



Lake Wales

Water Quality Report 2005

*Prepared By The City Of Lake Wales
Utilities Department
Lake Wales Water Supply Is Dependable*

We're pleased to provide you with this year's Annual Water Quality Report. We want to keep you informed about the excellent water and services we have delivered to you over the past year. Our goal is and always has been, to provide to you a dependable supply of drinking water. Our water source consists of seven wells that draw from the Floridian aquifer at a depth of over 1000 feet. Our water treatment process is one of aeration and chlorine disinfection.

All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. It is important to remember that the presence of these contaminants does not necessarily pose a health risk.

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 results from urban storm-water 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 storm-water runoff and residential uses.
- (D) **Organic Chemical contaminants**, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm-water runoff and septic systems.
- (E) **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.

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The City of Lake Wales routinely monitors for constituents in your drinking water according to Federal and State laws. The enclosed tables show the results of our monitoring for the period January 1st to December 31st, 2005 and include test results in earlier years for contaminants sampled less often than annually. For contaminants not required to be tested for in 2005, test results are for the most recent testing done in accordance with the regulations.

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

Maximum Contaminant Levels are very stringent. To understand the possible health effects described for many regulated constituents, a person would have to drink two liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effects.

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**.

In the following table you may find many terms and abbreviations you may not be familiar with. To help you better understand these terms we've provided the following definitions.

Not Detected (ND)- laboratory analysis indicates that the constituent is not present.

N/A-not applicable

Parts per billion (ppb) or Micrograms per liter- by weight of analyte to 1 billion parts by weight of the water sample.

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.

pCi/L – picocuries per liter (a measure of radioactivity in water).

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

Maximum Contaminant Level-the "Maximum Allowed" (MCL) is 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-the "Goal" (MCLG) is 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 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.

Test Results Lake Wales							
**Results in the Level Detected column for radiological contaminants, 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 sampling (mo./yr.)	MCL Violation Y/N	Level Detected **	Range Of Results	MCLG	MCL	Likely source of contamination
Radiological Contaminants							
Alpha (pCi/L)	1/03-12/03	N	2.1	2.1-2.1	0	15	Erosion of natural deposits.
Radium 226 + 228 or combined Radium (pCi/L)	1/03-12/03	N	0.2	ND-0.2	0	5	Erosion of natural deposits.
Inorganic Contaminants							
Barium (ppm)	1/05-12/05	N	0.02	0.02 (3 sites)	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Nitrate (as Nitrogen) (ppm)	1/05-12/05	N	0.29	0.16 – 0.29	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Sodium (ppm)	1/05-12/05	N	5.91	4.61-5.91	N/A	160	Salt water intrusion, leaching from soil.
TTHMs and Stage 1 Disinfectant/Disinfection By-Product (D/DBP) Parameters							
The Chlorine level detected is the highest of the quarterly averages for Chlorine. Range of Results is the range of monthly Chlorine results (lowest to highest) at the individual sampling sites							
Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL Violation Y/N	Level Detected	Range of Results	MCLG or MRDLG	MCL or MRDL	Likely Source of Contamination
Chlorine (ppm)	1/05-12/05	N	0.88	0.2 – 3.5	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes
Haloacetic Acids (five) (HAA5) (ppb)	1/05-12/05	N	10.19	3.37 - 16.31	N/A	MCL = 60	By-product of drinking water disinfection
TTHM [Total trihalomethanes] (ppb)	1/05-12/05	N	24.99	8.17 - 51.30	N/A	MCL = 80	By-product of drinking water disinfection
Note: The result in the Level Detected column for TTHMs is the highest of the four quarterly running annual averages of results from all sampling sites. The quarterly running annual averages were calculated during the first, second, third and fourth quarters of 2004.							
Contaminant and Unit of Measurement	Date of samplings (mo./yr.)	Action Level Violation Y/N	Number of sampling sites exceeding the AL	90 th Percentile Result	MCLG	MCL	Likely source of contamination
Lead and Copper (Tap Water)							
Copper (tap water) (ppm)	6/04 – 11/04	N	1	0.58	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.

We sampled for 86+ contaminants and only the above were detected.

In 2004 the Department of Environmental Protection (DEP) performed a source water assessment of our water system. These possible contaminants are from a broad range from Ethylene Dibromide (EDB) *an agricultural pesticide used in citrus groves* to petroleum storage tanks. According to DEP there are six areas of potential contamination sources. They are as follows:

Type of Potential Contaminant Source	Susceptibility Level
DELINEATED AREA	HIGH
PETROLEUM STORAGE TANK	MODERATE
PETROLEUM STORAGE TANK	HIGH
PETROLEUM STORAGE TANK	MODERATE
PETROLEUM STORAGE TANK	MODERATE
PETROLEUM STORAGE TANK	MODERATE

Delineated area: Areas of the State designated by DEP that have increased potential for contamination of the ground water, due to well drained sandy soils overlying porous limestone, a shallow water table and high rainfall or a combination of.

Petroleum Storage tank: An above ground or below ground tank designed to contain regulated substances such as, motor fuels, residual oils, waste oils, lubricants, petroleum solvents and petroleum based substances.

Susceptibility Level: Based on each of the following factors: Known health effects; Leaching potential (mobility); Protection provided by the underlying geologic materials, and operating practices and design of the potential source. Each of these factors were evaluated and given a score and assessed as posing a low, moderate, or high concern to the source water, based upon the score outcome.

The EPA has determined that your water is safe for most people at these levels. Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer who are 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. Environmental Protection Agency and the Center for Disease Control guidelines are appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants. These guidelines are available from the Safe Drinking Water Hotline (800-426-4791).

We at the City of Lake Wales work around the clock to provide top quality water to every tap. Thank you for allowing us to continue providing your families with clean, quality water this past year. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.

For More Information

- **For questions concerning this report:** Please contact Robert Johnson, Lead Operator, at 863-678-4182 ext.294.
- **Learn how to:** Read your water meter, detect if you have a leak, conserve water or what the current water restrictions are, please call Customer Service at 863-678-4196 or visit us on the internet at www.cityoflakewales.com.
- **SWFWMD:** You may also call the Southwest Florida Water Management District at 1-800-423-1476 or their web site at www.swfwmd.state.fl.us for general information on how to save water or specific water restrictions that apply to you.
- **Florida's DEP** is in the process of conducting Source Water Assessment (SWA) for all public water systems in Florida. These assessments are to identify and assess any potential sources of contamination in the vicinity of your water supply. A SWA report for this system is available at the DEP SWAPP website: www.dep.state.fl.us/swapp.
- **Commission Meetings:** Attend any of our regularly scheduled Commission meetings. They are held on the first and third Tuesday of each month in the Commission Chambers located at 201 West Central Avenue 7:30 p.m.