net
- www.waterwise.org
- www.conservewatergeorgia.net
- www.wateruseitwisely.com

*1 Hydrologic Atlas 18, Most Significant Recharge areas of Georgia, Georgia Department of Natural Resources, Atlanta, 1989.

*2 Hydrologic Atlas 20, Ground-Water Pollution Susceptibility Map of Georgia, Georgia Department of Natural Resources, Atlanta, 1992.

WATER QUALITY DATA

The following tables list all the drinking water contaminants that were detected during the 2007 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done January 1 – December 31, 2007. Georgia EPD requires monitoring for certain contaminants less than once each year because the concentrations of these contaminants are not expected to vary significantly from year to year. Due to this, some of the data are more than one, but less than 5 years old except Sulfate last tested in 1995.

TERMS AND ABBREVIATIONS USED IN THESE TABLES

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

MCL: Maximum Contaminant Level; 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 technology (BAT).

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

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

N/A: not applicable. ND: not detected. ppb: parts per billion. ug/l: micrograms per liter. ppm: parts per million. mg/l: milligrams per liter. pci/l: pico curies per liter. (A measure of radiation).

Analogies that demonstrate how small these concentrations are:

1 ppm or mg/l is equal to 1 penny in \$10,000.00.

1 ppb is equal to 1 penny in \$10,000,000.00.

INORGANIC CONTAMINANT TABLE

Parameter	MCL	MCLG	Range of Detection	Jekyll Island System	Sample Date	Acceptable Yes/No	Typical Source of Contamination
** Fluoride, mg/l	4.0	N/A	0.68-0.73	0.59	2006	Yes	Naturally Occurring
Sodium, mg/l	*	*	15.0-29.0	18.0	2006	Yes	Naturally Occurring
Sulfate, mg/l	*	*	76-148	101	1995	Yes	Naturally Occurring
Iron, mg/l	*	*	0-54	18	2004	Yes	Naturally Occurring
Chlorine Residual, mg/l	4.0	4.0	0.87-1.66	1.0	2007	Yes	Water Additive used to control microbes

* No MCL or MCLG established

** Fluoride is added to water in some systems for prevention of tooth decay

ORGANIC CONTAMINANT TABLE

Parameter	MCL ppb	MCLG ppb	Jekyll Island Water System	Range of Detection	Sample Date	Acceptable Yes/no	Typical Source of Contamination
Total Tri-halomethanes	80.0	0.0	21.1	N/A	2007	Yes	By-product of Chlorination
Halo-Acetic Acids	60.0	N/A	1.2	N/A	2007	Yes	By-product of Chlorination
Total Xylenes	1000	0.0	0	0 – 8.2	2006	Yes	Discharge from Petroleum and chemical factories
Ethylbenzene	700	0.0	0	0 – 1.8	2006	Yes	Discharge from Petroleum refineries

RADIONUCLIDES

Parameter	MCL Pci/l	MCLG Pci/l	Jekyll Island Water System	Range of Detection	Sample Date	Acceptable yes/ no	Typical Source of Contamination
Beta Photo Emitters	50*	0.0	<2	N/A	2000	Yes	Naturally Occurring

- The MCL for beta particles is 4 millirems/year. EPA considers 50 Pci/l to be the level of concern for beta particles.

LEAD AND COPPER

Parameter	MCL ppb	MCLG Ppb	Jekyll Island Water System	No of sites above Action Levels	Sample Date	Acceptable Yes/no	Typical Source of Contamination
Lead, ppb	15	0.0	5.1	1	2007	Yes	Corrosion of Household Plumbing
Copper, ppb	1300	0	110	0	2007	Yes	Corrosion of Household Plumbing

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 Jekyll Island Water System 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>.

In addition to the above analyses, Jekyll Island's Water Laboratory collects and analyzes 10 samples each month from sites equally divided around the island for microbiological contaminants (Total Coliform, Fecal Coliform, and/or E. Coli. Bacteria). There have been no incidents of contamination of the system water by any of these indicator organisms.

The Georgia Environmental Protection Division, through risk assessment and meticulous testing protocol, has granted The Jekyll Island Authority Waivers on testing for the chemicals listed below: (This means that no harmful levels of these substances were detected as specified in the *Georgia Rules for Safe Drinking Water*, Rev. 1994.)

Cyanide
Heptachlor Epoxide
q-BHC (Lindane)
Hexachlorobenzene
Asbestos
Aldicarb Sulfone

Chlorodane
Methoxychlor
Endrin
Hexachlorocyclopentadiene
Dioxin
Aldicarb Sulfoxide

Heptachlor
PCB's
Aldrin
Dieldrin
Alachlor
Atrazine

Benzo (A) Pyrene
Di (2-Ethylhexyl) Adipate
Diquat
Ethylene Dibromide (EDB)
Oxymyl (Vydate)
Simazine 2,4-D
Arsenic

Carbofuran
Dibromochloropropane (DBCP)
Di (2- Ethylhexyl) Phthalate
Glyphosate
Pentachlorophenol
Toxaphene 2,4,5-TP (Silvex)

Dalapon
Dinoseb
Endothall
Lindane
Picloram
2,3,7,8-TCDD

We are pleased to report that your community's drinking water has met or exceeded all safety and quality standards set by the Georgia EPD and the USEPA during the previous year and in previous years. This 2008 Water Quality Report is inclusive of all contaminants detected in the system's drinking water supply during the 2007 calendar year unless otherwise noted. We are committed to provide consumers with safe, dependable, tap water on a year-round basis.

Over the years, the Jekyll Island Water and Wastewater departments have received numerous awards for outstanding operations. Most recently, the Wastewater Plant received the "2007 Plant of the Year Award" in our size category from Georgia Association of Water Professionals. The Water department was not allowed to compete as we won this award in 2006. In addition, both Water and Wastewater systems received 5-year platinum awards for continuous permit compliance.

