



# The City of DeLand – Main Water System DeLand, Florida



## 2007 Annual Consumer Report on the Quality of Our Drinking Water

Dear Customer: We are pleased to present a summary of the quality of the water provided to you during the past year. The Safe Drinking Water Act (SDWA) requires that utilities issue an annual "Consumer Confidence Report" to customers in addition to other notices that may be required by law. This report details where our water comes from, what it contains, and the risks our water testing and treatment are designed to prevent. The City of DeLand is committed to providing you with the safest and most reliable water supply. We are proud to share our results with you. Please read this report carefully and, if you have any questions, call the numbers listed below. Informed consumers are our best allies in maintaining safe water.

### Water Source and Source Water Assessment/ Protection Program

The raw water supply for the City of DeLand - Main Water System is derived from 13 deep wells obtaining groundwater from the Floridan Aquifer. These wells can produce a total firm capacity in excess of 14.6 million gallons per day. The wells are located at various locations throughout the city. Well depths range from 250 feet to 350 feet. Water treatment processes include chlorination, fluoridation, aeration and corrosion control.

The Department of Environmental Protection performed a Source Water Assessment on our system in 2006 which provides the most current information available. The assessment was conducted to provide information about any potential sources of contamination in the vicinity of our wells. Seventeen potential sources of contamination were determined that include industrial wastewater and underground storage tanks where susceptibility levels range from low for industrial wastewater to high for petroleum storage tanks. The assessment results are available on the FDEP Source Water Assessment Protection Program website at [www.dep.state.fl.us/swapp](http://www.dep.state.fl.us/swapp).

### Overview

In 2007, your water department distributed 2.5 billion gallons of water to 18,661 connections servicing an estimated 46,653 residents.

We encourage public interest and communication to assist us in making decisions affecting your drinking water. In keeping with our directive of a customer oriented utility, we are proud to provide a Water Quality Hotline (386-740-6854) and an informational website at [www.deland.org](http://www.deland.org). City Commission meetings offer opportunities for public participation in decisions that may affect the quality of water. The Commission meets at 7:00 PM on the first and third Monday of each month at 120 South Florida Avenue. Please call City Hall at (386-626-7000) for additional information.

For further information, also see U.S. Environmental Protection Agency (EPA) Water at [www.epa.gov/safewater/](http://www.epa.gov/safewater/) or on the world wide web at <http://www.waterdata.com>.

### An Explanation of the Water-Quality Data Table

Our water is tested to assure that it is safe. The table shows the results of our water-quality analyses for the period of January 1, 2007 to December 31, 2007. Regulated contaminants that are required, by Federal and State regulatory agencies, to be tested in our water and that have been detected, are listed here. The table contains the name of each detected substance, the highest level allowed by regulation (MCL), the ideal goals for public health (MCLG), the amount detected, the usual sources of such contamination, and a key to units of measurement. Definitions of MCL and MCLG are important.

**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.

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

**Parts per million (ppm) or Milligrams per liter (mg/l):** one part per million corresponds to one minute in two years, or a single penny in \$10,000,000.

**Parts per billion (ppb) or Micrograms per liter (ug/l):** one part per billion corresponds to one minute in 2,000 years, or a penny in \$10,000,000.

**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 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.

### Key To Table

AL= Action Level  
MCL= Maximum Contaminant Level  
MCLG= Maximum Contaminant Level Goal  
n/a= not applicable  
MRDL=Maximum Residual Disinfectant Level

pCi/L= picocuries per liter (a measure of radioactivity in water)  
ppm= parts per million, or milligrams per liter (mg/l)  
ppb= parts per billion, or micrograms per liter (ug/l)  
ND= not detected by laboratory analysis  
MRDLG=Maximum Residual Disinfectant Goal

The following tables list the contaminants which were present or within detectable levels during the City of DeLand's most recent testing. Even though the following contaminants were present, the detected levels are well below the MCL's (Maximum Contaminant Levels) prescribed by Federal and State regulation. Again, the data presented in this report is from the most recent testing performed in accordance with regulations.

### PRIMARY DRINKING WATER STANDARD (Regulated in order to protect against possible adverse health effects)

| Microbiological Contaminants   |   |                   |                                    |                  |   |                                      |                                |
|--|---|-------------------|------------------------------------|------------------|---|--------------------------------------|--------------------------------|
| Contaminant and Unit of Measurement  | Dates of sampling (mo./yr.)                   | MCL Violation Y/N | High Monthly # of Positive Samples | MCLG             | MCL   | Likely Source of Contamination       |                                |
| Total Coliform Bacteria  | Jan., Apr., June, Aug., Oct., Nov., Dec. 2007 | N                 | 2                                  | 0                | Presence of coliform bacteria in 5% of monthly samples. | Naturally present in the environment |                                |
| Radiological Contaminants  |   |                   |                                    |                  |   |                                      |                                |
| ** Results in the Level Detected column for radiological contaminants and inorganic contaminants are the highest average at any of the sampling points or the highest detected level at any sampling point, depending on the sampling frequency. |   |                   |                                    |                  |   |                                      |                                |
| Contaminant and Unit of Measurement  | Dates of samp. (mo./yr.)                      | MCL Violation Y/N | Level Detected                     | Range of Results | MCLG  | MCL                                  | Likely Source of Contamination |
| Alpha emitters (pCi/L)   | Oct/2002                                      | N                 | 1.2                                | ND – 1.2         | 0   | 15                                   | Erosion of natural deposits    |

