

2005

Annual Drinking Water Quality Report of the City of Longwood

This is an annual report on the quality of water delivered by the City of Longwood. It meets the federal Safe Drinking Water Act (SDWA) requirement for "Consumer Confidence Reports" and contains information on the source of our water, its constituents, and the health risks associated with any contaminants. Safe water is vital to our community. Please read this report carefully and, if you have questions, call the numbers listed below.

We encourage public interest and participation in our community's decisions affecting drinking water. Regular City Commission meetings occur on the 1st and 3rd Mondays of each month, at the City Hall Commission Chambers located at 175 West Warren Avenue. The public is welcome. We'll be happy to answer any questions about the City of Longwood water system and our water quality. Call Richard Kornbluh at 407-263-2388.

More information is available on the World Wide Web at www.ci.longwood.fl.us

Overview

Water Source and Treatment

What is the source of our water? Five wells at a depth of 300 to 500 feet in the City of Longwood supply our system with groundwater of high purity. Our water is then chlorinated for disinfection purposes and fluoridated for dental health purposes.

Source Water Assessment

The Department of Environmental Protection has performed a Source Water Assessment on our system. These assessments were conducted to provide information about any potential sources of contamination in the vicinity of our wells (or surface water intakes). Potential sources of contamination identified include underground petroleum storage tanks and dry cleaning facilities. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at www.dep.state.fl.us/swapp.

An Explanation of the Water-Quality Data Table

This report is based upon tests conducted between January 1 and December 31 in the year 2005 by the City of Longwood. The data presented in this report is from the most recent testing done in accordance with regulations. Terms used in the Water-Quality Table and in other parts of this report are defined here.

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 that, if exceeded, triggers treatment or other requirements 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.

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

Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.

Non-Detects (ND) - laboratory analysis indicates that the constituent is not present.

Not Applicable (N/A) - does not apply.

Key To Table

AL = Action Level

MCL = Maximum Contaminant Level

MCLG = Maximum Contaminant Level Goal

pci/l = picocuries per liter (a measure of radioactivity)

ppm = parts per million, or milligrams per liter (mg/l)

ppb = parts per billion, or micrograms per liter (µg/l)

ND= Non-Detects

N/A= Not Applicable

TEST RESULTS TABLE

Contaminant and Unit of Measurement	Date of sample analysis	MCL Violation Y/N	Highest Monthly Number	Range	MCLG	MCL	Likely Source of Contamination
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Microbiological Contaminants

Total Coliform Bacteria	2005	Y	1	N/A	0	Presence of coliform bacteria in 1 sample collected during a month.	Naturally present in the environment
Contaminant and Unit of Measurement	Date of sample analysis	MCL Violation Y/N	Total Number of Positive Samples for the Year	Range	MCLG	MCL	Likely Source of Contamination
Fecal coliform and <i>E.coli</i>	2005	Y	1	N/A	0	A routine sample is fecal coliform positive or <i>E. coli</i> positive and the repeat samples are negative	Human and animal fecal waste

Contaminant and Unit of Measurement	Date of sample analysis	MCL Violation Y/N	Level Detected	Range	MCLG	MCL	Likely Source of Contamination
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Radiological Contaminants

Gross Alpha (pCi/l)	12/2002	N	0.9	0.6-0.9	0	15	Erosion of natural deposits
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Inorganic Contaminants

Barium (ppm)	06/2005	N	0.0088	0.0068-0.0088	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Cadmium (ppb)	06/2005	N	0.1	0.0-0.1	5	5	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints
Fluoride (ppm)	06/2005	N	0.927	0.201-.927	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Lead (point of entry) (ppb)	06/2005	N	28.7	0-28.7	N/A	15	Residue from man-made pollution such as auto emissions and paint.; lead pipe, casing, and solder
Mercury (inorganic) (ppb)	06/2005	N	0.1		2	2	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland
Nickel (ppb)	06/2005	N	5.3	3.2-5.3	N/A	100	Pollution from mining and refining operations. Natural occurrence in soil.
Nitrate (ppm)	06/2005	N	0.058	0.033-0.058	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium (ppb)	06/2005	N	4.2	2.9-4.2	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium (ppm)	06/2005	N	19	16.4-19	N/A	160	Salt water intrusion, leaching from soil

