



Water Quality Report 2009



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THE CITY OF JACKSONVILLE BEACH IS PLEASED TO PRESENT THE ANNUAL DRINKING WATER QUALITY REPORT FOR 2009

This report is designed to inform you about the quality of your drinking water, and the services we deliver every day to ensure it is safe. In order to ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes regulations that limit the amount of certain contaminants in water provided by public water systems.

Our water supply is drawn from a series of six wells extending into the pristine Floridan Aquifer. The Floridan Aquifer is the source of drinking water for the majority of North Florida's water systems. Once the water is pumped from the wells, the water is aerated to remove the hydrogen sulfide (rotten egg smell). Chlorine is added for disinfection purposes; the water is then pressurized for the water distribution system.

In 2009 the Department of Environmental Protection performed a Source Water Assessment on our system. The assessment was conducted to provide information about any potential sources of contamination in the vicinity of our wells. There are 19 potential sources of contamination identified for this system with moderate levels of susceptibility. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at www.dep.state.fl.us/swapp.

WANT MORE INFORMATION?

If you have any questions about this report or want additional information concerning your water utility, please contact Robert M. Newman, at (904) 247-6278, in the Water Plant. Additional copies of this report are available at City Hall, 11 N. Third Street, or The Public Works Administration office at 1460-A Shetter Avenue, second floor. This report may also be accessed at the City's website www.jacksonvillebeach.org under Departments, Public Works, Drinking Water Report.

We value our customers and encourage you to contact us. If you want to learn more, please attend any of our regularly scheduled Public Works meetings held every Wednesday at 8 A.M. in the Operations and Maintenance Facility on Shetter Ave. Please call in advance to be placed on the agenda.

The City of Jacksonville Beach routinely monitors your drinking water for contaminants according to Federal and State laws, rules, and regulations. Water samples are collected citywide and tested for bacteriological and chemical components.

Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and to protect our water resources. Another important way we protect our drinking water is through our Cross Connection/Backflow Prevention Program.

Except where indicated otherwise, this report is based on the results of our monitoring for the period of January 1 to December 31, 2009. Data obtained before January 1, 2009, and presented in this report, are from the most recent testing done in accordance with the laws, rules, and regulations.

If you have any questions or concerns regarding the information provided in this report, please call either of the following numbers: Jacksonville Beach Water Plant (904) 247-6278 or the Environmental Protection Agency (EPA) Safe Drinking Water Hotline (800) 426-4791.

Thank you for allowing us to continue providing your family with clean, quality water. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers. These improvements are sometimes reflected as rate structure adjustments.

Thank you for understanding.





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TYPES OF CONTAMINANTS

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. Water can also pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

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 stormwater 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 stormwater 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 stormwater runoff, and septic systems.

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

In order to ensure that tap water is safe to drink, the EPA prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. The 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 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.

TERMS AND ABBREVIATIONS

In the Test Results data table you may find terms and abbreviations that are not familiar. The following definitions will help you better understand these terms:

MAXIMUM CONTAMINANT LEVEL OR 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.

MAXIMUM CONTAMINANT LEVEL GOAL OR 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 RESIDUAL DISINFECTANT LEVEL OR 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 microbial contaminants.

MAXIMUM RESIDUAL DISINFECTANT LEVEL GOAL OR MRDLG:

The level of a drinking water disinfectant below where there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

ACTION LEVEL (AL):

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

PARTS PER MILLION (PPM) OR MILLIGRAMS PER LITER (mg/l) One part by weight of analyte to 1 million parts by weight of the water sample.

PARTS PER BILLION (PPB) OR MICROGRAMS PER LITER (µg/L) One part by weight of analyte to 1 billion parts by weight of the water sample.

Non-Detects (ND): Indicates that the substance was not found by laboratory analysis.

IMPORTANT HEALTH INFORMATION

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, persons 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.

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 Jacksonville Beach 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>.

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.

The Environmental Protection Agency and the Center for Disease Control (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.