| Radium 226 & 228 (pCi/L)            | Oct/2002                 | N                 | 2.9            | ND – 2.9         | 0    | 5   | Erosion of natural deposits  |
|-------------------------------------|--------------------------|-------------------|----------------|------------------|------|-----|--|
| <b>Inorganic Contaminants</b>       |                          |                   |                |                  |      |     |  |
| Contaminant and Unit of Measurement | Dates of samp. (mo./yr.) | MCL Violation Y/N | Level Detected | Range of Results | MCLG | MCL | Likely Source of Contamination   |
| Arsenic (ppb)                       | May/2005                 | N                 | 1.4            | 0.59 – 1.4       | 0    | 10  | Erosion of natural deposits, runoff from orchards; glass and electronics production wastes   |
| Cyanide (ppb)                       | May/2005                 | N                 | 3.0            | ND – 3.0         | 200  | 200 | Discharge from metal factories, discharge from plastic and fertilizer factories  |
| Selenium (ppb)                      | May/2005                 | N                 | 0.27           | ND - 0.27        | 50   | 50  | Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines   |
| Fluoride (ppm)                      | May/2005                 | N                 | 1.40           | 0.40-1.40        | 4    | 4   | Erosion of natural deposits; water additive which promotes strong teeth when at optimum levels between 0.7 and 1.2 ppm; discharge from fertilizer and aluminum factories |
| Sodium (ppm)                        | May/2005                 | N                 | 26             | 8.7 - 26         | n/a  | 160 | Salt water intrusion, leaching from soil   |
| Barium (ppm)                        | May/2005                 | N                 | 0.04           | 0.02-0.04        | 2    | 2   | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits   |
| Lead (ppb)                          | May/2005                 | N                 | 1.7            | ND – 1.7         | 0    | 15  | Corrosion of household plumbing systems; erosion of natural deposits   |
| Nitrate (as Nitrogen) ppm           | June/2007                | N                 | 0.80           | 0.038 – 0.80     | 10   | 10  | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits  |

\*\* The result in the Level Detected column for TTHMs, HAA5s & Chlorine is the highest of the four quarterly running annual averages of results from all sampling sites. Range of results is the range (lowest to highest) from all individual sample sites.

**Stage 1 Disinfection By-Product (D/DBP) Contaminants and Disinfectant Residuals**

| Contaminant and Unit of Measurement | Dates of sampling | MCL Violation Y/N | Level Detected | Range of Results (lowest to highest) | MCLG or MRDLG | MCL or MRDL | Likely Source of Contamination            |
|-------------------------------------|-------------------|-------------------|----------------|--------------------------------------|---------------|-------------|---|
| TTHM-Total Trihalomethanes (ppb)    | 2007 (annual)     | N                 | 69             | 10 - 69                              | n/a           | MCL=80      | By-product of drinking water disinfection |
| HAA5-Haloacetic Acids (ppb)         | 2007 (annual)     | N                 | 30.3           | 2.56 – 30.3                          | n/a           | MCL=60      | By-product of drinking water disinfection |
| Chlorine (ppm)                      | 2007 (monthly)    | N                 | 1.1            | 0.03 – 2.2                           | MRDLG= 4.0    | MRDL=4.0    | Water additive used to control microbes   |

**Lead and Copper (Tap water samples were collected for lead and copper analyses from homes throughout the service area)**

| Contaminant and Unit of Measurement | Dates of sampling (mo./yr.) | AL Violation Y/N | 90th Percentile Result | No. of sample sites exceeding the AL | MCLG | AL (Action Level) | Likely Source of Contamination   |
|-------------------------------------|-----------------------------|------------------|------------------------|--------------------------------------|------|-------------------|--|
| Copper (tap water) (ppm)            | Aug-Sept/ 2005              | N                | 0.81                   | 0                                    | 1.3  | 1.3               | Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives |
| Lead (tap water) (ppb)              | Aug-Sept/ 2005              | N                | 5.8                    | 1                                    | 0    | 15                | Corrosion of household plumbing systems, erosion of natural deposits                                   |

**As you can see by the table, our system had no primary drinking water violations. We are proud that your drinking water meets or exceeds all Federal and State requirements. The EPA has determined that your water is safe at these levels.**

**Additional Health Information**

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 radioactive material, and can pick up substances resulting from the presence of plants, animals or from human activity. Contaminants that may be present in source water include:

- (A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock and wildlife.
- (B) 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.
- (C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, stormwater runoff, and residential uses.
- (D) Organic chemical contaminants, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production and can also come from gas stations, urban stormwater runoff and septic systems.
- (E) 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, 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 water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA Safe Drinking Water Hotline at 1-800-426-4791.

**Some people may be more vulnerable to contaminants in drinking water than is 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 microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).**

*We at the City of DeLand work around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water resources, which are the heart of our community, our way of life and our children's future. Thank you.*