Volatile Organic Contaminants							
Contaminant and Unit of Measurement	Date of sample analysis	MCL Violation Y/N	Level Detected	Range	MCLG	MCL	Likely Source of Contamination
Ethylbenzene (ppb)	09/2005	N	0.38	0-0.38	700	700	Discharge from petroleum refineries
Xylenes (ppm)	09/2005	N	2.03	0-2.03	10	10	Discharge from petroleum factories; discharge from chemical factories

Contaminant and Unit of Measurement	Date of sample analysis	AL Exceeded Y/N	90th Percentile Result	No. of sampling sites exceeding the AL	MCLG	AL (Action Level)	Likely Source of Contamination
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Lead and Copper (Tap Water)

Lead (tap water) (ppb)	2003	N	2.0	One sampling site exceeded AL	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Copper (tap water) (ppm)	2003	N	0.449	No sampling site exceeded AL	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Contaminant and Unit of Measurement	Date of sample analysis	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination

Trihalomethanes

TTHM [Total trihalomethanes] (ppb)	2005	N	47.08 (annual average) ¹	28.6 - 61.05	0	80	By-product of drinking water chlorination
HAA5 (Total Haloacetic Acids) (ppb)	2005	N	24.68 (annual average) ²	0 - 57	0	60	By-product of drinking water chlorination

Water-Quality Table Footnotes

- 1 This number is based on an average of 6 samples in 2005 which ranged from 28.6 to 61.05 ppb.
- 2 This number is based on an average of 6 samples in 2005 which ranged from 0 to 57 ppb.

Explanation of Violations

We failed to complete required sampling for TTHM (Total trihalomethanes) and HAA5 (Total Haloacetic Acids) during 2005 and therefore were in violation of monitoring and reporting requirements. Because we did not take the required number of samples, we did not know whether the contaminants were present in your drinking water, and we are unable to tell you whether your health was at risk during that time. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer. Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer. The sampling which was completed for the 2005 year indicated levels of TTHM and HAA5 within the MCL limits set by the State and Federal regulations.

Total Coliform. 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 Total Coliform Rule requires water systems to meet a stricter limit for coliform bacteria. Coliform bacteria are usually harmless, but their presence in water can be an indication of disease-causing bacteria. When coliform bacteria are found, special follow-up tests are done to determine if harmful bacteria are present in the water supply. If this limit is exceeded, the water supplier must notify the public by newspaper, television or radio. To comply with the stricter regulation, we have increased the average amount of chlorine in the distribution system.

We failed to complete required sampling for routine bacteriological sampling for total coliform in the last week of April 2005 and therefore were in violation of monitoring and reporting requirements. Because we did not take the required number of samples, we did not know whether the contaminants were present in your drinking water, and we are unable to tell you whether your health was at risk during that time. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. The monitoring period was 4/1/05 through 4/30/05. Twenty samples were required for the monitoring period and eighteen were collected. Sampling resumed on 5/1/05.

Fecal Coliform/E. coli. Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems. On October 19, 2005 one of the October compliance distribution bacteria samples was total coliform positive. Longwood took the required three repeat samples (same location, upstream and downstream) on November 1. The same location was total coliform positive, the downstream was absent and the upstream sample was E.coli positive. This constitutes an acute bacteriological MCL violation. Longwood officials met with FDEP on November 3 within 24 hours of becoming aware of the repeat sample results and also provided notice of this acute violation as well as issued a Precautionary Boil Water Notice (PBWN) by hand delivery and on the TV stations to the affected approximately 200 customers on November 3 as required within 24 hours. Only a portion of the Longwood water system was affected. On November 8, the acute violation and PBWN were rescinded after additional bacteria samples collected were satisfactory. In addition, all required compliance distribution bacteria samples collected in December 2005 were satisfactory.

The follow-up sampling which was done for this violation indicated that no harmful bacteria were present. The monitoring period was October 2005.

Required 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, in some cases, radioactive material, and can pick up substances resulting from the presence of 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 operations, and wildlife.
- (B) *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.
- (C) *Pesticides and herbicides*, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- (D) *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.
- (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, 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.

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 are available from the Safe Drinking Water Hotline 800-426-4791.

Other Monitoring

In addition to testing we are required to perform, our water system voluntarily tests for hundreds of additional substances and microscopic organisms to make certain our water is safe and of high quality. We'll be happy to answer any questions about the City of Longwood water system and our water quality. If you are interested in a more detailed report, contact Richard Kornbluh at 407-263-2388. This report was prepared using CCRbuilder and technical assistance provided by the American Water Works Association, the Florida Rural Water Association and the Florida Department of Environmental Protection.