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TEST RESULTS

Microbiological Contaminants

| Contaminant and Unit of Measurement | Dates of sampling (mo./yr.) | MCL Violation Y/N | Highest Monthly % Number | MCLG | MCL | Likely Source of Contamination |
|-------------------------------------|-----------------------------|-------------------|--|------|---|--------------------------------------|
| Total Coliform Bacteria | Monthly 2009 | Y | 6.9% | 0 | For systems collecting at least 40 samples per month: presence of coliform bacteria in 5% of monthly samples. | Naturally present in the environment |
| Contaminant and Unit of Measurement | Dates of sampling (mo./yr.) | MCL Violation Y/N | Total Number of positive samplers for the year | MCLG | MCL | Likely source of contamination |
| Fecal coliform and E. coli | Monthly 2009 | N | 2 | 0 | 0* | Human and animal fecal waste |

Inorganic Contaminants

| Contaminant and Unit of Measurement | Dates of sampling (mo./yr.) | MCL Violation Y/N | Level Detected | Range of Results | MCLG | MCL | Likely Source of Contamination |
|-------------------------------------|-----------------------------|-------------------|----------------|------------------|------|-----|--|
| Barium (ppm) | 08/2008 | N | 0.025 | 0.020 – 0.025 | 2 | 2 | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits |
| Fluoride (ppm) | 08/2008 | N | 0.75 | ND-0.75 | 4 | 4.0 | Erosion of natural deposits; discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth when at optimum levels between 0.7 and 1.3 ppm |
| Nickel (ppb) | 08/2008 | N | 4 | ND-4 | N/A | 100 | Pollution from mining and refining operations. Natural occurrence in soil |
| Sodium (ppm) | 08/2008 | N | 14 | 13-14 | N/A | 160 | Salt water intrusion, leaching from soil |

Stage 1 Disinfectants and Disinfection By-Products

| Disinfectant or Contaminant and Unit of Measurement | Dates of sampling (mo./yr.) | MCL or MRDL Violation Y/N | Level Detected | Range of Results | MCLG or MRDLG | MCL or MRDL | Likely Source of Contamination |
|---|-----------------------------|---------------------------|----------------|------------------|---------------|-------------|---|
| Chlorine (ppm) | Monthly 2009 | N | 1.55 | 0.45-3.20 | MRDLG = 4 | MRDL = 4.0 | Water additive used to control microbes |
| Haloacetic Acids (five) (HAA5) (ppb) | 08/2009 | N | 18.80 | 15.50-18.80 | NA | MCL = 60 | By-product of drinking water disinfection |
| TTHM [Total trihalomethanes] (ppb) | 08/2009 | N | 42.30 | 35.20-42.3 | NA | MCL = 80 | By-product of drinking water disinfection |

For chlorine, the level detected is the running annual average (RAA), computed quarterly, of monthly averages of all samples collected. Range of Results is the range of individual sample results (lowest to highest) for all monitoring locations.

Lead and Copper (Tap Water)

| Contaminant and Unit of Measurement | Dates of sampling (mo./yr.) | AL Violation Y/N | 90th Percentile Results | # of Sampling sites exceeding the AL | MCLG or MRDLG | AL | Likely Source of Contamination |
|-------------------------------------|-----------------------------|------------------|-------------------------|--------------------------------------|---------------|-----|--|
| Copper (tap water) (ppm) | 07/2007 | N | 0.33 | 0 of 46 | 1.3 | 1.3 | Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives |
| Lead (tap water) (ppb) | 07/2007 | N | 3.00 | 0 of 46 | 0 | 15 | Corrosion of household plumbing systems, erosion of natural deposits |

Secondary Contaminants Table

Secondary Contaminants

| Contaminant and Unit of Measurement | Dates of sampling (mo./yr.) | MCL Violation Y/N | Highest Result | Range of Results | MCLG | MCL | Likely Source of Contamination |
|-------------------------------------|-----------------------------|-------------------|----------------|------------------|------|-----|--------------------------------|
| Odor (threshold odor number) | 8/2008 | Y | 4 | N/A | | 3 | Naturally occurring organics |

Note: While the MCL was exceeded for Odor, this parameter does not show adverse health effects.